# Anglian Water PR19

## Executive Summary: Reply to Ofwat's Response to Anglian's Statement of Case

# 1 Overarching Comments

(1) Part 1 of this Executive Summary sets out some overarching comments that are relevant for the CMA's consideration of Ofwat's Response in the round.

## 1.1 Anglian Water: a company with social and environmental purpose at its heart

(2) **Anglian does not recognise the company which Ofwat has portrayed to the CMA in its response to the Company's Statement of Case ("SOC") and in its subsequent presentation**. Ofwat has sought to portray Anglian as being focused on gaming the regulatory regime, paying very large and unjustified dividends to shareholders, and seeking additional costs only to pay dividends in AMP7. It sums this up by claiming that *"Anglian Water's case is that customers should pay more and receive less"*.[1]

(3) In fact, **Anglian's Business Plan would have enabled customers to pay less in bills, whilst receiving more**. Its Plan is focused on doing the right thing for customers and the environment, now and in the future, and is in line with customers' clearly expressed preferences. Ofwat's FD, by contrast, would give customers less of what they want, and force Anglian to implement a series of sub-optimal short-term solutions that will, in the long-term, cause overall costs to be greater. Future customers will be left facing bigger costs, and bigger risks, than they should.

(4) **Anglian is a leading performer overall in the sector**, innovating to become the industry-leader on leakage reduction, leading on drinking water quality measures and capital carbon reduction, highly regarded by peers, stakeholders, its supply chain and most importantly its customers and colleagues. Its suite of external awards and endorsements recognise these achievements, including being recognised as a responsible business and leading the way in embedding social and environmental purpose in its constitution.

(5) Anglian's track record shows it has **paid dividends to shareholders when it has delivered strong performance against the regulatory contract**. This is precisely the outcome that the incentive-based regulation system aims to deliver, and sees customers also benefiting when a company performs well, in four main ways:

(i) firstly, they receive a higher standard of service;

(ii) secondly, they directly share in the benefits of the outperformance of the regulatory contract;

(iii) thirdly, the efficiencies delivered are then baked into a lower cost base for future price reviews and have enabled reinvestment into the business with the support of shareholders; and

(iv) fourthly, the innovations made to drive frontier performance are shared with other companies, so bringing benefits to customers across England and Wales.

(6) For many years Anglian has worked hard to do the right thing, achieving **a balance between the legitimate interests of its owners and the delivery of good outcomes for customers and the environment, serving a region that is the most water-stressed in the UK** and growing rapidly.

(7) This approach has been "locked in" following a change to Anglian's Articles of Association last year, which embedded **social and environmental purpose** into the articles that govern its management, and created a “North Star” for all decision-making, including the one the Board took to seek a reference to the CMA.

(8) Anglian's Business Plan is rooted in an assessment of the long-term context, as set out in its Strategic Direction Statement. This is very much in line with the priorities set out by Government in its formal

[1] Response to Anglian, para. 1.3.

guidance to Ofwat, and with Ofwat's new Resilience Duty. Anglian's AMP7 plan builds on its AMP6 plan which delivered the **biggest bill reduction in the sector at PR14**.

(9) Anglian's Plan seeks to get on with addressing resilience rather than "kicking the can down the road". The related increase in scope necessarily sees costs higher than at PR14, but this step change is in line with customer preferences, Government policy, and Ofwat's Resilience Duty. Moreover, taking action now represents better value for money in the long run, a point made clearly in the National Infrastructure Commission's 2018 Report, "Preparing for a Drier Future", which concluded that delay in taking action to boost supply resilience to drought would lead to a near doubling of costs over the next 30 years.[2]

(10) As explained in the SOC, when assessed in the round, **the overall balance of risk and return created by the FD is strongly skewed to the downside**.[3] This creates problems which manifest themselves in all of the key areas of the financing decisions in the FD: an inadequate level of WACC, an FD that does not meet the financeability test for the notional company, an incorrect allocation of allowed funds between opex and capex, and a penal Gearing Outperformance Sharing Mechanism. Anglian and the other appellants are not alone in considering that Ofwat has erred in its approach to balance of risk and return; this point has been made in a number of third-party representations made to the CMA.

(11) Anglian recognises the twin demands of investing for resilience and ensuring affordability in its Plan for those struggling to pay or otherwise vulnerable. It remains of the view that a redetermination that upheld its Plan would meet both objectives: allowing a significant increase in support for those struggling to pay (expected to be a larger proportion of customers in the wake of Covid-19), while also allowing a step-change in investment for resilience.

### 1.2 Covid-19

(12) In previous correspondence Anglian has expressed the desire to find early resolution to the redetermination process to allow all parties to focus on responding to Covid-19 and ensuring customers continue to receive essential services.

(13) Regrettably, Ofwat seems to have concluded that, despite the huge amount of evidence and expert reports submitted in the SOCs, there are almost no points that any party has raised that merit any adjustment to its FD position. This inflexible position seems to close the door on finding a way forward to early resolution. Anglian has, however, indicated to the CMA that it would be happy to consider some workshops on certain methodological issues that concern all disputing companies, to assist the CMA in formulating its redetermination.

(14) Anglian is writing separately to the CMA to set out early views on impacts on the business of Covid-19. In particular, Anglian notes that the diminution of revenues worsens the position on financeability and its ability to maintain a Baa1 credit rating, which the FD already undermines. Covid-19 impacts, which are outside management control, also have a more negative effect on Anglian because of the punitive cost-sharing ratios the FD has imposed, making it more difficult to minimise impacts on customers during the pandemic. Anglian seeks no special favours, but the crisis makes it all the more urgent to correct the mistakes in Ofwat's FD.

### 1.3 Anglian's approach to preparing its Reply to Ofwat's Response

(15) Anglian recognises the scale of the task before the CMA, and the large volume of materials already submitted to it. With that in mind, this Reply to Ofwat's Response has been kept as concise as possible.

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[2] NIC Preparing for a Drier Future Report, page 21 (SOC270).

[3] Anglian's SOC, Chapter A: Executive Summary, para. 105.

(16) To help the CMA, the key points from Ofwat's Response are summarised in a table. This references each point made, Anglian's response to it, and where the evidence to support the response can be found (either already within Anglian's SOC or included as part of this Reply). The table also highlights where Ofwat has not addressed relevant evidence set out in the SOC.

(17) Inevitably, this Reply focuses on Ofwat's Response document. However, where possible Anglian draws attention to ways in which the CMA could seek to resolve the issues identified, in its redetermination.

(18) Clearly, different statements have been made to the CMA regarding the level of cost increase compared to AMP6 that Anglian is seeking. This is an important issue, and Anglian proposes that the CMA could seek to resolve this specific question as part of the preliminary phases of its work, taking on board feedback from all relevant parties, before it reaches its provisional findings.

### 1.4 Setting the record straight

(19) Before turning to the detail of its Reply, Anglian would like to highlight a number of aspects of Ofwat's Response where Anglian believes Ofwat has mischaracterised important points and/or has invited the CMA to draw inferences which, in Anglian's view, are not the appropriate views to form when all of the facts and data are understood. These include the following:

**Table 1 Correcting mischaracterisations**

| Ofwat Assertion | Anglian's Position |
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| Anglian has a track record of high dividends and has paid extraordinarily high dividends over the last 10 years, with an average gross annual nominal dividend return on actual equity of around 35%.[4] | Ofwat is aware that the dividend figures which it used in support of this claim[5] include both intra-group payments of £192 million annually, and a special intra-group payment of £1.6 billion (which Ofwat acknowledges to have been made in 2018 to settle an intercompany loan and to simplify the Company's accounts in its drive to improve transparency). Neither of these payments ever left the Group. The £192 million annual payment has never been available to the ultimate owners of the business**. These payments have never left the Anglian Water Finance Group and have been used exclusively to settle interest on the intercompany loan referred to above. The correct assessment of the actual dividends paid to shareholders is c.6% of the notional equity, not the c.35% claimed by Ofwat.**<br>Anglian's Plan proposed that **over AMP7 there will be no dividends to shareholders.** |
| Anglian has a track record of high gearing which is detrimental to customer interests.[6] | Anglian's **gearing has remained constant over the last 10 years whilst performance has been strong.** This must be seen in the context of the Aligned Model which provides protection and other benefits for customers.<br>Ofwat does not advance evidence to support its claim that Anglian's gearing level is problematic. |

[4] Response on Overall Stretch, para. 6.25 and Figure 6.8.

[5] Ofwat Initial Presentation to CMA (20 May 2020), slide 25 (REP11).

[6] Response to Anglian, para. 1.19.

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| Anglian's historical embedded costs reflect inefficient decisions made in the early 2000s and should now be disallowed.[7] | The debt that Anglian took out in the early 2000s was efficiently incurred, enabled the development of the Aligned Model which has brought benefits to customers, and its long-tenor responded to clear regulatory guidance and incentives from prevailing market conditions at the time.<br>To disallow those costs now is retroactive, and the methodological basis used to justify the disallowance is flawed. |
| Anglian has a history of consistent high totex "bidding" over the last 20 years. Ofwat claims that Anglian has consistently asked for more Totex than it needs, (i.e. it is "gaming") and that it is seeking additional costs now in order to ensure that customers fund "excessive" dividends for shareholders.[8] | Anglian wholly rejects this assertion.<br>**In previous price reviews, there have been legitimate differences in view about the scope of investment appropriate for the five-year period in question. For example, at PR14 Anglian proposed to begin the roll out of smart meters and invest more to reduce leakage. Ofwat did not agree with these proposals and disallowed their costs. This represented the main difference between the amounts sought and what was allowed in the PR14 FD.** Similarly, the differences between the amount sought in Anglian's Plan and the amount ultimately allowed in this FD are in large part attributable to reductions in scope. Had Anglian's Plan been accepted, it would have allowed customers to receive more of the outcomes and investment they said they want and are prepared to pay for.<br>**Anglian's Plan also assumed no dividends for shareholders during AMP7**. |
| Bill reductions are driven by lower allowed returns and increasing customer numbers rather than reductions in costs.[9] | Anglian's Plan would have delivered bill reductions whilst also delivering the step change increase in resilience that customers demand and are willing to pay for. **The bigger bill reductions that the FD creates result from a range of factors, one of which is an unrealistic expectation for reduced costs and reductions in scope which merely defers (and increases) costs and risk to future customers**. |

[7] Response on Risk and Return, paras. 2.11 to 2.18.

[8] Response to Anglian, paras. 1.15 to 1.17 and Ofwat Initial Presentation to CMA (20 May 2020), slide 25 (REP11).

[9] Response to Anglian, para. 2.10.

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| Anglian Water has underspent its expenditure allowance in each of the last four price control periods. It has underspent its PR14 allowance by 9.2% from 2015 to 2019.<br><br>In its Response and presentation to the CMA, Ofwat sought to characterise the rewards linked to Anglian's previous strong performance as somehow being evidence of bidding behaviour and gaming of the regulatory system.[10] | Anglian does not dispute the figures Ofwat quotes, but it does refute the inference drawn.<br><br>**Anglian's strong performance against the regulatory contract shows that incentive-based regulation is working well.** Anglian's performance in AMP6 was one of the criteria informing Ofwat's 2019 assessment of Anglian as a better performing company.<br><br>**Anglian's customers' bills over AMP7 will be, on average, £31 less than they would otherwise have been in the absence of the performance achieved in AMP6**. |
| Anglian Water is inefficient (its modelled base costs appear least efficient in the sector).[11] | **Anglian's Botex is efficient for a company delivering the strongest performance in the sector. Contrary to Ofwat's claims of a large increase being sought, Anglian's proposed Botex for AMP7 is effectively the same as for AMP6**.<br><br>Ofwat's assertion that the gap of £750 million between Anglian's business plan and the FD is entirely attributable to "inefficiency" is not credible. Not least as Anglian was considered reasonably efficient at PR14. Anglian has supplied the CMA (and Ofwat) with evidence on efficiency and remains willing to engage at any level of detail to prove this crucial point. |
| Ofwat had to intervene to better align plans with customer interests because the Company's business plan did not reflect its own customer research and company research was not high quality.[12] | **Anglian's customer research was "A" rated by Ofwat**. Anglian was the only company to receive this top rating. Anglian does not understand the comments now made by Ofwat. |
| High equity market premium for listed water companies since FD demonstrate that PR19 is reasonable.[13] | **Listed companies' share price performance is driven by factors other than the cost of equity, including the treatment of embedded debt and other external events such as general elections:** this cannot be adduced as evidence to show that all is well with the FD. |
| Ofwat claims that the rest of the sector considers Ofwat's approach to balancing cost and risk to be reasonable, given that they have not asked for a redetermination: *"PR19 has challenged companies to achieve this (step up in responsible corporate* | The CMA's attention is drawn to the third-party responses including from Water UK, Southern Water, Wessex Water and Welsh Water which clearly illustrate that this is not the case. In any event, there are costs of many sorts in pursuing redetermination. It was not a decision the Board took lightly, others decided differently. **There would be little point in the CMA's redetermination role, unless all** |

[10] Response to Anglian, para. 1.5.

[11] Response to Anglian, para. 3.1.

[12] Response to Anglian, paras. 1.61 to 1.63.

[13] Response on Risk and Return, para. 1.20.

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| *behaviours) without asking customers to pay extra for inefficiency or to accept lagging performance, or indeed to pay out inflated returns to investors. Thirteen companies have accepted this challenge: four have not*."[14] | **companies sought references, if Ofwat's argument here were valid**. |

### 1.5 Ofwat is wrong to characterise Anglian's concerns regarding the application of its duties as mere ***"disagreements as to the merits of decisions that Ofwat made"***[15]

(20) Ofwat mischaracterises Anglian's concerns about the compatibility of its FD with a reasonable and proportionate balancing of Ofwat's duties. In so doing, it defends many points that Anglian has not raised (and does not dispute) while largely ignoring Anglian's actual complaints or dismissing them on grounds of regulatory discretion and expertise.

(21) Anglian agrees that Ofwat has discretion in applying its primary and secondary duties; however, that **discretion is not unlimited**. Conducting the price control in accordance with the duties and the Government's Strategic Policy Statement is not discretionary. Nor is the obligation to observe the principles of good regulatory practice.

(22) Anglian's concerns on duties are more fundamental than mere *"disagreements as to the merits of decisions made by Ofwat";* however, the two are inextricably linked.[16] For example:

(i) Ofwat's flawed assessment of Anglian's efficient costs has been wrongly used to justify interventions to remove proposed expenditure across Anglian's Plan.

(ii) Its failure to take into account asset health and future maintenance needs as part of its cost assessment undermines its assessment of inter-generational equity.

(iii) Its flawed assessment of notional financeability results in a clear breach of the financing duty.

(23) Anglian agrees the duties are not mutually exclusive. But in practice, Anglian's FD has inevitably created a dichotomy between long-term investment and short-term bill reductions. The failings in (i) and (ii) serve to undermine rather than promote "*long-term planning and investment by companies; and the taking by them of a range of measures to manage water resources in sustainable way and to increase efficiency in the use of water and reduce demand for water*". They are therefore incompatible with the Resilience duty, as well as with the SPS objective to "*challenge the sector to plan, invest and operate to meet the needs of current and future customers, in a way which offers best value for money over the long-term […] considering the wider costs and benefits to the economy, society and the environment*".

(24) The resulting impact on Anglian (compromising the *proper* performance of its functions) and its customers (lower service quality and higher overall cost) is difficult to reconcile with the Functions, Financeability and Consumer duties.[17]

(25) Anglian therefore maintains that its FD is difficult to reconcile with a reasonable and proportionate balancing of Ofwat's duties, as set out in Chapter C: Ofwat's duties in PR19 of its SOC.

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[14] Response on Overall Stretch, paras. 1.1 and 1.2.

[15] Response to Anglian, para. 1.22.

[16] Response to Anglian, para. 1.22.

[17] Anglian's SOC, Chapter C: Ofwat's duties in PR19.

### 1.6 Important parts of Ofwat's process were much less open and well-considered than Ofwat claims, and major changes were made after the Final Methodology was published

(26) Ofwat suggests in its Response on Overall Stretch that *"the package we have set for 2020-25 is the result of a comprehensive and exhaustive process of development, co-creation and analysis lasting over three years. Every element of our work has been open and transparent. We have listened to the views of companies, their customers, companies' customer challenge groups (CCGs), consumer groups, environmental groups and wider stakeholders. We have then used the insights gained to inform our determinations"*.[18] Anglian Water disputes this description.

(27) As stated in its SOC,[19] Anglian agrees that Ofwat can (and needs to) adapt its approach to price controls as appropriate, but observes that CMA / CC precedents make clear that *"Differences that arise due to changes in approach may need to be particularly well justified, as there are benefits to a stable and well understood regulatory framework"*.[20] Moreover, **there is a reasonable expectation that the Final Methodology can be relied on, and that if there are major changes thereafter, this should be presaged by meaningful consultation**. Some of the core policy changes that result in Anglian's FD are poorly justified and their impacts distortive and contrary to regulatory objectives. These include most notably the Gearing Outperformance Sharing Mechanism, but also, for example, the approach to growth costs, frontier shift, catch-up efficiency challenge and the methodology for the WACC assumptions. Ofwat does not respond to these points, but it would be expected that there is a "high bar" for justifying such changes in approach.

(28) Whilst aspects of the PR19 process were indeed an improvement on PR14, Ofwat failed to respond to criticisms from the sector. For example, whilst it consulted on its models, it ignored feedback it received. It also refused to share its models which limited the ability for companies to engage meaningfully on key issues. And on areas of divergence, such as the approach to capital maintenance, the process was inflexible and did not allow the issue to be properly considered. This is not a process where *"every element of our work has been open and transparent"*.[21]

(29) Examples of material changes include the decision to model growth costs as part of a new "Botex Plus" model suite which happened with inadequate consultation before being revealed by Ofwat at DD.

(30) Other process issues include the fact that those companies that were awarded fast-track status were able to negotiate directly with Ofwat prior to the IAP decisions being made – an opportunity not afforded to other companies – and the outcomes of this fast-track process were then used by Ofwat as justification for removing costs from Anglian's Plan and those proposed by other companies.

### 1.7 Anglian welcomes the fact that the CMA can exercise its own regulatory discretion on an objective basis, taking into account the evidence

(31) In its documentation, Ofwat plays heavily on its unique position to take an expert, independent and objective view across the sector as a whole. And yet, Ofwat is also quick to claim information asymmetry when convenient for its position.

(32) Whilst it is evident that Anglian does not agree with many of Ofwat's decisions, there are serious questions for the CMA to consider about the application of the whole range of duties. Anglian invites the CMA to give full consideration to the appropriate balance of the duties (including, but not limited to, the

[18] Response on Overall Stretch, para. 1.5.

[19] Anglian's SOC, Chapter A: Executive Summary, para. 38 and Chapter C: Ofwat's duties in PR19, para. 403.

[20] *Bristol (2010)*, para. 9.21.

[21] Response on Overall Stretch, para. 1.5.

Financeability Duty and the new Resilience Duty) and the implications of the price control for both current and future consumers.

(33) More broadly, Anglian is concerned that the positions Ofwat sets out in its Response, and in its FD, will create perverse incentives for the future, and undermine the benefits of the RPI-x regulatory regime. It has included a discussion paper on PR19 and regulatory incentives as part of this Reply.

(34) The representations of other water companies express very serious concerns about the PR19 approach, even where the Boards of those companies decided to accept the FD. Ofwat's assertion that the companies not seeking a reference to the CMA, are in effect endorsing its position, is not borne out in the representations made.

(35) In its Response, Ofwat has cited "information asymmetry" as a justification for a number of positions it has taken, particularly in relation to judgments on cost efficiency, where it argues that, due to information asymmetry, it is justified to *"place the onus on the companies to provide sufficient evidence to prove that the allowances they wish to claim represent efficient expenditure"*.[22]

(36) However, Ofwat then makes a diametrically opposed argument to dismiss evidence provided by companies on the basis of information asymmetry.[23] Ofwat's approach to information asymmetry is contradictory. It is simply Ofwat's argument of last resort which it uses both to shift the burden of proof onto companies to prove efficiency when it has failed to prove inefficiency itself, and then to dismiss evidence put forward by companies on the basis that it has access to more information.

(37) In addition to Anglian's central concern about the lack of evidence to support Ofwat's decisions at PR19, this type of approach risks longer-term harm. It creates perverse incentives for companies to avoid proposing service quality improvements that customers may prioritise through Enhancement expenditure (due to risks of excessive efficiency challenge) and can worsen the quality of information that companies provide on their costs in future business plans (as companies seek to pre-empt Ofwat's arbitrary efficiency challenges).

(38) Anglian requests that the CMA consider these points, and what precedents its redeterminations will set for PR24 and beyond, for the water sector, for the stability and predictability of economic regulation in general, and for confidence in the system for customers, investors and society as a whole.

## 2 Key Points from Anglian's Reply

(39) Part 2 of this Executive Summary highlights the key points from Anglian's Reply as set out in the associated tables and narrative documents.

### 2.1 Anglian has not paid excessive dividends in the past – they are in line with the industry average and Ofwat's allowances and generated by strong performance

(40) In its Response, and its presentation to the CMA, Ofwat has misrepresented Anglian's historical dividends as excessive.

[22] Response on Overall Stretch, pages 27 to 28 and Response to Anglian, pages 59 and 62.

[23] Response on Overall Stretch, page 32: "*[Ofwat] unlike the companies – [is] able to take an expert, independent and objective view across the sector as a whole, drawing on the representations and evidence from all of the individual companies (including the 13 companies who are not disputing their final determinations). We can also consider historical performance across the sector and make comparisons of performance across companies (of which we have decades of knowledge)"* (Ofwat's Response on Overall Stretch, page 33). Ofwat also dismisses any criticism raised by companies claiming that *"in truth, the companies disagree with how we have exercised our judgement as a regulator. The essence of their complaint is that Ofwat's funding was less generous than they would like*".

(41) Over the last 10 years, Anglian has paid actual dividends to shareholders of 6% on a notional company basis. This is against a backdrop of stable gearing. These dividends have been in line with Ofwat's allowed levels of dividend, and in line with the sector average.

(42) Dividends have been able to be paid as a result of strong performance achieved as through positive management action in areas such as leakage, reduced incidence of supply interruptions, and Anglian's success in driving down embodied carbon and reducing costs (which has seen a c.60% reduction in embedded carbon achieved during AMP6 from a 2010 baseline). All of these examples see efficiencies achieved shared with customers, and all of them demonstrate the success of incentive-based regulation.

(43) Additionally, when significant achievements have been realised, shareholders have chosen to reinvest funds back into the business to deliver additional benefits for customers, with £165 million being reinvested during AMP6. For AMP7, Anglian's Plan proposes **no dividends for shareholders**.

(44) **Ofwat has knowingly misdescribed Anglian's historical dividends, failing to distinguish between intercompany loan payments and actual dividends paid to shareholders.** The reality of a 6% return on the notional company basis is a far cry from the picture Ofwat is painting which seeks to suggest shareholders have received dividends of 35% on actual equity and 500% more than would be expected.

(45) The difference between Ofwat's figures and the actual level of dividends derives from a mischaracterisation of intercompany loan repayments which were never available for distribution to shareholders.

(46) Ofwat has knowingly misdescribed Anglian's historical dividends. It has used this mis-description in the past even after the discrepancy had been pointed out by Anglian. Furthermore, certain of Ofwat's documents describe the correct position, which shows Ofwat is fully aware of the discrepancy.

### 2.2 Anglian Water's costs are efficient

(47) Ofwat has invited the CMA to conclude that the overall increase in totex proposed by Anglian is problematic and driven primarily by "inefficiency". Yet, as Anglian has very clearly shown, **the driver of this increase is the uplift in Enhancement expenditure to address critical issues relating to the growing risks of drought and flood**. This investment directly responds to the resilience duty, to the SPS, to customers' preferences and to the evidence from the NIC and elsewhere that delay in addressing this now will mean costs will be certain to be greater in the future.

(48) Furthermore, Ofwat's models take no account of service quality and the costs associated. Ofwat thus mistakenly concludes that a high performing company like Anglian – which sets the national standard for leakage – is simply "inefficient".

(49) Through the entire PR19 process, Ofwat has suggested Anglian's plan sought a significant uplift on its AMP6 base expenditure (Botex). In its Response to Anglian, it applied again the error which it had previously corrected after the IAP, of including Enhancement Opex within Botex.[24]

(50) Once the costs of transferred sewers and pumping stations are treated equally within Botex, Anglian shows that the **uplift from AMP6 is a mere £8 million, or 0.2%. In effect there is no material change between AMP6 and AMP7 Botex, contrary to Ofwat's presentation of the issues and despite the significant increase in its capital maintenance obligations arising from historical investment and an ageing asset base, the costs of which Anglian absorbs**. Anglian is proposing to maintain its growing and aging asset base without increasing the risk to customers from asset failure and to maintain and enhance the quality of its sector-leading performance - at effectively no additional cost.

[24] Response to Anglian, para. 1.25.

(51) Ofwat has preferred its misrepresentation to justify the inadequate allowances produced by its cost models. Anglian has consistently drawn attention to the flaws in these models and in this Reply provides further evidence of those flaws and proposes remedies for the CMA to consider.

(52) Anglian shows Ofwat's models would be significantly improved with the addition of omitted variables, such as average pumping head and very large Water Recycling Centres. It proposes reliable wholesale wastewater models which Ofwat said were not achievable. And it shows that the range of uncertainty around the company's efficiency scores and the benchmarks used is such that **a conclusion of Anglian's inefficiency is unreliable.** Finally, it suggests ways in which the CMA can take account of different levels of service quality in setting its cost allowances.

(53) Ofwat's conclusion that Anglian is inefficient (and the extent to which it is inefficient) is used to justify many of its decisions on consumer interest grounds. But given the weight it places on this conclusion, Ofwat fails to support it with adequate evidence. Ofwat expects companies to prove their efficiency from an implicit starting assumption of inefficiency (on the grounds of information asymmetry, historical outperformance, the narrowing of the gap during the process, and in Anglian's case, its uplift in costs compared to AMP6 which are the result of a much broader scope of activities being undertaken).

(54) Anglian considers it has provided sufficient evidence that its costs are efficient. It is now providing more as part of this Reply and would welcome engagement with the CMA as to how it and its advisers may wish to test this evidence.

### 2.3 Cost sharing rates and DPC

(55) Anglian does not agree with Ofwat's suggestion that the CMA should retain the original cost sharing rates in its redetermination. Anglian believes Ofwat's approach penalises companies for legitimately disagreeing with it on scope and cost efficiency during the regulatory process. It would therefore be inconsistent to come to decisions on these matters during the redetermination, but still retain Ofwat's penal cost sharing rate. To do so would directly harm Anglian and disincentivise ambitious business plans in future. In its Response, Ofwat has emphasised the link between asymmetric cost sharing rates and its menu incentive applied at PR14. Anglian has struggled to understand Ofwat's PR19 approach to cost sharing rates. This is an important issue that would benefit from the fresh eyes the CMA will bring.

(56) As a matter of good regulation, a company should have all relevant information available to it when making its decision to accept or refer its FD to the CMA. Notwithstanding this fact, Anglian will engage openly with Ofwat on its forthcoming Direct Procurement for Customers consultation and, if this provides a workable solution to the problem regarding the Elsham scheme, then Anglian would propose that the issue need not be dealt with as part of the CMA redetermination.

### 2.4 Historical performance: Anglian's past performance has been strong, responding well to regulatory incentives and creating benefits that are shared with customers

(57) In its Response and presentation to the CMA, Ofwat has sought to characterise the rewards linked to Anglian's previous strong performance as somehow suggesting bidding behaviour and gaming of the regulatory system. Anglian refutes this portrayal.

(58) In fact, Anglian's performance in AMP6 was one of the criteria informing Ofwat's 2019 assessment of Anglian as a better performing company. **Anglian's customers' bills over AMP7 will be, on average, £31 less than they would otherwise have been in the absence of the company's strong performance in AMP6**.

(59) Moreover, its strong track record shows the RPI-x regulation system has worked well in incentivising Anglian to outperform the regulatory settlement by attempting innovative solutions and delivering outcomes in a more efficient way.

(60) Customers share in the rewards of this through totex sharing and the use of lower outturn costs in the models used to set future allowances for all companies. That is, not only do Anglian's customers benefit from its performance, so do all customers in England and Wales if Anglian is used to provide a benchmark for others.

### 2.5 Customer Engagement: Ofwat is wrong to ignore the views of Anglian's customers

(61) Ofwat claims that in some cases, it was necessary to intervene to better align plans with customer interests because:

(i) the company business plan did not reflect its own customer research;

(ii) the company research was not of high quality; and

(iii) differences in research results could not be explained.

(62) None of these factors are true in the case of Anglian, whose **customer engagement received an A-rating from Ofwat**. The independent Customer Engagement Forum (which included experienced economic analysts among its number) judged that the company's engagement was strong, and the Plan reflected the customer priorities identified.

(63) Ofwat makes several generic statements and high-level arguments in relation to the industry-wide customer engagement and valuation evidence used to determine customer views needing to be of sufficient quality. Yet, it fails to demonstrate any specific credible shortcomings in the Anglian evidence used to build its investment proposals and the ODI package. Such a position would be directly contradictory to Ofwat's previous assessment of the high quality of the customer engagement and its application in developing Anglian's Plan.

(64) Ofwat also argues there are issues it is difficult for customers to judge, such as comparative efficiency. Anglian accepts there are areas where customer engagement's role may be more difficult but does not believe this justifies giving no weight to its outcomes where they do not accord with Ofwat's prior view.

(65) **Ofwat is now backtracking from its Final Methodology position that customer views were to be given sufficient weight in the PR19 process** and not be replaced entirely by the regulator's view as to what they ought to want. Anglian was guided by Ofwat's Final Methodology and the guidance provided to companies' independent CCG's to hold the quality of customer engagement to account[25] in putting together its Business Plan. The Final Methodology included strong statements such as: *"we are specifically encouraging companies to engage with their customers on longer term issues including resilience",* and that *"we expect companies to demonstrate a clear commitment across the entire business to genuinely understanding and responding to the different needs and requirements of their customers. This is key to building legitimacy and trust".*[26]

(66) In putting together its Performance Commitment and ODI package, Anglian's approach was again guided by Ofwat's Final Methodology and the guidance provided to companies' independent CCGs to

[25] CCG aide memoire issued by Ofwat setting out its expectations – see https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Aide-Memoire-for-Customer-Challenge-Groups.pdf.

[26] PR19 Final Methodology, page 22 (SOC314).

hold the quality of customer engagement to account.[27] Ofwat has not engaged with the specific complaints Anglian has raised as to how to reconcile key ODIs with a fair balancing of its duties.

(67) Ofwat's Response states customers and CCGs could not judge whether Performance Commitments were stretching or not. This conflicts with the explicit guidance for CCGs in the Aide Memoire Ofwat published as part of the PR19 process, relevant paragraphs of which included:

(i) "*CCGs will challenge companies on their approaches to setting performance commitments including how well they reflect customers' views and how stretching they are. Our assessment will include focussing on the CCG report*".[28]

(ii) "*Our approach to setting stretching performance commitment levels for PR19 is that companies should: engage with their customers on their performance commitment levels; and challenge the level of stretch in their performance commitments with their customers, CCGs and other stakeholders*".[29]

(iii) "*Companies will need to engage with their customers on the factors they take into account and will then need to explain how they have balanced these factors when setting their performance commitment levels using multiple data sources. The role of CCGs will be important in assuring how companies have engaged with their customers on this issue*".[30]

(68) This demonstrates that, in its guidance on these matters, Ofwat asked CCGs to test that companies did engage with customers on how stretching the PCs were. Now it is instead stating that customers cannot have a relevant opinion on this.

### 2.6 Capital Maintenance: There is a clear need for forward-looking analysis of capital maintenance needs which Ofwat has not undertaken for PR19 and which its Response does not address

(69) Anglian has provided various submissions and evidence as to how it built its AMP7 capital maintenance requirements. Anglian, supported by the views of Bush and Earwaker[31], has repeatedly made the case that capital maintenance allowances should be set using a range of separate forward-looking, bottom-up, risk-based, asset-led analyses rather than derived solely on the basis of a suite of inaccurate econometric models that do not include any cost drivers to capture upward pressures (such as asset condition or asset risk measures). This is an issue Anglian has engaged on for many years, including through Ofwat's 'Market Place for Ideas' in order that a better approach could be taken for PR19. Ofwat has not engaged effectively with these arguments, nor with the Asset Summaries submitted as part of our SOC.

(70) Based on Ofwat's Response, and its other published documents, Ofwat has no established framework for PR19 comparable to that used at PR99 to monitor companies' serviceability. This represents a retrograde position relative to PR99 which the EAC concluded was “intellectually neglectful”. It also seems to be at odds with Ofwat's own guidance on serviceability in MD161.[32] This is at a time when, relative to then, the challenges of climate change are both better known, and better modelled through robust asset management approaches such as those undertaken by Anglian. The absence of progress from Ofwat on this issue is a matter of extreme concern which Anglian encourages the CMA to explore

[27] CCG aide memoire issued by Ofwat setting out its expectations as to the main issues to be covered in customer engagement, available at https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Aide-Memoire-for-Customer-Challenge-Groups.pdf ("**CCG Aide Memoire**").

[28] CCG Aide Memoire, para. 6a.

[29] CCG Aide Memoire, para. 6b.

[30] CCG Aide Memoire, para. 6c.

[31] Bush & Earwaker Capital Maintenance Report (May 2019) (SOC153) and Bush & Earwaker Capital Maintenance Report (August 2019) (SOC191).

[32] Ofwat MD161: Maintaining Serviceability to Customers, April 2000 (REP48D).

as part of its redetermination. **This is not some technical disagreement: the failure to undertake this critical work exposes future customers to risks and costs as a bow-wave of need is expected during the 2020s. These costs and risks could be avoided if appropriate allowances are made in the redetermination**. Ofwat has itself begun to discuss the potential for an improved approach for PR24, but this cannot remedy the problems created by the paucity of its approach to this issue in PR19 and its implications for the proper discharge of the Resilience duty and the principle of inter-generational equity.

(71) There are useful parallels for the CMA to consider in the approach recently developed by the Water Industry Commissioner for Scotland (WICS). **The proactive and collaborative approach that WICS has taken seeks to set the right framework to enable Scottish Water to tackle challenges that are similar to those facing the sector in England and Wales. Anglian recommends the CMA seek to discuss these important issues with WICS**. Anglian also suggests that the CMA review WICS' 2019 Decision Papers, including the Paper on Asset Replacement.[33]

### 2.7 Enhancement: Anglian's request for additional Enhancement expenditure derives from regulatory obligations, the need for which should not be challenged by Ofwat

(72) There is very broad agreement that there is an urgent need to invest now to make the East of England more resilient to the threats from climate change. The Government recognises this, customers recognise this, and Ofwat's Resilience Duty should have ensured it did too. It has not done so. **The delay in investment that the FD requires will mean future customers have to bear more risk, and pay more to address it, than if Anglian's Plan had been enabled**.

(73) Ofwat claims that, through the PR19 process, it has not challenged need in relation to Enhancement spend. This is not correct. Ofwat has indeed challenged need, on a number of occasions through the process. Examples include the challenge to proposed bioresources investment, and proposed expenditure for water quality Enhancement. Specifically, within the WRMP, the clearest example is the reductions it has required in the scope of Anglian's interconnectors programme. It sustained this challenge to scope even after the WRMP had been agreed. **The result is that the resilience objectives of the supply side element of the WRMP have been compromised**. Resolving this issue is important not just for this redetermination, but for future Price Reviews, as noted by a number of respondents to the CMA's call for third-party representations.

(74) Ofwat's central justification for reducing the scope of Anglian's proposed interconnector programme is that the need to reflect a higher level of drought resilience (1 in 500 years) remains too uncertain to reflect in FDs. Ofwat's position directly conflicts with both the Water Resources National Framework and draft WRMP24 guidance which require companies to be resilient to the 1 in 500 drought risk by the 2030s. It is clear that the scale of reductions the FD makes to required investment will render Anglian unable to meet identified needs, unless the redetermination improves the position.

(75) Anglian went through a rigorous, statutory process, in which Ofwat was a full participant, to get to the right answer in its WRMP. This was then signed off by the Secretary of State.

(76) Elsewhere, Ofwat explains that it reduced costs that Anglian proposed for its Enhancement programme as it believed Anglian *"failed to provide sufficient and convincing evidence to justify its proposed solutions"*.[34] This is a clear challenge to the scope of the programme, not to cost efficiency. Anglian considers that (i) it has fully justified the robustness and transparency of its decision-making process; and (ii) Ofwat's arguments mischaracterise the guidance used by Anglian and fail to acknowledge that

[33] WICS Strategic Review of Charges – Asset Replacement (July 2019) available at https://www.watercommission.co.uk/UserFiles/Documents/2019%20Asset%20Replacement_Final.pdf.

[34] Response to Anglian, para. 1.48.

its Plan strikes a balance between known, firm requirements and potential future ones, considering the whole life costs and value of various options. Anglian remains ready to provide any further explanations required by the CMA.

(77) Ofwat has also argued that Anglian's Enhancement costs are inefficient but has itself failed to provide satisfactory evidence to substantiate this or to address Anglian's evidence regarding the limitations of Ofwat's models **which have been used to support its mischaracterisation of Anglian's proposed costs as inefficient. The teach-in that Ofwat provided the CMA on its models also neglected to address how it had developed its Enhancement models**. By contrast, Anglian has demonstrated the steps it has taken to ensure that the costs in its Plan are appropriate and Anglian's own benchmarking assessments, **shared with Ofwat, show its Enhancement costs are efficient.** Without further meaningful evidence being presented by Ofwat, Anglian cannot reconcile Ofwat's assertions that its Enhancement costs are inefficient.

### 2.8 Growth: Anglian's proposed growth true-up mechanism delivers a fairer outcome than the mechanism proposed by Ofwat (which does not capture all growth-related costs)

(78) Anglian does not suggest that its forecasts of growth are 100% accurate (no forecast can be – and Covid-19 makes this worse) but there was a logic in both the original approach (given its alignment with the mandated WRMP basis for forecasts), and the updated figures, which were intended to provide Ofwat and subsequently the CMA with the benefit of the most up to date data available (i.e. recent outturn data) to inform a reasoned approach. However, rather than engage now in a detailed argument about forecasts, Anglian believes the CMA should focus on how the price control can be made robust to the inevitable uncertainty in forecasts.

(79) Perhaps most importantly, Ofwat's proposed Developer Services Revenue Adjustment is inadequate as it does not cover the full scope of costs that a company may incur in relation to housing and population growth pressures. **Anglian's proposal for an appropriate true-up mechanism addresses this shortcoming and ensures a fair outcome, regardless of the profile of housing growth that transpires**. This approach is fair to all parties and recognises that the vagaries of external economic or other forces driving particular growth outcomes should not leave companies or customers out of pocket, or unduly benefiting. Anglian acknowledges Ofwat's concerns in relation to distortive incentives and has thought further about how best to address these. It would welcome the opportunity to work with the CMA to develop this approach further.

(80) Anglian also acknowledges the short-term impact of Covid-19 on new completions (although construction activity has already begun to pick up again, incentivised by clear Government guidance to that effect). This issue is dealt with alongside other Covid-19 impacts in a separate submission Anglian is making to the CMA.

(81) Growth unit rate evidence supplied by Anglian has not been properly considered by Ofwat, nor is the fact that population growth will still be a pressure, even if housebuilding rates are slower.

(82) Anglian also acknowledges its revised lower forecasts flow through to revised totex needs. Anglian has been working on this for several months: the task is complex as there is not a linear relationship between the drivers of growth and totex costs. The results of this work are included as part of this submission. The lower forecast means growth totex needs reduce by £33 million.

(83) In conclusion, Anglian believes it has shown:

(i) lumpy growth costs, often linked to network reinforcement requirements, are not part of base costs, contrary to Ofwat's assertion. Critically, Ofwat's models are not just wrong in detail, they miss fundamental drivers of costs;

(ii) its unit costs for growth are efficient; this is underpinned by the further evidence from Vivid Economics that it presents as part of this Reply; and

(iii) its proposed true-up addresses the inherent uncertainty of growth forecasting, and can be structured to avoid any problematic incentives.

### 2.9 Opex-Capex Misallocation: Ofwat's Response does not address Anglian's arguments about the shortcomings of its approach and its negative consequences

(84) Anglian's SOC outlines how, as the result of an error, Ofwat allocates too little to opex within the total allowed expenditure. **This leaves Anglian with £157 million less opex than it should have for AMP7, with an equivalent excess of capex**.

(85) This is a result of Ofwat treating base and growth costs together while calculating the opex/capex composition of total allowed expenditure. Ofwat assumed that the cost challenge was nearly equally split between opex and capex – ignoring that a significant proportion of the challenge was to capex-heavy growth costs.

(86) Ofwat's Response seems to accept, or at least does not contest, that the FD results in a misallocation. And it does not engage with Anglian's arguments. Rather, its justification appears to be that (unaffected) companies are generally supportive of its approach and that to remain consistent with its cost assessment, it should consider base and growth costs together. Ofwat's position is not tenable – it cannot ignore that its approach is clearly inappropriate for Anglian's circumstances. Further, it would be easy to remedy the error by calculating the growth allowance separately (and, indeed, Ofwat has already made this calculation).

(87) **This misallocation has a real-world impact on the business. As a result of the FD, Anglian will be unable to recover sufficient funds needed for the operating expenses to run the business**. This also undermines Anglian's ability to meet the financial ratios required to retain Baa1 credit ratings. To mitigate the effects of Ofwat's error, Anglian will be forced to make short-term expenditure reductions that will reduce the quality of service and increase the need for greater expenditure in future periods to recover from this harm.

(88) **Ofwat's approach fails to appropriately reflect the costs of maintaining a higher quality service and pushing this further in future**. Ofwat's Response is inconsistent on the interaction between cost and service. It makes reference to acknowledging in theory there is a relationship between service and cost.[35] But, in practise, it has done nothing to reflect this, and has advanced no further credible evidence in its Response that the FD addresses the relationship between the quality of service a company delivers and the costs of doing so. In fact, to the contrary, it has based its FD on the assumption that companies that are upper quartile on efficiency can also achieve upper quartile on service quality.

(89) The level of evidence provided by Ofwat's charts to support its position falls well short of the standard expected in a regulatory debate, particularly when used to support a position as radical as to claim that it need not reflect additional expenditure requirements to either maintain high quality service or to achieve further service improvement. The refusal by Ofwat to recognise that maintaining and providing higher quality of service often costs more to achieve drives a large part of its mischaracterisation of Anglian's costs - that are needed to maintain and enhance quality as being "inefficient".

(90) Anglian's SOC provided robust evidence of historical and future-looking analyses demonstrating how costs increase as service provided improves. The CMA, when assessing efficient existing and future costs, should therefore take into account as a cost driver quality output measures, such as leakage or

[35] *"We agree that there can be a trade-off between service quality and cost, and improvements in service quality can come at a higher cost."* Response to Anglian, para 1.67.

interruptions to supply, when setting its view of expenditure allowances. There are inevitable limitations in the evidence available, not least because of the difficulty of assessing underlying efficiency of costs (even triangulation across the best available econometric benchmarking models cannot be expected to give a precise position on efficient costs). In this context, it matters what the starting point is, as a matter of principle and of theory. Anglian contends that it is important for the regulatory regime to start from the principle that trade-offs between costs and quality do indeed exist.

### 2.10 WACC: Ofwat has failed to meet its duty to ensure that companies are able to finance their functions by making a reasonable return on capital

(91) Ofwat's Response largely reiterates arguments that it presented in the PR19 process. It has not engaged with or addressed the fundamental concerns with its approach that Anglian, and others, have raised in the SOC. Consequently, it continues to advocate a WACC estimate of 1.92% (RPI-real) that is significantly below the actual cost of capital over AMP7. This risks the financial resilience of the company and dilutes the long-term incentive for investors to invest in the water sector.

(92) Ofwat states: "*Having regard to the volume of the economic and financial analysis forming part of the PR19 determinations, the companies cannot credibly cast doubt on the fact that we have acted in the manner we considered best calculated to secure that companies are able to finance the proper carrying out of their functions (in particular by securing reasonable returns on capital).*"[36] However, Anglian has shown that Ofwat has failed to meet the duty to ensure that companies are able to finance their functions by making a reasonable return on capital. While Ofwat claims that, as a regulator, it has discretion in determining the "manner best calculated" to secure financeability, the Competition Commission in Bristol (2010) made it clear that "*[a] return below the cost of capital would not be consistent with [the Financeability Duty]*".[37]

(93) The failure to meet its duties in this regard flow from a range of issues, in particular:

(i) Ofwat has introduced major changes to how the total market return and risk-free rate are estimated. It is these methodology changes, rather than changes in the market, that account for the majority of the reduction in the allowed base equity return since PR14. Ofwat continues to articulate a position that is not supported by a balanced analysis of the available evidence.

(ii) In terms of the total market return (TMR), there have been two important updates since the PR19 FDs – a revised forecast of the forward-looking RPI-CPI wedge from 100bp to 90bp, and the publication of DMS returns data for 2019. **Under Ofwat's approach to estimating the TMR, the cumulative impact of incorporating these updates is to increase the RPI-real TMR by c.20bp**.

(iii) Ofwat has mischaracterised Anglian's position as seeking to claim for the actual cost of embedded debt, whereas Anglian's position is that the allowance should provide for an efficiently financed company to recover its cost of embedded debt. By imposing its own view of an efficient financing strategy, drawing on the benefit of hindsight, Ofwat is not allowing companies to recover historical financing costs that were incurred efficiently, based on the market rates and regulatory policy at the time. This is inconsistent with its previous statements and exposes companies to significant risk of changes in market conditions as well as changes in regulatory policy, which the company cannot control. **Ofwat's approach does not create the right incentives as it rewards and penalises companies for factors that are outside their control**

[36] Response on Overall Stretch, para. 3.77.

[37] *Bristol (2010)* (SOC345).

**(i.e. future market movements) rather than factors they do control (i.e. whether their debt issuances reflect efficient market rates at the time of issuance)**.

(94) Ofwat also claims that Anglian accepted its provisional WACC in 2018 and infers it should not be disputing it now. This is both wrong as a matter of regulatory process, and an incorrect representation of the Anglian Board's position. In the Board Assurance Statement to Anglian's DD, the Anglian Board stated clearly that: *"Despite a low WACC assumed in our September Plan, the Board was able to provide assurance that the plan was financeable due to its commitment to re-invest dividends from the base-plan back into the Company. However, Ofwat has since made a number of interventions which have increased the overall risk in the plan. Ofwat has also proposed a further reduction in the WACC. The Board can therefore only attest to the long-term financial resilience of the Company when the balance of risk, and the level of WACC determined by Ofwat, enables the Company to finance the delivery of its business plan."*[38]

### 2.11 Financeability: Ofwat's Response does not address the fundamental problems that PR19 has created and which were set out in Anglian's SOC

(95) In the main, Ofwat's Response shows that it continues to underestimate the significant financeability problems created by its FD. The conclusion that the notional company can maintain a credit rating two notches above the minimum investment grade rating, rests on multiple unreasonable and unrealistic assumptions, which Anglian describes in detail in this Reply, but at the headline level **the financeability duty is shown not to have been met because the notional company cannot achieve the Baa1 rating that is assumed in the WACC analysis and that Ofwat is targeting in its own financeability analysis**.[39] This confirms the assessment that the equity return has been underestimated relative to the cost of debt. Moreover, **Ofwat fails to acknowledge that since the FD, which had been calibrated to the minimum threshold for a Baa1 rating, the financeability of the notional company has worsened as a result of a reduction in inflation and other consequences of Covid-19**.

(96) Ofwat seeks to argue that Parliament was not thinking of the application of financial metrics when it passed the Water Act 1989. However, the Financeability Duty is clear, and over many years, both Ofwat and the CMA have considered financial ratios as part of the assessment of financeability.

(97) It is also notable that Ofwat identifies "financeability constraints" when a notional company achieves an AICR below 1.50x as a result of the FD. It then seeks to address the problem by advancing revenue through PAYG adjustments so that (by its calculation) the notional company will have an AICR of at least 1.50x. Yet, it does not address the problem that this makes no difference to the ability of companies to meet their total debt obligations in terms of interest and capital repayments and does not address the inadequate allowance for the return on capital.

(98) Conscious that rating agencies disregard PAYG in assessing creditworthiness, and therefore implicitly accepting that these will not address the financeability issue, Ofwat has now proposed alternative mitigations in response to Anglian's SOC, including faster transition to CPIH and changing the definition of the notional company by adjusting the notional gearing level. Neither of these mitigations are an effective means of addressing the financeability constraint, which arises from the inadequacy of returns on equity. These proposals, which have only now been proposed for the first time, are inconsistent with Ofwat's previous statements and policy. These changes seek to **make the notional company fit the FD and therefore redefine what is financeable, rather than setting a price control that meets the agreed financeability standard** and so discharges the financeability duty.

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[38] DD Board Assurance Statement (SOC170).

[39] Anglian's SOC, Chapter J: Financeability, section 3.1, paras. 1246 to 1247.

(99) Ofwat has now also sought to use evidence on the share prices and credit ratings of other companies as evidence that its FD is financeable. Anglian's analysis shows that other factors are driving share prices and credit ratings of the specific companies in question and that the market data does not confirm Ofwat's claim that the PR19 FD is financeable for either the notional company or more widely across the sector. The key points are that:

(i) The small number of companies that have maintained ratings of Baa1 either have debt headroom (lower cost of embedded debt and/or lower gearing) that the notional company does not, or have other credit-enhancing features of their corporate structures; and

(ii) The share prices of Severn Trent and United Utilities are driven by factors (e.g. 'enhanced' status, company expectations around Totex outperformance, and being at the positive end of the approach to averaging the cost of embedded debt) that are not generalisable to the sector as a whole and are therefore not directly relevant to assessing the financeability of the notional company.

### 2.12 Gearing Outperformance Sharing Mechanism: Ofwat has failed to demonstrate that this will further the consumer objective, why Anglian's financial structure poses a material resilience risk relative to lower-geared companies, or that there is a benefit to be shared with customers

(100) Ofwat's Response does not advance evidence to support its position on the Gearing Outperformance Sharing Mechanism (the **"Mechanism"**). The introduction of the Mechanism is based on Ofwat's purported challenge to "*the legitimacy of the regulatory framework*".[40] However, it is clear that much of this was driven by political concerns. There is **no evidence put forward by Ofwat that customers are concerned by water companies employing securitised structures**.

(101) **Ofwat has dramatically changed its position over the course of PR19**. In particular, Ofwat now dismisses the benefits of securitised structures when previously it recognised that these are "*viable and sustainable over the longer term*", and benefitted customers directly through "*lower tax costs*" and indirectly through "*increased scrutiny*" on management, both resulting in lower customer bills.[41] In a similar vein, Ofwat introduces the Mechanism when previously it held that a sharing mechanism "*goes against the principles of the incentive-based regulatory framework*".[42]

(102) **Ofwat fails to meet the evidential standard required for the introduction of the Mechanism**. Ofwat, and its consultants Europe Economics, simply speculate that the key assumptions underpinning the introduction of the Mechanism may or may not be correct rather than concluding with certainty that the assumptions are sufficiently likely to justify an intervention of this magnitude. The use of conditional language falls far below the evidential standard required for regulatory intervention.

(103) **Ofwat incorrectly assumes that a high gearing per se impacts financial resilience.** Ofwat fails to provide any additional theoretical or empirical basis to support its arbitrary conclusion that a gearing above 70% gives rise to unacceptable levels of risk compared to a gearing of 60%. Further, Ofwat incorrectly treats companies with Aligned Debt Programmes and de-risking covenants on the same basis as companies with unsecured corporate debt.

(104) **Ofwat mistakenly assumes that higher levels of gearing create a "benefit" to shareholders**. Ofwat asserts that high gearing results in a "risk transfer" from shareholders to customers because it increases the probability of default. The examples Ofwat cites in support of this only show the effects of a potential default on customers. It ignores the fact that in both examples, the effects were equally severe for

[40] Ofwat PR19 Cost of Debt Consultation, page 35 (SOC473).

[41] Ofwat PR19 Cost of Debt Consultation, page 19 (SOC473).

[42] Ofwat PR19 Cost of Debt Consultation, page 20 (SOC473).

shareholders. Ofwat offers no evidence that shareholders have permitted higher levels of gearing safe in the knowledge that they would not bear the cost of the increased risk.

(105) Ofwat's response dismisses the tax benefits of highly geared structures as well as those accruing from enhanced protections of aligned debt structures. As set out above, this is contrary to its previous position. Ofwat contends that securitisation arrangements "*are designed to protect lenders*" and fails to recognise that in reality the interests of lenders and customers are aligned in several ways – the most important being that the company does not default.

(106) Finally, Ofwat has not engaged with Anglian's arguments that the Mechanism runs against Ofwat's duties. Ofwat's contention that the glidepath satisfies its procedural duties is untenable and unevidenced. This is precisely proven by Anglian itself, which would have to significantly alter its capital structure in Year 1 of AMP7 and incur exorbitant break costs to benefit from the glidepath. Hence, Ofwat's glidepath does not mitigate the sudden and insufficiently signposted introduction of the Mechanism.

# Anglian's Reply: List of submissions

| Ref. No | Proposed Short Names | Full Names |
|---|---|---|
| **1** | **Cover Letter** | |
| | Cover Letter | Cover Letter |
| **2** | **Executive Summary** | |
| **REP01** | Executive Summary | Executive Summary |
| **3** | **Tables: Review of key points from Ofwat's Response and Anglian's reply** | |
| **REP02** | Part A: Review of Cost arguments<br>• Part A.1: Review of Botex and Capital Maintenance arguments<br>• Part A.2: Review of Growth arguments<br>• Part A.3: Review of Enhancement arguments<br>• Part A.4: Review of Opex/Capex Misallocation arguments | Part A: Review of Cost arguments<br>• Part A.1: Review of Botex and Capital Maintenance arguments<br>• Part A.2: Review of Growth arguments<br>• Part A.3: Review of Enhancement arguments<br>• Part A.4: Review of Misallocation of Opex and Capex arguments |
| **REP03** | Part B: Review of Cost Service Disconnect arguments | Part B: Review of Cost Service Disconnect arguments |
| **REP04** | Part C: Review of Cost sharing rates and uncertainty mechanisms arguments | Part C: Review of Cost sharing rates and uncertainty mechanisms arguments |
| **REP05** | Part D: Review of ODIs arguments | Part D: Review of ODIs arguments |
| **REP06** | Part E: Review of Leakage arguments | Part E: Review of Leakage arguments |
| **REP07** | Part F: Review of Risk and Return arguments<br>• Part F.1: Review of WACC arguments<br>• Part F.2: Review of Financeability arguments<br>• Part F.3: Review of Gearing arguments | Part F: Review of Risk and Return arguments<br>• Part F.1: Risk and Return Review of arguments WACC<br>• Part F.2: Risk and Return Review of arguments Financeability<br>• Part F.3: Risk and Return Review of arguments Gearing |

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| **4** | **Narratives - Provide further analysis in response to the points raised in Ofwat's Response** | |
| **REP08** | Part G: Reply to Ofwat's Response on Cost issues<br>• Part G.1: Reply on Uplift and Outperformance<br>• Part G.2: Reply on Capital Maintenance<br>• Part G.3: Reply on Growth<br>• Part G.4: Reply on Enhancement cost efficiency<br>• Part G.5: Reply on WRMP decision-making process<br>• Part G.6: Reply on Frontier shift<br>• Part G.7: Reply on Opex/Capex Misallocation | Part G: Reply to Ofwat's Response on Cost issues<br>• Part G.1: Reply to Ofwat's Response on uplift in totex from AMP6 to AMP7 and previous outperformance<br>• Part G.2: Reply to Ofwat's Response on capital maintenance<br>• Part G.3: Reply to Ofwat's Response on growth<br>• Part G.4: Reply to Ofwat's Response on enhancement cost efficiency<br>• Part G.5: Reply to Ofwat's Response on WRMP supply-side decision-making<br>• Part G.6: Reply to Ofwat's Response on Frontier shift<br>• Part G.7: Reply to Ofwat's Response on Opex Capex Misallocation |
| **REP09** | Part H: Reply on Cost service disconnect | Part H: Reply to Ofwat's Response on cost service disconnect |
| **REP10** | Part I: Reply to Ofwat's Response on Risk and Return<br>• Part I.1: Reply on WACC<br>• Part I.2: Reply on Financeability<br>• Part I.3: Reply on Gearing Sharing<br>• Part I.4: Reply on Dividends | Part I: Reply to Ofwat's Response on Risk and Return<br>• Part I.1: Risk and Return WACC<br>• Part I.2: Risk and Return Financeability<br>• Part I.3: Risk and Return Gearing Sharing<br>• Part I.4: Risk and Return Dividends |
| **5** | **Annexes - Third-party reports commissioned by Anglian and documents referred to in Anglian's Reply** | |
| **REP11** | Ofwat Initial Presentation to CMA (20 May 2020) | Ofwat, CMA Initial presentation in response to water companies' statements of case (20 May 2020) |
| **REP12** | Vivid Technical Note on Growth Modelling Issues | Vivid Economics, Technical note on growth modelling issues (May 2020) |
| **REP13** | Oxera's Report on cost assessment issues | Rebuttal of Ofwat's response on cost assessment issues, Oxera, in association with Professor Subal Kumbhakar (May 2020) |
| **REP14** | Prof. Saal and Dr Nieswand's Report on cost models | Incrementally Improving Ofwat's Collection and Bioresource Plus Modelling, and Demonstrating the Feasibility of Integrated Wholesale Wastewater Regulatory Cost |

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| | | Assessment Modelling by Prof David Saal and Dr Maria Nieswand of Loughborough University (May 2020) |
| **REP15** | PR19 Econometric Cost Modelling Consultation | Cost assessment for PR19: a consultation on econometric cost modelling, Appendix 1 Modelling results (March 2018) |
| **REP16** | RIIO-ED1 FD | Ofgem, RIIO-ED1: Final determinations for the slow-track electricity distribution companies (November 2014) |
| **REP17** | Ofgem Strategy Decision for the RIIO-ED1 Electricity Distribution Price Control | Ofgem, Strategy decision for the RIIO-ED1 electricity distribution price control, Uncertainty mechanisms (March 2013) |
| **REP18** | Challenges to incentive-based regulation Paper | Challenges to incentive-based regulation from PR19 - a discussion paper (18 May 2020) |
| **REP19** | Leakage Unit Cost Graph | Anglian, Forecast leakage level v. leakage enhancement unit costs |
| **REP20** | KPMG Reply to CMA's approach to cost of equity in NATS PFs | KMPG, A reply to the CMA's approach to the cost of equity in the NATS Provisional Findings (15 April 2020) |
| **REP21** | BoE: A millennium of macroeconomic data for UK | Bank of England, A millennium of macroeconomic data for the UK (30 April 2017) |
| **REP22** | BoE Monetary Policy Report (2020) | Bank of England, Monetary Policy Report (May 2020) |
| **REP23** | Gregory et al, Estimation of Beta for Regulatory Charge Control | Gregory, A., Harris, R. and Tharyan, R., A report on the Estimation of Beta for Regulatory Charge Control Purposes (May 2020) |
| **REP24** | Oxera Cost of equity for RIIO-2 Report | Oxera, The cost of equity for RIIO-2, Q4 2019 update (November 2019) |
| **REP25** | Ofwat IAP, Aligning Risk and Return Appendix | Ofwat, Initial Assessment of Plans, Technical appendix 3: Aligning risk and return (January 2019) |
| **REP26** | Moody's Outlook remains negative as PR19 leads to unprecedented number of appeals | Moody's, Regulated Water Utilities: Outlook remains negative as price review leads to an unprecedented number of appeals (April 2020) |

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| **REP27** | GIIA CMA Ofwat Price Determinations Case Submission (2020) | Global Infrastructure Investor Association, CMA Ofwat Price Determinations Case Submission, (May 2020) |
| **REP28** | Moody's Transition to CPI creates risks for water and energy networks (2016) | Moody's Report: GB Water and Energy Networks: Transition to CPI creates risks for water and energy networks (2016) |
| **REP29** | CAA Economic regulation of capacity expansion at Heathrow | Civil Aviation Authority, Economic regulation of capacity expansion at Heathrow: policy update and consultation, CAP 1610 (December 2017) |
| **REP30** | Moody's United Utilities Water, PR19 FD Update (2020) | Moody's, United Utilities Water Limited, Update following PR19 final determination (March 2020) |
| **REP31** | Ofwat's regulatory approach (2016) | Ofwat, Water 2020: our regulatory approach for water and wastewater services in England and Wales (May 2016) |
| **REP32** | Fitch Downgrades Wessex Water to 'BBB' (2020) | Fitch Ratings, Fitch Downgrades Wessex Water to 'BBB'; Outlook Stable (March 2020) |
| **REP33** | Capital Maintenance Planning (July 2015) | Capital Maintenance Planning - From an Historical and Future Perspective (July 2015) |
| **REP34** | Revised Growth Data Tables | Revised growth totex tables |
| **REP35** | Updated Growth Data Table Commentary | Growth forecast and investment update table commentary |
| **REP36** | Growth Technical Assurance Report | Summary Audit Report: Updated growth forecasts by Jacobs Engineering Group |
| **REP37** | UKWIR Guidance on Decision Making Process | UKWIR, WRMP19 Methods - Decision Making Process: Guidance (2016) |
| **REP38** | EA Water Resources Planning Guidelines Checklist | EA WRMP guideline supplementary document - Water company checklist (May 2017) |
| **REP39** | EA Draft Water Resources Planning Guidelines WRMP24 | Environment Agency, Draft Water Resources Planning Guidelines WRMP24 (Version 4.2) |
| **REP40** | First Economics Frontier Shift Report (March 2019) | A review of Ofwat's PR19 approach to estimating frontier shift, First Economics (March 2019) |
| **REP41** | First Economics Frontier Shift Report (February 2020) | A review of Ofwat's PR19 approach to estimating frontier shift, First Economics (February 2020) |

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| **REP42** | Response to KPMG analysis of future productivity potential (March 2018) | Response to KPMG analysis of future productivity potential (March 2018) |
| **REP43** | OBR Forecast evaluation report | Office for Budget Responsibility, Forecast evaluation report (December 2019) |
| **REP44** | Ofwat and CAA Alternative approaches to setting the cost of debt | Ofwat & Civil Aviation Authority: Alternative approaches to setting the cost of debt for PR19 and H7 (August 2016) |
| **REP45** | Ofwat Monitoring Financial Resilience (January 2020) | Ofwat, Monitoring Financial Resilience (January 2020) |
| **REP46** | Ofwat Project Redbull Consent (11 April 2002) | Ofwat, Project Redbull – Ofwat Consent (11 April 2002) |
| **REP47** | KPMG Analysis of dividends | KPMG, Analysis of Anglian Water dividend payments (May 2020) |
| **REP47A** | Anglian Transmittal Letter KPMG Analysis of dividends | Anglian, Transmittal Letter to the CMA on KPMG Analysis of dividends (27 May 2020) |
| **REP47B** | KPMG Release Letter KPMG Analysis of dividends | KPMG, Release Letter to Anglian for KPMG Analysis of dividends (27 May 2020) |
| **REP48** | Customer Engagement Policy (May 2016) | Ofwat's customer engagement policy statement and expectations for PR19 (May 2016 |
| **REP48A** | Email correspondence between Ofwat and Anglian (7 May 2020) | Email correspondence between Ofwat and Anglian (7 May 2020) |
| **REP48B** | IAP CAC Feeder Model Anglian (corrected for log error) | Ofwat, Initial Assessment of Plans Cost Adjustment Claim Feeder Model for Anglian (January 2019) (version corrected by Anglian for log error) |
| **REP48C** | UKWIR Capital Maintenance Planning Growth in the Asset Base | UK Water Industry Research, Capital Maintenance Planning Implications for Maintenance of Growth in the Asset Base (2003) |
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| **REP60** | Prof. Saal and Dr Nieswand's Report - Do files Bioresources Plus | Stata-do-files Regressions Wholesale wastewater Bioresources Plus (Saal & Nieswand) |
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| **REP65** | Vivid Technical Note on Growth Modelling Issues - Simulation waste | Vivid Economics, Technical note on growth modelling issues (May 2020) - Simulation waste |
| **REP66** | Vivid Technical Note on Growth Modelling Issues - Master waste | Vivid Economics, Technical note on growth modelling issues (May 2020) - Master waste |
| **REP67** | Vivid Technical Note on Growth Modelling Issues - Efficiency Score | Vivid Economics, Technical note on growth modelling issues (May 2020) - Efficiency Score |

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| **REP68** | Vivid Technical Note on Growth Modelling Issues - Figures for notes | Vivid Economics, Technical note on growth modelling issues (May 2020) - Figures for notes |
| **REP69** | Vivid Technical Note on Growth Modelling Issues - Simulation Figures | Vivid Economics, Technical note on growth modelling issues (May 2020) - Simulation Figures |
| **REP70** | Vivid Technical Note on Growth Modelling Issues - Growth Opex Implicit Allowance | Vivid Economics, Technical note on growth modelling issues (May 2020) - Growth Opex Implicit Allowance |

# Anglian Water PR19

## Part A: Review of Cost arguments

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# Part A.1: Review of Botex and Capital Maintenance arguments

## Preliminary observations on cost assessment

Ofwat claims that:

(i) Anglian's requested expenditure was the largest increase relative to historical levels of any company;

(ii) The cost gap of £732 million is the largest across the industry, in terms of magnitude and at 12% as a proportion of investment;

(iii) Anglian's proposals were generally inefficient and the company has failed to provide sufficient and convincing evidence to show otherwise;

(iv) The FD gives Anglian £5.6 billion, 15% more than in 5 years to 2018/19.[1]

(v) "*Company business plans have consistently proved to be poor guides to outturn expenditure […] our expenditure allowances tend to be a better guide to company to outturn expenditure than company forecasts*".[2] Anglian has outperformed its totex allowance in the last four price controls and has met over 90% of its performance commitments in 2015-19. Ofwat cites this as implicit evidence that "*if efficient, Anglian can continue to deliver its commitments and obligations within the cost allowances we have set, with incentives to outperform, and receive returns*".[3]

The above assertions ignore that the increase in Anglian's total expenditure is **almost entirely driven by higher enhancement expenditure** in response to a significant increase in statutory drivers, growth and the need to increase resilience.[4]

The cost gap reflects the difference between Anglian's view and Ofwat's view as to Anglian's efficient costs. It is not "high totex bidding" as Ofwat suggests.[5] The difference reflects the failure of Ofwat's cost assessment approach to account for **legitimate differences between companies' costs and between time periods – not inefficiency (and certainly not the magnitude Ofwat suggests)**. It follows, that Ofwat's basis for applying the catch-up efficiency challenge and punitive cost-sharing rate to Anglian are unsound.

Ofwat's comparison across time periods is also misleading as Ofwat has excluded 2019/20 from the previous period on the grounds that it is unusually high. This approach fails to recognise that the end of the AMP is when spending increases to meet deadlines for capital projects due for completion during the AMP.

[1] Response to Anglian, paras. 1.1 and 3.1.
[2] Response to Anglian, para. 2.8.
[3] Response to Anglian, paras. 1.2 and 1.79.
[4] As clearly set out in Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built.
[5] Ofwat Initial Presentation to CMA (20 May 2020), Slide 34 (REP11).

Anglian addresses Ofwat's perception of the increase in AMP7 costs compared to the past[6] in detail in **Part G.1: Reply on Uplift and Previous Outperformance (REP08)** and demonstrates that the variance between Anglian's AMP6 and AMP7 Botex expenditure is effectively nil.

Ofwat uses "information asymmetry" to support its finding of inefficiency and to justify the high burden of proof on Anglian to evidence its costs. Yet, Ofwat has failed to adequately engage with Anglian's own cost assessment approach to sense check its modelled outcomes against bottom up, engineering led evidence and risk-based analysis. This issue is relevant to Anglian's critique of Ofwat's cost assessment approach for base costs, summarised in the table below and set out further in **Part G.2: Reply on Capital Maintenance (REP08)**.

Ofwat's comparison of company business plans and outturn expenditure ignores that company business plans cease to be a relevant comparator for outturn expenditure once the FD is in place, not least due to the significant variations in terms of scope of proposed activity. Having accepted their FDs, companies work within the cost allowances defined by the FD. As such, Ofwat's comparison of Company business plans and outturn expenditure is irrelevant. It certainly does not evidence that Ofwat's assessment of a company's expenditure needs is more accurate than a company's own assessment. This is further set out in **Part G.1: Reply on Uplift and Previous Outperformance (REP08)**.

**Part G.1: Reply on Uplift and Previous Outperformance (REP08)** presents an analysis of Anglian's actual performance on costs in the last four price control periods. The analysis illustrates that Anglian's outperformance applies almost entirely with respect to enhancement: Botex outturn is close to the FD allowance. Therefore, This, provides further evidence to support Anglian's expenditure Plan on base and cast doubt on the accuracy of Ofwat's models in determining Anglian's efficient base costs. In particular, Ofwat is incorrect to rely on past outperformance to suggest that Anglian's Plan overstates its base costs and to justify the high evidential bar which it applies to assessing them. Furthermore, it sets out why outperformance is incentivised in the RPI-X framework. Further exploration of the challenges to incentives is set out in the accompanying **Challenges to incentive-based regulation Paper (REP18)**.

[6] Response to Anglian, page 38, Table 3.3.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| **1** | Anglian's plan proposed a modest (1.9%) increase in Botex allowance versus AMP6 | | |
| **1.1** | The increase in Botex requirements relative to AMP6 is modest (£65 million a **1.9% increase**), driven by the cost of **new service obligations and higher capital maintenance needs, partially offset by efficiency improvements**.[7]<br><br>Ofwat's FD therefore represents a £199 million (6%) decrease against Anglian's Botex spend in AMP6. | Ofwat rejects this analysis and submits that the increase is in fact 4.1% and that, by excluding the forecast year 2019-20 (which it claims to be exceptionally high and unrepresentative), the difference increases to 8.8%.[8]<br><br>Table 3.3 (page 38 in Ofwat's Response to Anglian's SOC) sets out Ofwat's perception of the increase in base costs in AMP7 compared to the past. | In comparing historical and future expenditure, Ofwat has reverted to the approach it took at IAP but subsequently corrected for the remainder of the price review process. This involves (i) treating enhancement opex in base and (ii) using the five years' data up to 2018/19 rather than AMP6 as a whole in its assessment of historical expenditure.<br><br>Point (i) above is important given that enhancement opex consists of two elements: the additional opex consequent on enhancement capex projects; and opex solutions to capex problems. This latter category of cost consists of precisely the sort of innovative solutions which totex funding is intended to unlock (e.g. Sustainable Urban Drainage Systems). If enhancement opex is included within Botex a company such as Anglian, which has proposed a lot of these type of opex schemes in AMP7, will inevitably appear to be seeking a significant Botex uplift by comparison to a company that has not taken such an innovative approach.<br><br>Point (ii) is important as the end of the AMP is when spending tends to be at its highest. The end of AMP6 is a higher level of spend than the end of AMP5. Excluding 2019/20 from the comparison with the whole of AMP7 thus makes the next AMP's cost total appear to be a significant AMP on AMP increase.<br><br>Anglian addresses Ofwat's perception of the increase in base costs in AMP7 compared to the past[9], in detail in **Part G.1: Reply on Uplift and Previous Outperformance (REP08).** |
| | | Ofwat claims that its efficient level of modelled base costs is only 2% lower than that of the company (disregarding its cost adjustment claims).[10] | There is no basis for excluding the cost adjustment claims from this comparison, given that these costs form part of the differential between Anglian and Ofwat's view of efficient base expenditure for AMP7 (including £230 million for capital maintenance of an ageing and growing asset base), not captured by Ofwat's models. |

[7] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 3.
[8] Response to Anglian, paras. 1.1 and 3.3.
[9] Response to Anglian, page 38, Table 3.3.
[10] Response to Anglian, para. 3.2.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | | | The actual cost gap between Ofwat's view of efficient base costs and Anglian's AMP7 Botex in its Plan is 7%, which Anglian cannot reconcile with its view of efficient costs. |
| | | Ofwat claims the company is proposing a significant increase from historical costs that is not fully justified. Ofwat states that Anglian is using its allowance for 2015-20 to prepare for 2020-25, citing the example of this to be the company spending up to £165 million of outperformance reinvested to make an "early start" on resilience plans and drive forward enhanced digital capability and customer experience.[11] | There is no robust reason for Ofwat's decision to exclude 2019-20 from its comparison. In doing so, Ofwat is suggesting that the expenditure in 2014-15 is a more appropriate year of expenditure to assess changes in AMP6 expenditure compared AMP7 proposals. This is unsupported, as is the statement that 2019-20 is "unrepresentative".<br>Ofwat's portrayal of Anglian's forecast expenditure for 2019-20 is inaccurate, not using the latest information available to it by using the forecasts Anglian made in its IAP response in March 2019 rather than its DD response in August 2019.<br>Ofwat's characterisation of Anglian's decision to reinvest outperformance achieved is confused. It appears to suggest the company should be penalised in its assessment for the decision of shareholders to reinvest in order to improve resilience and customer experience rather than extracting as dividends.<br>Ofwat's position removes the incentive to invest future outperformance if such decisions are simply used to demonstrate a company is either high cost, or should be stretched further in the next regulatory period because of the "early start". Such an impact is explored in more detail in **Challenges to incentive-based regulation Paper (REP18).** |
| **1.2** | The modest increase in Botex requirements versus AMP6 is justified by the need to **(i) maintain service while assets deteriorate, (ii) operate and maintain a larger asset base and (iii) maintain and raise standards of service**.[12]<br>As regards (i), Anglian described its asset and investment planning approach and how it balances risks, service and cost (through its asset management tools) with the interests of stakeholders and statutory objectives throughout PR19 and in | Ofwat claims that the inclusion of the cost adjustment claim mechanism ensures its PR19 methodology is consistent with the recommendations made in 2000 by a parliamentary select committee, which were that future capital maintenance allowances should be based on a forward-looking approach.[13] | Anglian rejects Ofwat's claim that the cost adjustment mechanism is an adequate substitute for a thorough forward-looking assessment of a company's capital maintenance needs. See further detail in **Part G.2: Reply on Capital Maintenance (REP08).** |

[11] Response to Anglian, para. 3.3.
[12] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 3. See also Asset Management Dashboards (SOC364).
[13] Response to Anglian, para. 3.84.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | its SOC, **Chapter B.3: Anglian's Plan and how it was built**, as well as in its Asset Management Plan Summaries. | | |
| **1.3** | As regards (ii) above, this includes a significant extension of the asset base during AMP6 which need to be maintained. This includes as a result of adopting **over 1,200 private wastewater pumping stations**. Anglian's planned expenditure on these assets for AMP7 includes £19 million capex that would previously have been accounted for as enhancement, rather than base, capex.[14] | Ofwat repeatedly misrepresents Anglian's point, by claiming that Anglian "*mistakenly puts forward an argument that [Ofwat has] not allowed for the increased costs arising from the adoption of private sewers and pumping stations in [Anglian's] base allowance*".[15] Ofwat argues that it included the historical costs related to the adoption of these assets in its base econometric models.<br><br>Ofwat also claims that, as Anglian forecasts capital costs which are £55 million lower than those incurred historically in this area, Ofwat's implicit allowance might have been significantly higher than the company forecast.[16] | Contrary to Ofwat's assertion, **Anglian does not claim that Ofwat's allowance does not allow for the costs of these transferred assets**. Rather, Anglian's reference to transferred assets in **Chapter B.3: Anglian's Plan and how it was built** of Anglian's SOC is part of an explanation of the various cost drivers which result in a modest increase as to Anglian's botex needs in AMP7 relative to AMP6.<br><br>In **Part G.1: Reply on Uplift and Previous Outperformance (REP08),** Anglian points out that if it adopts Ofwat's treatment of transferred sewer expenditure the gap between its AMP6 and AMP7 Botex expenditure falls to £8 million, or 0.2%. In other words, contrary to Ofwat's claims, Anglian's Plan forecast of Botex needs for AMP7 is broadly flat, with Anglian absorbing the increased costs associated with an ageing and growing asset base.<br><br>Ofwat's explanation supports Anglian's point about the importance of factoring in future capital maintenance needs rather than placing excessive reliance on historical expenditure to inform future needs: Whereas Anglian's cost assessment approach seeks to understand, and take account of, these variations in asset maintenance needs between periods, Ofwat's models do not. |
| **1.4** | As regards (iii) above, Anglian explained that its comprehensive plan recognised the true costs of achieving the service standards demanded by customers, including costs to deliver lower leakage and improved performance on supply interruptions.[17] | Ofwat notes that it provided Anglian with additional funding of £71.4 million to further reduce leakage.[18] Otherwise it defends its opinion that future performance levels can be achieved with current funding allowances.[19] | Ofwat's approach to leakage funding for enhancement is the only area where Ofwat recognises that improving service, increases (in the case of Anglian, insufficiently) costs.<br><br>Anglian responds to Ofwat's comments in **Part E: Review of Leakage arguments (REP06)** and **Part H: Reply on Cost service disconnect (REP09)**. |

[14] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 3.2.
[15] E.g. Response to Anglian, para. 3.11.
[16] Response to Anglian, paras. 1.32 and 3.48 and 3.50.
[17] See e.g. Anglian's SOC, Chapter F: cost service disconnect, Section 3.
[18] Response to Anglian, para. 5.4.
[19] Response to Anglian, para. 5.4.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| **2** | Ofwat's models fail to account for legitimate cost differences between companies | | |
| **2.1** | **Ofwat's models are excessively simplistic and poorly defined.**[20]<br><br>Anglian explained that Ofwat's modelling approach was set out in CEPA's March 2018 report on cost modelling which prescribed a framework comprising a maximum of six explanatory variables, an avoidance of multicollinearity and simple model form with no cross-terms.<br><br>Anglian stated that this framework **is excessively simplistic** and inevitably leads to models which **fail to control sufficiently for the complexity of water supply**. | Ofwat argues that:<br><br>• In March 2018, it published a consultation on cost modelling, which included a wide range of models<br><br>• it developed wholesale econometric models following a robust, transparent and inclusive process – taking account of the responses and feedback received;[21]<br><br>• Most companies did not raise significant representations on its econometric models at DD;[22]<br><br>• Its approach has been supported by companies at multiple stages of the model development process;[23] and<br><br>• its models received broad support from the industry.[24] | Ofwat's portrayal of the engagement with companies suffers from a number of factual omissions.<br><br>Firstly, only one of Ofwat's PR19 Botex Plus models appeared in Appendix 1 to the 'Cost assessment for PR19: a consultation on econometric cost modelling', which Ofwat presented as part of the March 2018 consultation. Companies first saw the models Ofwat proposed to use for price setting in the IAP in January 2019; these had changed significantly in style from the March 2018 models.<br><br>The March 2018 consultation focused on Botex drivers and not (i) estimation approaches or (ii) benchmark choice or (iii) Botex Plus models.<br><br>Companies made significant representations on the models after IAP but the DD models were substantially the same (with the exception of a very material redefinition of the dependent variable) so the majority of earlier comments remained valid.<br><br>The most significant change to the models subsequent to IAP was the re-definition of cost to include £3.5 billion of enhancement expenditure, which was not a recommendation of the industry as a whole.[25] Ofwat put forward no Botex Plus models in its March 2018 consultation. In contrast, most companies' representations on Ofwat's Botex models were ignored: the models changed comparatively little during the process.<br><br>On the industry's support to Ofwat's models, Ofwat's examples[26] illustrate its own point that companies' responses to Ofwat's models are influenced by their allowances: For several companies, Ofwat's models forecast expenditure needs in excess of those companies' own assessments, removing their incentive to comment.[27] |

[20] Anglian's SOC, Chapter E.1: Botex, Section 4.1.
[21] Response to Anglian, para. 3.12.
[22] Response to Anglian, para. 3.16.
[23] Response to Anglian, para. 3.7.
[24] Response to Anglian, para. 3.19.
[25] Only one company, South West Water, put forward a suite of models including growth at the March 2018 Consultation. These they described as Botex +. Ofwat put forward no Botex + models in the Consultation.
[26] Response to Anglian, Table 3.6.
[27] Anglian's SOC, Chapter E.1: Botex, Table 10.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | | | Ofwat's model development task was to create models that worked for the industry as a whole. However, this has still resulted in models that do not adequately capture the key characteristics for individual companies, like Anglian.<br><br>In addition to proposals to include Average Pumping Head and quality of service as a driver, most of the pushbacks by companies to the DD models were related to the inclusion of growth in the models. Companies also continued to develop cost adjustment claims.<br><br>Anglian has consistently raised concerns throughout the process that the models do not adequately capture its characteristics. |
| **2.2** | Ofwat's Botex Plus models fail to account for the **atypical characteristics** of the region Anglian serves. | Ofwat stated that:<br>• its model selection criteria were based on statistical performance, economic intuition and engineering justification;[28]<br>• its approach involved testing a number of alternative drivers and models at different levels of aggregation. Where results were not sufficiently robust those drivers did not make Ofwat's final selection;[29]<br>• the number and type of cost drivers chosen received extensive scrutiny from companies, who provided feedback in response to the IAP and DD; [30]<br>• Ofwat does not consider the alternative cost drivers proposed by Anglian to be appropriate;[31]<br>• Ofwat has concerns with the data quality and perverse incentives of the alternative drivers suggested by Anglian.[32] | As noted in 2.3 below, several companies proposed models with Average Pumping Head ("**APH**") as a key driver. Many companies have also noted the failure to account for quality of service (which ultimately led to Ofwat considering alternative models at FD). Most of the pushbacks by companies to the DD models were related to the inclusion of growth in the models.<br><br>Anglian submits two new reports by way of supplemental evidence on these points:<br><br>**Oxera's Report on cost assessment issues (REP13),** Section 2 shows that Ofwat's water models are improved with the use of APH, and that its waste water models are improved with the use of new bandings for very large water recycling centres, a variable to reflect sludge transport and an improved definition of tight consents. It also shows that Ofwat's concerns over the use of APH are unfounded and contrary to significant regulatory precedent (see below). Section 2 and 3 also show that Ofwat's concern over perverse incentives can be avoided and that not to include quality creates perverse incentives.<br><br>**Prof. Saal and Dr Nieswand's Report on cost models (REP14)** shows that improved models are produced by the use of new bandings |

[28] Response to Anglian, para. 3.17.
[29] Response to Anglian, para. 3.17.
[30] Response to Anglian, para. 3.18.
[31] Response to Anglian, Table 3.5.
[32] Response to Anglian, para. 3.20.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | | | for very large water recycling centres, better consideration of demographic factors and disaggregation of sewer length. |
| **2.3** | Ofwat's models don't include the appropriate cost drivers for **water distribution energy requirement**.<br>Ofwat's wholesale water model uses the number of booster pumping stations in the treated water distribution network to control for topography, whereas half of Anglian's total APH relates to the abstraction of water from boreholes and rivers and the transport of raw water.<br>The use of APH instead of number of booster pumping stations as a measure of topography would be more appropriate.[33] | Ofwat argues that:<br>• It does not find APH to be a superior driver. it tested the APH at different stages of the price review but that it was not robust across all model specifications. This may be explained by the fact that companies reported low confidence grades for this driver's data quality when compared with the number of booster pumping stations in their data submissions.<br>• while APH may offer some advantages over other factors, there were valid reasons for excluding it from its set of models, including concerns about data quality.[34] | Ofwat and CMA have consistently used APH in past reviews (e.g. PR99, PR04, PR09, PR14, Bristol 2015).<br>Models with APH were proposed by Anglian, Thames, Wessex, Bristol and Severn Trent (and highlighted by South Staffs as a key driver) and Ofwat in the 2018 consultation, and again by Bristol in its SOC.[35]<br>The argument for not using APH on data quality grounds is inconsistent with Ofwat's choice of other cost drivers. It is also inconsistent with Ofwat's use of the variable in the alternative specification models and to justify a cost adjustment claim for energy requirements by SES. **Oxera's Report on cost assessment issues (REP13)** at Section 2.1 provides compelling evidence for the use of APH in Ofwat's water models. |
| **2.4** | Anglian proposed **further scale drivers** in addition to the number of connected properties. In particular (water delivered, or Distribution Input – Leakage) has merit in that it both incorporates both the network deliverable, water, and the level of leakage.[36] | Ofwat does not agree that Anglian's proposed variable is superior. Ofwat argues that its scale drivers were based on responses to its consultation, statistical performance and engineering rationale.<br>Following responses to its consultation, Ofwat decided not to use the volume of water (whether abstracted, treated or distributed) as a cost driver as it is to some extent under management control (management can reduce leakage, promote water efficiency, etc.) which could undermine behaviours and performance levels.[37] | Leakage is the only material component of the water balance which is under management control. Anglian's proposed drivers - water delivered or effective water - exclude leakage, thus correctly retaining the incentive for leakage management.<br>Ofwat has used water delivered in previous price controls instead of Distribution Input for this reason.<br>**Oxera's Report on cost assessment issues (REP13)** at Section 2.3 provides strong evidence for the use of water delivered as an alternative scale driver. in Ofwat's water models. It shows that replacing properties with water delivered in both Water Resources Plus and Wholesale Water models produces coefficients with strong statistical significance.<br>Ofwat has made contradictory statements on endogeneity previously. There are worse perverse outcomes if models don't account for quality. For example: |

[33] Anglian's SOC, Chapter E.1: Botex, Section 4.1.
[34] Response to Anglian, para. 3.25 and Response on Cost Efficiency (006), paras. 3.16 and 3.17.
[35] Cost assessment for PR19: a consultation on econometric cost modelling, Appendix 1 Ofwat, March 2018.
[36] Anglian's SOC, Chapter E.1: Botex, Section 4.1.
[37] Response on Cost Efficiency (006), para. 3.18 and Response to Anglian, para. 3.27.

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| | | | • CMA (2015): "*Our view was that, in some cases at least, including explanatory variables that are inputs and under management control may be better than a strict approach of excluding such factors*".[38]<br>• Ofwat (2018 consultation): "*Most cost drivers are, to some degree, under management control, particularly in the longer term. It is important to assess the degree of management control, the potential materiality of bias and the risk presented by any perverse incentive. There may well be a case for keeping factors under management control in the model, as replacing them with alternative cost drivers may present a greater risk inadequately reflecting the underlying cost drivers*".[39] |
| | | Ofwat also claims that the scale driver proposed by Anglian for a wholesale waste water model is not appropriate because load only captures sewage collection and treatment activities but not bioresources activities.[40] See further below. | Ofwat's statement on load is inconsistent with the fact that load was not used a variable in its collection models and was used to control for bioresources activities in its bioresources plus models. |
| **2.5** | Ofwat's **measures of treatment complexity** need to be revisited.[41]<br>• No justification is provided for the weights in the 'weighted average measure of complexity' variable Ofwat uses.<br>• The second measure – share of water treated above level 3 complexity – is also problematic. As there is very little surface water treated below level 3, the comparison is between all high treatment water and low treatment ground water. A better approach might be to look at the share of low (level 2 and below) water and the share of high treatment (level 5 and above). | Ofwat argues that:<br>• the percentage of water treated at complexity levels 2 and below is complementary to the percentage of water treated at levels 3 and above. Therefore, both variables would be statistically equivalent.<br>• with regards to the percentage of water treated at levels 5 and above, this driver had no effect in water resources plus models, which include treatment costs where Ofwat would expect this driver to potentially have any effect; | Ofwat has not addressed the essentially ad hoc nature of the weighted average treatment complexity variable. It is entirely reasonable to assume that the intention was *"...to capture better the full range of treatment complexity levels"* but without a solid grounding in operational / engineering logic behind the weights used, there is no reason to assume it achieves this.<br>There are a number of different possible metrics to capture water quality or complexity of treatment and Anglian considers that these should be examined further. |

[38] CMA Final Determination for Bristol Water, Annex 4.2, para. 181.
[39] Cost assessment for PR19: a consultation on econometric cost modelling, Ofwat, March 2018, Page 11.
[40] Response to Anglian, para. 3.37.
[41] Anglian's SOC, Chapter E.1: Botex, Section 4.1.

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| | | • it used the weighted average treatment complexity to capture better the full range of treatment complexity levels;[42]<br>• factors that capture economies of scale in treatment often lack statistical significance.[43] | |
| **2.6** | Ofwat's core suite of models also take no account of the **different levels of service that companies provide** and the impact of this on their costs.[44] | Ofwat responds that:<br>• it has failed to find statistical robustness of service quality variables;<br>• the relationship between costs and service quality is often ambiguous;<br>• service quality variables could raise statistical concerns and create potential perverse incentives;[45]<br>• none of the 220+ models submitted in response to its March 2018 consultation included a service variable.<br>Ofwat also notes that "*We agree with Anglian that there can be a trade-off between service quality and cost*" and argues that whilst its models do not include service quality variables, they do include cost drivers that would affect output quality.[46] | Many companies pushed back about the failure to account for quality of service (ultimately reflected by Ofwat considering alternative models at FD).<br>**Oxera's Report on cost assessment issues (REP13)** sets out the arguments for inclusion for service quality variables in models and demonstrates approaches which might be taken to do so[47]. It shows that statistically robust models can be developed and that such models avoid the perverse incentives that Ofwat is concerned about (namely, allowing higher costs for companies with low quality). Moreover, *excluding* quality of service in the cost models or not taking them into account ex post, can result in perverse incentives.<br>Oxera's analysis including quality of service measures shows how leakage can be factored into cost models.[48] |
| **2.7** | On **leakage control** specifically, the models do not recognise that the marginal cost of reducing leakage increases at lower levels of leakage.<br>Anglian is unable to maintain its current levels of leakage with the existing base allowance.[49] | Ofwat considers there is a need to challenge the industry including companies that are comparatively high performers to do more to deliver leakage levels required to ensure future resilience.<br>Ofwat claims that: | Anglian provided several separate sources of evidence to show that additional costs are required (Nera report, UKWIR report and observed historical costs). PwC's report for Ofwat on funding leakage also recognised a higher maintenance cost for high performing companies on leakage. Ofwat did consider at IAP that Anglian had provided |

[42] Response on Cost Efficiency (006), para. 3.14 and Response to Anglian, para. 3.22.
[43] Response on Cost Efficiency (006), para. 3.25.
[44] Anglian's SOC, Chapter E.1: Botex, Section 4.1.
[45] Response on Cost Efficiency (006), para. 3.34 and Response to Anglian, para. 3.29.
[46] Response to Anglian, Table 5.1, page 153.
[47] Oxera's Report on cost assessment issues, Section 3 (REP13).
[48] Oxera's Report on cost assessment issues, Section 3 (REP13).
[49] Anglian's SOC, Chapter H: Leakage, Section 3.

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| | At FD, Ofwat allowed a £50.2 million uplift (£24.5 million of which was leakage driven) to Anglian's "Botex Plus" allowances on the basis of adjusting for alternative specifications to its econometric models, so implicitly admitting the insufficiency of the base allowance.<br><br>While the recognition that the existing models are inadequate was welcome, Anglian considers the quality of the alternative specification models to be low and the additional allowance made on their basis to be insufficient, leaving Anglian with a funding gap of £112.4 million.[50] | • the company has not provided compelling evidence that maintaining a low level of leakage requires additional cost to Ofwat's base allowance; and<br><br>• Ofwat is unable to conclude that the company had provided sufficient evidence to support the argument that its claimed costs are efficient. [51]<br><br>However, "*to ensure the robustness of its modelling results*", Ofwat explored alternative modelling specifications which led to an additional allowance of £50.2 million to Anglian Water's base allowance. Ofwat claims that this adjustment "*should address any possible link between leakage levels and expenditure*".[52]<br><br>Ofwat does not defend the quality of its alternative model specifications.<br><br>Ofwat's arguments on the leakage cost adjustment claim are addressed in more detail in **Part E: Review of Leakage arguments (REP06)**. | compelling evidence to justify an adjustment but later reversed this position.[53]<br><br>Ofwat's rejection of Anglian's leakage cost adjustment claim is inconsistent with the fact that it allowed an additional allowance for leakage in its alternative specification models, which would have led to a £98 million adjustment to Anglian's base allowance of which Ofwat applied just 25%.<br><br>The analysis in **Oxera's Report on cost assessment issues (REP13)** about including quality of service measures shows how leakage can be factored into cost models. The need for an additional allowance is also implicitly recognised through the alternative specification models introduced at FD.<br><br>Ofwat explicitly accepted (in its seminar on econometrics for the CMA on 9 April 2020) that the quality of each individual alternative specification model is "*not very strong [...] but that collectively they could be used for an adjustment*". It is not clear how the second part of this assertion follows from the first.<br><br>Ofwat's arguments on the leakage cost adjustment claim are addressed in more detail in **Part E: Review of Leakage arguments (REP06)**.<br><br>See also **Part B: Review of Cost Service Disconnect arguments (REP03)** and **Part H: Reply on Cost service disconnect (REP09)**. |
| 2.8 | **Additional issues with Ofwat's modelling framework:**<br><br>• by **ignoring any cost interactions between different parts of the value chain**, but adding together the results of different parts of the value chain before calculating the gap to the benchmark, Ofwat's disaggregated models create an **unrealistic frontier**; and | Ofwat fails to address these points with the exception of the multicollinearity example cited by Anglian, where **Ofwat mischaracterises or misunderstands Anglian's critique** and argues that Anglian misunderstood the application of statistical diagnostics.[56] | Anglian does not submit that a high level of multicollinearity rules out the use of a model: in such a small dataset with key scale drivers (such as properties, volume and length) which are highly collinear, multicollinearity is ever-present. Rather, Anglian notes that having set out a set of rules for itself, Ofwat has not held to them; nor has it been transparent where it has deviated from its own rules. |

[50] Anglian's SOC, Chapter H: Leakage, para. 1038 (iii). See also Anglian's SOC, Chapter E.1: Botex, paras. 548, 555 and 562.
[51] Response to Anglian, para. 1.34.
[52] Response to Anglian, para. 3.90.
[53] IAP CAC Feeder Model Anglian (corrected for log error) (REP48B). This workbook accepted the analytical approach taken by Anglian in its Cost Adjustment Claim. The graph linking cost to leakage reduction was an exponential function. Ofwat computed the value of the claim by taking log base 10 of the exponential function instead of log base e. Anglian pointed out the error and rather than recomputing the claim on the correct basis, Ofwat struck out the claim altogether at DD.
[56] Response to Anglian, para. 3.44.

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| | • Ofwat's applied modelling principles **lack transparency at times and are applied inconsistently.** Ofwat violates its own principles in the models or modifies them without explaining or indicating the change in its modelling approach. A notable example is Ofwat's acceptance of high levels of multicollinearity in its models, contrary to its originally stated modelling principles. the five Water models have VIF statistics[54] ranging from 212 to 230. For the alternative models put forward at FD, the VIF ranges from 215 to 1,570.[55] | | |
| **3** | Ofwat's models fail adequately to account for legitimate cost increases since AMP6 from new service obligations and higher capital maintenance needs | | |
| **3.1** | Anglian set out the drivers for its Botex needs in AMP7, including as a result of **new service obligations and capital maintenance nee**ds, and the **robust process** it went through to determine those needs throughout the PR19 process and in its SOC, **Chapter B.3: Anglian's Plan and how it was built**.<br><br>Anglian argues that Ofwat's modelling approach fails adequately to account for those legitimate cost increases, incorrectly characterising them as "inefficiency". | Ofwat claims that:<br>• its econometric models use forecasts of cost drivers and it sets an efficient allowance for the long-term based on eight years of historical cost data;<br>• its base modelled costs appropriately consider the impact of new service obligations and capital maintenance needs.[57]<br>• its PR19 methodology includes a cost adjustment claim mechanism in case this is not the case[58];<br>• companies with a large, diverse asset base should be able to balance peaks, troughs and atypical lumps in investment on particular cohorts of assets within a long-term average allowance; | Ofwat has not fully engaged with the evidence Anglian provided on its capital maintenance needs.[63]<br><br>Ofwat's PR19 Final Methodology[64] refers to benchmarking with historical ***and forecast*** data in the Securing cost efficiencies block, but Anglian has not seen evidence as to how Ofwat has used the forecast data and information provided by companies to assess future requirements for Botex,<br><br>**Oxera's Report on cost assessment issues (REP13)** shows that smoothing the capital maintenance expenditure mitigates against companies being in cost troughs and improves the robustness of the models. It also shows that new quality of service targets are not currently accounted for in the modelling but, by including the quality of service in the models, such improvements can be better accounted for.<br><br>Ofwat's approach in PR19 fails to reflect a credible approach to assessing companies' asset requirements in the future.<br><br>**Ofwat's claim that Anglian's cost adjustment claim does not provide evidence that it has followed CMPCF is baseless** and reflects Ofwat's repeated failure to engage with the various previous |

54 VIF: Variance Inflation Factor. This is a measure of the severity of multicollinearity. A figure above 10 is generally considered high.
55 Anglian's SOC, Chapter E.1: Botex, Section 4.1.
57 Response to Anglian, Table 3.5.
58 Response to Anglian, paras. 3.76.
63 Response to Anglian, paras. 3.77 to 3.79.
64 PR19 Final Methodology, Page 20, Figure 1.2 (SOC314).

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| | | • Its historical cost data includes two traditionally low years and six high cost years, therefore the models are likely to over rather than under estimate allowances;<br>• It finds no evidence of companies being considered efficient because they are in a trough;[59]<br>• Historically, cycles in capital maintenance appear more correlated to price control periods than being directly related to the asset base (although less pronounced since the introduction of totex).<br>Ofwat claims to be fully supportive of companies in developing their approach to asset management that allows them to better understand future maintenance needs.[60]<br>Ofwat claims that the inclusion of the cost adjustment claim mechanism ensures its PR19 methodology is consistent with the recommendations made in 2000 by a parliamentary select committee, which were that future capital maintenance allowances should be based on a forward-looking approach.[61]<br>Ofwat claim that the information provided in Anglian's cost adjustment claim does not evidence that the company has followed the framework developed by the industry following PR99 review, specifically the UKWIR Capital Maintenance Planning Common Framework (CMPCF).[62] | submissions and evidence provided as to how Anglian built its AMP7 capital maintenance requirements. Anglian's approach is supported by the views of Bush and Earwaker,[65] namely that capital maintenance allowances should be set using a range of separate forward-looking, bottom-up, risk-based, asset-led analyses rather than derived solely on the basis of a suite of inaccurate econometric models that do not include any cost drivers that capture upward pressures (such as asset condition or asset risk measures).<br>In stark contrast, based on **Ofwat's published documents for PR19, Ofwat has no established framework comparable to that Ofwat used at PR99 to monitor companies' serviceability. Such an omission is a retrograde position even relative to the low point of PR99, which the EAC considered "intellectual neglect"[66], and seems to be at odds with Ofwat's own guidance of serviceability in MD161**.[67] Anglian published and discussed a thought leadership paper on the Water UK web site Market Place for Ideas, "Capital Maintenance Planning – From a historical and future perspective", in July 2015 to demonstrate the divergence of approaches and to remind Ofwat of the significant improvements the sector has made in the area of investment planning. The aim was to ensure this could be taken forward as part of the approach to PR19. This has not happened.<br>**This is a matter of extreme concern and Anglian encourages the CMA to explore this critical issue.** Ofwat has itself begun to discuss the potential for an improved approach for PR24, but this cannot remedy the problems created by the paucity of its approach to this issue in PR19.<br>Ofwat has ignored the evidence provided to support the capital maintenance plan, past criticism of backward-looking approaches to |

[59] Response to Anglian, para. 1.29.
[60] Response to Anglian, para. 3.83.
[61] Response to Anglian, para. 3.84.
[62] Response to Anglian, para. 3.85.
[65] Bush & Earwaker Capital Maintenance Report (May 2019) (SOC153) and Bush & Earwaker Capital Maintenance Report (August 2019) (SOC191).
[66] House of Commons (2000), Environmental Audit Committee, Seventh Report, para. 208, available at https://publications.parliament.uk/pa/cm199900/cmselect/cmenvaud/597/59703.htm.
[67] Ofwat MD161 Maintaining Serviceability to Customers (REP48D).

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| | | | allowance-setting and the shocks and stresses that Ofwat's capital maintenance assessment approach will put on the company.[68]<br>Anglian's asset management approaches are certified to ISO 55001 Asset Management.<br>Anglian's plan is made up of 3,767 separate investments with alternatives (options) in over 240 portfolios. The plan was prioritised, optimised and challenged prior to submission.<br>For the avoidance of doubt, Anglian rejects Ofwat's claim that the cost adjustment mechanism is an adequate substitute for a thorough forward-looking assessment of a company's capital maintenance needs in **Part G.2: Reply on Capital Maintenance (REP08)**. |
| | | In the context of capital maintenance, "*In the 2015-20 period, Anglian Water is forecast to underspend its allowance*".[69] | Based on Ofwat's previous regulatory approach, no evidence exists to support this statement. Ofwat will be aware that it did not set out separate allowances for capital maintenance in 2015-20.<br>At PR14, Anglian was given a totex allowance that was not sub-divided into opex, capital maintenance, etc.<br>In **Part G.1: Reply on Uplift and Outperformance (REP08),** Anglian shows that over the last 20 years it has spent 99.5% of its botex allowances. |
| | | Ofwat claims that "*The company is forecasting a lower level of capital maintenance expenditure in 2020-25 than compared to historical levels*". We recognise that this reducing tend can be partially attributed to efficiency and changes in accounting rules which changed the treatment of former capital costs to operating costs".[70] | By failing to capture legitimate accounting differences between AMP6 and AMP7, Ofwat has misrepresented or misunderstood the position by considering only the figures reported on the capital maintenance lines of the relevant business tables. This is a result of failing to appreciate that capital maintenance activities, for example in relation to digital services are frequently coded to opex.<br>Anglian sets out its historical and planned capital maintenance expenditure, correcting for this error in **Part G.2: Reply on Capital Maintenance (REP08)**.<br>The analysis in this document sees through the accounting differences which cause confusion and demonstrates that contrary to Ofwat's conclusion, capital maintenance expenditure is increasing in AMP7. |

[68] Arup Resilience in the Round Assessment (2020) (SOC285).
[69] Response to Anglian, para. 1.30.
[70] Response to Anglian, para. 1.31.

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| | | | This is consistent with expectations for maintaining a growing, more complex asset base reflective of investment in shorter lived assets that delivery higher quality environmental and service quality to customers. |
| | | Even if Anglian Water is forecasting a peak in maintenance activity in 2020-2025 Ofwat does not consider that an adjustment to allowance is appropriate.[71]<br>Ofwat argues that its allowance is appropriate on a long-term basis and relatively immune to investment cycles. While there may be periods when a company has higher investment requirements, it will have periods with lower investment requirements where it might, if efficient, benefit from Ofwat's independent cost allowance. As a result, Ofwat expects companies to balance their expenditure over the long-term, thus greater needs in the future can be met through historical savings. | Anglian has never stated AMP7 is a peak of activity, rather, it sees a steady rise in requirements. It has been proven through UKWIR studies and the company's own analysis that maintenance needs will steadily increase as a result of the continued extension and nature of the asset base it is required to maintain. This is not just the result of growth; even when normalised by number of properties, CM has increased AMP on AMP since 2000. Anglian disputes where, in relation to capital maintenance, Ofwat considers future periods of lower expenditure requirements exist.<br>The general deterioration of inherited older (pre-privatisation) infrastructure assets means that maintenance requirements will naturally increase over time. This is a function of how the condition of these assets and the risk of failure changes over time. In addition, companies' asset bases grow over time as a result of enhancement expenditure in meeting tighter statutory requirements for water quality and environmental improvements and to accommodate an increase in connected properties and overall population served. Again, like older assets, their condition and the risk of asset failure changes over time. This gives rise to the requirement to regularly repair, refurbish and, in the long-term, replace them to maintain their capability.<br>Anglian sets outs counter evidence on this in **Part G.2: Reply on Capital Maintenance (REP08)**. This demonstrates the historical industry **rising** trend in capital maintenance expenditure. |
| **3.2** | New assets acquired in the previous period then require operation and maintenance in the next period (effectively becoming additional base costs in that period).<br>For example, during AMP6 the Company has installed screens at 19 river intakes to prevent the entrainment of eels; | As noted in 1.3 above, Ofwat claims that Anglian "*mistakenly puts forward an argument that [Ofwat has] not allowed for the increased costs arising from the adoption of private sewers and pumping stations in [Anglian's] base allowance*".[73] Ofwat argues that it included the historical | Ofwat does not engage in the principles of Anglian's argument.<br>It has been proven through UKWIR studies and the company's own analysis that maintenance needs will steadily increase as a result of the continued extension of the asset base.[75] Anglian sets out the evidence on this in **Part G.2: Reply on Capital Maintenance (REP08)**. |

[71] Response to Anglian, para. 1.30.
[73] E.g. Response to Anglian, para. 3.11.
[75] UKWIR Capital Maintenance Planning Growth in the Asset Base (REP48C).

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| | these assets will require operation and maintenance going forward.<br>These costs are considered Enhancement during the AMP they are incurred before subsequently adding to base expenditure requirements in the next AMP period and beyond.[72] | costs related to the adoption of these assets in its base econometric models.[74] | Ofwat focuses on a narrow point on private sewers and pumping stations – an unrelated point which it either misrepresents or misunderstands: As noted above in 1.3, contrary to Ofwat's assertion, Anglian does not claim that Ofwat's allowance does not allow for the costs of these transferred assets. Rather, Anglian's references to transferred assets in **Chapter B.3: Anglian's Plan and how it was built** of Anglian's SOC are to explain the various cost drivers which result in a modest increase in Anglian's botex needs in AMP7 relative to AMP6.<br>However, Ofwat's explanation supports Anglian's point about the importance of factoring in future capital maintenance needs rather than placing excessive reliance on historical expenditure to inform future needs. Whereas Anglian's cost assessment approach takes account of these variations in asset maintenance needs between periods, Ofwat's models do not. |
| **3.3** | Ofwat's base allowance may not necessarily reflect efficiency but low maintenance activity (i.e. maintenance troughs).[76] | Ofwat states that it has assessed peaks and troughs in its model input data to check whether the companies identified as efficient in its benchmarking analysis were found to be so because they were in a capital maintenance trough, but found no evidence of that.[77] | Ofwat also appears to contradict its previous position on this point, as at FD, Ofwat's own assessment in wastewater was that:<br>*"For wholesale wastewater of the top three efficient companies two indicate evidence of a 'trough' in expenditure in the 2011-19 period and for the remaining one there is evidence of a 'peak'".*[78]<br>**Oxera's Report on cost assessment issues (REP13)** shows that problems associated with the cyclical nature of companies' capital maintenance profiles are best resolved by modelling with smoothed cost data, as Ofwat did at PR14 and the CMA did in the 2015 re-determination of Bristol Water's price control.<br>Anglian contests that Ofwat's assessment of historical costs and econometrics is an appropriate substitute for an appropriate forward-looking assessment of capital maintenance requirements. See section 3.1 above. |
| **3.4** | Anglian ultimately submitted a Capital Maintenance Cost Adjustment Claim ("**CAC**") having failed to engage Ofwat on | Ofwat argues that: | Ofwat has misrepresented the context for and nature of, Anglian's CAC. |

[72] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, para. 311.
[74] Response to Anglian, paras. 1.32 and 3.48 and 3.50.
[76] Anglian's SOC, Chapter A: Executive Summary, para. 24.
[77] Response to Anglian, para. 3.80.
[78] Anglian FD Cost Efficiency Additional Information Appendix Ofwat (2019), pages 5 to 6 (SOC236).

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| | its future capital maintenance needs, as it was the only regulatory mechanism available for Ofwat to make adjustments in the FD.[79]<br><br>The cost adjustment claim process, which required Anglian to demonstrate its "unique characteristics" provided an inadequate remedy to the flaws in Ofwat's models.[80] | • it accepted to consider Anglian's cost adjustment claim on increase capital maintenance need though it was submitted late in the process. Ofwat argues that the evidence provided was poor.[81]<br><br>• the evidential bar for cost adjustment claims was high due to information asymmetry, as companies only issue claims that are positive additions to their allowances and claims override Ofwat's established approach based on econometrics.[82]<br><br>• the company did not quantify the effects it described in its claim and the claims account for most of Anglian's gap on wholesale base expenditure.[83]<br><br>• It could not find any point in the cost adjustment claim relating to innovation being the basis of additional costs.[84] | The CAC represented the continued raising of concerns by Anglian that Ofwat's econometric modelling failed to fully capture the future capital maintenance needs of the company.<br><br>Anglian proactively submitted evidence and argumentation throughout PR19, supported by the Bush-Earwaker Capital Maintenance Reports[85] to try and remedy the shortcomings of the econometric models.<br><br>At a meeting with Ofwat on 7 October, Ofwat said that a CAC was the route through which it would consider additional evidence on capital maintenance and invited Anglian to use this route. [86]<br><br>Anglian therefore duly submitted a CAC to Ofwat on the understanding that it was the only mechanism within the regulatory process which enabled Ofwat to make adjustments.<br><br>Anglian also noted that, given timing constraints, the document largely included a compendium of existing material already submitted which Anglian had sought to fit into Ofwat's CAC format as best possible in the time available. In practice the CAC regulatory mechanism was an inadequate substitute for the limitations in Ofwat's models, requiring the companies to demonstrate "unique characteristics".<br><br>Anglian sets out more detail on this in **Part G.2: Reply on Capital Maintenance (REP08)**. |
| **4** | There is a failure to sense-check modelling results with bottom-up evidence of the Company's actual expenditure needs | | |
| **4.1** | **Failure to sense-check modelling results with bottom-up evidence of the Company's actual expenditure needs**.[87]<br><br>The Bush-Earwaker paper[88] sets out the potential remedies to ensure a more rounded approach to assess Anglian's Capital | Ofwat argues that its approach to setting an allowance for maintenance costs, using econometric modelling with historical data, has been consulted on with the companies and is the same as at PR14.[89] | Anglian continues to have significant concerns about the reliance on econometric modelling of historical costs to set future allowances. The outputs from the models are opaque specifically when combined with future growth and flooding needs. Anglian strongly disagrees that the cost adjustment mechanism is an adequate substitute for a thorough |

79 Anglian's SOC, Chapter E.1: Botex, Section 4.1.
80 Anglian's SOC, Chapter E.1: Botex, Section 4.7.
81 Response to Anglian, para. 1.28.
82 Response to Anglian, para. 3.76.
83 Response to Anglian, Table 3.2.
84 Response to Anglian, para. 3.82.
85 Bush & Earwaker Capital Maintenance Report (May 2019) (SOC153) and Bush & Earwaker Capital Maintenance Report (August 2019) (SOC191).
86 Capital Maintenance CAC, page 2 (SOC213).
87 Anglian's SOC, Chapter E.1: Botex, Section 4.2.
88 Bush & Earwaker Capital Maintenance Report (May 2019) (SOC153).
89 Ofwat's Response to Anglian, para. 1.27.

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| | Maintenance needs was undertaken. This included a 'bottom up' assessment rather than reliance solely on econometric modelling. | Ofwat claims that the inclusion of the cost adjustment claim mechanism ensures its PR19 methodology is consistent with the recommendations made in 2000 by a parliamentary select committee, which were that future capital maintenance allowances should be based on a forward-looking approach.[90] | forward-looking assessment of a company's capital maintenance needs. The mechanism shifts the burden onto companies to demonstrate "unique circumstances" rather than proactively taking into account companies' forward-looking maintenance needs as part of a more rounded approach to cost assessment.<br>The Final Methodology for PR19[91] refers to benchmarking with historical and forecast data in the Securing cost efficiencies block. However, Anglian has not seen evidence as to how Ofwat have used the forecast data and information provided by companies to assess future requirements for Botex. |
| **5** | **There** is a lack of proper triangulation with alternative models, alternative levels of aggregation or different estimation techniques | | |
| **5.1** | There is inadequate triangulation ***between models*****.** As such, Ofwat has not really tested its model outcomes, and in particular, has not tested for drivers that better account for Anglian's atypical characteristics.[92] | Ofwat does not directly respond on this point. | Anglian remains of the view that Ofwat's models are insufficiently different to allow for satisfactory triangulation between models.<br>Evidence in **Oxera's Report on cost assessment issues (REP13)** and **Prof. Saal and Dr Nieswand's Report on cost models (REP14)** shows that the reliability of modelled forecasts is improved when triangulated with a richer set of models. |
| **5.2** | Ofwat triangulated with models which **fail statistical, economic or engineering criteria**.<br>For example, one of Ofwat's sewage collection models suggests that all other things being equal (pumping capacity and properties served), increasing the length of the sewerage network will reduce costs.[93] | Ofwat responds that Anglian's argument disregards the proper interpretation of the sewage collection model. Properties/length is a measure of density and capacity/length is a measure of energy intensity per kilometre.[94]<br>Ofwat states that Anglian is asking the wrong question of the model. | With regard to the sewage collection model referred to, this model does indeed predict that Botex decreases as sewer length increases. This does not accord with operational or engineering reality and calls into question the robustness of the model. |
| **5.3** | There is inadequate triangulation **between aggregation levels.**<br>Professor Saal and Dr Nieswand noted the limitations in assessing the efficiency components of the business units | Ofwat argues that the levels of aggregation include a wide range of bottom-up and top-down models, and capture different parts of the value chain with the support of engineering rationale. Where a particular level of | Anglian stands by its original comments. **Prof. Saal and Dr Nieswand's Report on cost models (REP14)** shows how the configuration of the sewerage network, water recycling centres and sludge treatment are intimately inter-connected in response to demographic variables. None of Ofwat's models are able to capture these interactions. |

[90] House of Commons (2000), Environmental Audit Committee, Seventh Report, available at https://publications.parliament.uk/pa/cm199900/cmselect/cmenvaud/597/59703.htm.
[91] PR19 Final Methodology, page 20, Figure 1.2 (SOC314).
[92] Anglian's SOC, Chapter E.1: Botex, Section 4.3.1.
[93] Anglian's SOC, Chapter E.1: Botex, Section 4.3.1.
[94] Response on Cost Efficiency (006), para. 3.22 and Section 3; and Response to Anglian, para. 3.41.

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| | given Anglian manages the business to maximise overall efficiency.[95] | aggregation was excluded, it was due to statistical or engineering reasons.[96] | |
| **5.4** | The most glaring absence of triangulation was in wastewater where Ofwat did not use an integrated water recycling model.[97] | Ofwat argues that:<br>• for wastewater model the underlying engineering characteristics between the parts of the value chain are very different, which means that an integrated wastewater model is unlikely to perform well;[98]<br>• When Ofwat explored this level of aggregation, the model results were not sufficiently robust;<br>• Factors that capture economies of scale in treatment often lacked statistical significance and/or fluctuated in sign and size between different specifications. This could be due to scale having different effects in different parts of the value chain. The effect of density is also ambiguous. | Anglian does not understand why the wastewater value chain is considered by Ofwat to be excessively diverse whereas the water value chain is not. Ofwat did not take this view at PR14, where it used two integrated wastewater Botex models nor in March 2018 where they presented eight. Neither did six other companies in the March 2018 consultation who presented a further 20 integrated Botex wastewater models and a further 9 with differing levels of enhancement spend included.<br>Both Professor Saal and Oxera have succeeded in producing integrated waste water models which meet statistical, economic and engineering criteria. These are described in **Prof. Saal and Dr Nieswand's Report on cost models (REP14)** and **Oxera's Report on cost assessment issues (REP13)**. |
| | | As noted above, Ofwat claims that:<br>• The scale driver proposed by Anglian for a wholesale waste water model is not appropriate because load only captures sewage collection and treatment activities but not bioresources activities.<br>• Anglian's proposed specifications do not capture economies of scale through a density variable. Ofwat 's preferred model specifications include two measures of density: number of connected properties per sewer length in the sewage collection model and weighted average density in the bioresources model.[99] | Ofwat's statement on load is inconsistent with the fact that load was not used a variable in its collection models and was used to control for bioresources activities in its bioresources plus models.<br>Anglian agrees that it is essential to account for economies of scale in wastewater. **Oxera's Report on cost assessment issues (REP13)** provides evidence on this point and provides an amendment to Ofwat's model that directly addresses economies of scale. |

[95] Anglian's SOC, Chapter E.1: Botex, Section 4.3.2 and Prof. Saal and Dr Nieswand's Report on cost models, page 34 and seq. (SOC125).
[96] Response to Anglian, para. 3.33.
[97] Anglian's SOC, Chapter E.1: Botex, Section 4.3.2.
[98] Response on Cost Efficiency (006), paras. 3.24 and 3.25 and Response to Anglian, paras.3.33 and 3.34.
[99] Response to Anglian, para. 3.37.

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| 5.5 | There is no triangulation **between other estimation methods**.[100] | Ofwat does not respond on this point. | |
| 5.6 | At FD, Ofwat made several adjustments, implying a lack of confidence in the output of the models (alternative model specifications, growth adjustments, movement in efficiency benchmark and cap on Portsmouth's allowance).[101] | Ofwat argues that the two upward adjustments to Anglian's base allowance were made to better account for its high growth rate and to account for evidence from alternative model specifications, including models that consider the potential impact of leakage.[102] | While Anglian welcomes the recognition by Ofwat that adjustments to its models are required to take account of its circumstances, it considers that neither the means nor the scale of the adjustments are adequate.<br>The purpose of Anglian's Supplementary Evidence submissions **(Prof. Saal and Dr Nieswand's Report on cost models (REP14) and Oxera's Report on cost assessment issues (REP13))** to explain and address these shortcomings. |
| **6** | The models have a number of statistical shortcomings | | |
| 6.1 | **Application of modelling principles**: The models have a number of statistical shortcomings, including:[103]<br>(i) the use of random effects;<br>(ii) mismatch in dataset for efficiency measurement; and<br>(iii) log-log bias. | Ofwat does not respond to Anglian's arguments. | Anglian maintains its earlier position and notes that Ofwat has not disputed any of the points raised. |
| **7** | After adding growth costs to Botex, Ofwat's Botex Plus models have allowed insufficient funding for Anglian's acute population growth in the next AMP | | |
| 7.1 | See Anglian's **Part G.3: Reply on Growth (REP08)**. | | |
| **Smart metering cost adjustment claim** | | | |
| 7.2 | To deliver its smart metering programme, in line with its statutory WRMP, Anglian is required to replace existing meters with smart meters in order to utilise its data network as it is rolled out across the region. As part of its DD Representation, Anglian submitted a smart metering cost adjustment claim of £42.4 million, which was rejected in full by Ofwat. This claim reflects the increase in the number of meters Anglian will be replacing in AMP7, over and above the | Ofwat expects large companies to be able to manage long-term investment plans within their base allowance, which allows for an element of lumpy maintenance.<br>Ofwat did not consider the company had presented a compelling argument for customers to bear the risk of early asset replacement (in the context of the company gaining the majority of benefits from the early installation strategy). | Ofwat fails to recognise that it is a requirement for Anglian to replace dumb meters with asset life remaining in order to deliver its smart metering programme. It is not discretionary.<br>Ofwat does not dispute the number of smart meters to be installed in AMP7. It makes an enhancement allowance and puts in place a PCL for the installation of 1,096,397 smart meters in AMP7. Ofwat's base modelling is based on historical meter replacement volumes. This base run rate of meter replacements falls far short of the required 1,096,397 meters. In fact, only 442,733 of these meters would have been due for |

[100] Anglian's SOC, Chapter E.1: Botex, Section 4.3.3.
[101] Anglian's SOC, Chapter E.1: Botex, para. 555.
[102] Response to Anglian, para. 1.25.
[103] Anglian's SOC, Chapter E.1: Botex, Section 4.6.

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| | number it would be replacing if it did not need to deliver its smart metering programme under the WRMP.[104] | Ofwat further argues that the approach to rolling out smart metering is discretionary and within management control.[105] | replacement in AMP7.[106] It is therefore impossible to meet the PCL without replacing meters beyond those reflected in Ofwat's base modelling. Because of this, Ofwat's base modelling leaves a shortfall of £42.4 million on base costs to meet the smart metering PCL. Anglian's cost adjustment claim addresses this gap in order to appropriately reflect the cost of the necessary additional meter replacements. |
| **7.3** | Ofwat has accepted Anglian's smart metering technology costs in full, but has not accepted, and makes no additional allowance for, the additional costs associated with the installation of the technologically advanced meters that Anglian has planned to install; this includes the disallowance of Anglian's base cost adjustment claim (£42.4 million) submitted as part of its DD Representation to enable the delivery of the programme.[107] | Ofwat argues that Anglian's base allowance is sufficient to cover for the cost of its smart metering programme. Ofwat notes that its approach to smart metering is consistent with the approach for other companies, in particular Northumbrian Water plans to undertake significant replacement of basic meters with smart meters, without a base allowance uplift.[108] | Anglian's cost adjustment claim relates to an atypically large increase in base expenditure, driven by a smart metering Enhancement. Ofwat has accepted the need for this and put in place performance commitments that require its delivery.[109] However it has left a £42.4 million cost allowance gap to achieve this (see also 7.2).<br><br>Ofwat's comparison between Anglian and Northumbrian with regards to smart metering is inappropriate. As set out in Anglian's DD Representation,[110] (i) Northumbrian is rolling out a less advanced smart metering programme, allowing it to finance it with base expenditure,[111] and (ii) unlike Anglian, Northumbrian's rollout is not constrained by the geographical coverage of data networks meaning it can install smart meters within its base replacement rate.[112] |
| **7.4** | As a result of the FD Anglian will be installing fewer meters over the next five years than originally planned.[113] In the short term, it means fewer people will have the benefit of engaging with their water use to drive down demand, aid with bills and identify leaks on customers' supply pipes. For consumers this means higher bills and less leakage reduction. In the longer term, whilst the cost in AMP7 will be lower as a result of | Ofwat argues that Anglian had not presented justification for customers to bear the costs the basic meters replaced within their asset lives and considers it is not appropriate to ask customers to bear the costs when Anglian will receive the majority of benefits from the early replacement strategy.[115] | Anglian disputes that the majority of benefits accrue to the company. This fails to recognise the significant benefits accruing to customers, including:<br>• the detection of leaks on customer supply pipes;<br>• detection of leaks within customer properties; |

[104] Anglian's SOC, Chapter E.3: Enhancement, Smart metering case study, pages 191 to 192.
[105] Response to Anglian, Table 3.5 and para. 3.161.
[106] As set out in page 65 of Anglian's WS2 data table commentary of IAP response - IAP Water Data Tables Commentary, page 65 of WS2 (SOC107).
[107] Anglian's SOC, Chapter E.3: Enhancement, Smart metering case study, pages 191 to 192.
[108] Response to Anglian, para. 3.163.
[109] Anglian FD Outcomes PCs Appendix, section 1.2.17 (SOC233).
[110] Anglian DD Representations, pages 130 and 131 (SOC168).
[111] Northumbrian is rolling out an AMR programme (Automated Meter Reading) which will still require reads from individual meters (albeit from a remote distance). Anglian's AMI programme (Advanced Metering Infrastructure) involves the automatic reading of meters using a data network. AMI meters are only operational where a data network is in place.
[112] For Anglian utilising the natural meter replacement rate to install smart meters (and not requiring a base adjustment) would lead to the installation of redundant smart meters in areas where AMI data networks are not yet established, underutilisation of data networks where meters are not replaced early in a smart meter rollout area, and insufficient smart meters in place to meet Anglian's performance commitments for leakage and smart meter ODIs.
[113] Currently estimated at 863,000 vs. envisaged 1.1 million meters.
[115] Response to Anglian, para. 3.162.

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| | Ofwat's position, the cost difference is ultimately simply being deferred into AMP8/9.[114] | | • greater visibility of usage through customer portal; and<br>• greater control of bills resulting from all of the above.<br>In addition to these benefits, by replacing meters on geographical basis, customers will benefit from more cost efficient meter replacements in the long run as meters in a locality reach the end of their asset life at a similar time and can be replaced in fewer trips.[116] |
| **8** | Ofwat's choice of benchmark is inappropriate | | |
| **8.1** | By failing to recognise important cost drivers in its models, Ofwat misinterprets the impact of omitting these variables as "inefficiency".<br>The quality of models does not justify moving from an upper quartile challenge to a more stretching challenge at FDs.<br>The selection of the benchmark should be informed by an assessment of the quality of the models which estimate companies' relative efficiency. Provided the level of prediction uncertainty of the PR19 models is, in most cases, higher than both Ofwat's PR14 models and those of the CMA, the benchmark should be no higher than that chosen at PR14 – that is, the median.[117] | Ofwat argues that:[118]<br>• after the DDs, new information came to light;<br>• outturn data showed that 2018-19 year is an atypically high cost year. Ofwat accepted companies' view that it ought to use the latest data but amended the catch-up challenge to address the issue;<br>• Ofwat also removed non- section 185 diversion costs from its base models;<br>• companies reduced their requested costs in their DD representations (which could have been for different reasons but *may* have been a response to information revealed to the companies during the process, e.g. on other companies' costs and Ofwat's benchmarking assessment, which allowed them to better understand their efficient costs) and that "*[i]t would be wrong for [Ofwat] not to act on information disclosed through [its] incentives, in particular given that it is in essence customers who pay for this improved information*."[119] | At different points in its submissions, Ofwat states that 2018/19 and 2019/20 are atypically high cost years. If the comparison is with the first three years of the AMP, then Anglian would wholeheartedly agree. As is observed above in 1.1, the end of the AMP is when spending increases to meet deadlines for capital projects due for completion during the AMP.<br>Companies will reduce their costs in the FD for a variety of reasons (as Ofwat recognises).<br>However, Ofwat simply chose to change its ad hoc choice of benchmark and did not change its econometric models other than to include the 2018/19 data. Ofwat's models are mis-specified, failing to account for key cost drivers, and the benchmark is inappropriate given the inaccuracy of the models.<br>Therefore, reliance on this new cost information to set an even more stretching benchmark without sound evidence that it is achievable is ill-considered. To do so requires checking: that the models were not mis-specified in the first place; what the accuracy of the models implies for the choice of benchmark; and whether doing so is more likely to cause customer detriment than benefit, due to the risks to company outcomes and incentives.<br>The main finding from the additional information disclosed for 2018-19 was that Ofwat's models were poor at predicting future expenditure needs (i.e. eight companies would receive more than they had asked |

[114] Anglian's SOC, Chapter E.3: Enhancement, Smart metering case study, pages 191 to 192.
[116] Anglian's SOC, Chapter E.3: Enhancement, Smart metering case study, pages 191 to 192.
[117] Anglian's SOC, Chapter E.1: Botex, para. 604.
[118] Response to Anglian, paras. 3.53 to 3.75 and Response on Cost Efficiency (006), Section 6.
[119] Response to Anglian, para. 3.60.

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| | | • Twelve out of seventeen companies were already outperforming the modelled base costs cost allowance under the upper quartile benchmark, compared to six at DDs;<br>• the level of historical upper quartile benchmark decreased steadily throughout the PR19 process;<br>• the upper quartile company was no longer providing a suitable challenge;<br>• As only Thames expressed an issue with the upper quartile efficiency challenge applied at DDs, this suggests all four disputing companies considered the DD catch-up challenge to be appropriate and achievable;<br>• Eight out of seventeen companies forecast more efficient costs than Ofwat's efficient benchmark so evidence suggest it is achievable;<br>• There is evidence to suggest Ofwat's models performed better at FD – they improved in accuracy and the range of efficiency scores between companies has narrowed – however, the setting of the catch-up challenge is not only a function of model quality. | for). The reliance on those models should therefore have reduced, not increased.[120] Indeed, **Oxera's Report on cost assessment issues (REP13)** demonstrates that Ofwat's models, by failing to account for APH, had failed to account for Portsmouth Water's advantageous topography and thus estimated Portsmouth Water as super-efficient, necessitating a capping of its allowance. By accounting for APH, Portsmouth Water is no longer estimated as super-efficient.<br>It is clear from Anglian's DD Representations that Anglian considered Ofwat's models had significant shortcomings (with inevitable implications for achievement of the upper quartile).<br>This change in approach creates perverse incentives to the detriment of customers – companies will be less inclined to submit lower costs post DDs in PR24, if they know Ofwat will simply move the benchmark in response. Ofwat's response demonstrates that it has simply amended its method in response to the outcome, yet companies had already responded to the challenging benchmark originally set, creating a ratchet effect. Ofwat's benchmarking removes the information asymmetry issues that Ofwat cites to support its approach (as evident in companies' response to Ofwat's DD benchmarking outcome).<br>**Oxera's Report on cost assessment issues (REP13)**, Section 4 demonstrates that uncertainty around each company's efficiency score and around the benchmark efficiency score means that no catch-up target should be applied in Anglian's case.<br>While Ofwat considers that the quality of the models is only one factor in its choice of benchmark, if the models are insufficiently accurate to identify any inefficiency for Anglian, then there is no basis for applying any catch up target.<br>Finally, in the SWW/SBW case, Ofwat noted to the CMA "*that this loss in precision might prevent it from being able to set more demanding benchmarks*".[121]<br>For more detail on some of these points, see **Oxera's Report on cost assessment issues (REP13)**.[122] |

[120] Anglian illustrates the wide dispersion of Botex allowances versus companies' own assessment of costs in its SOC, Chapter E.1: Botex, Table 10.
[121] CMA Final Report: Pennon Group and Bournemouth Water A report on the completed acquisition by Pennon Group plc of Bournemouth Water Investments Limited, para. 6.45.
[122] Oxera's Report on cost assessment issues, Sections 2, 4.1 and 5 (REP13).

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| 8.2 | Ofwat's choice of benchmark goes against most regulatory precedents. | Ofwat argues that other UK regulators have previously set more stretching benchmarks than the upper quartile and refers to Postcomm, Ofcom, Monitor and the Norther Ireland Utility Regulator.[123] | Ofwat's statement is highly misleading. Postcomm, Ofcom and Monitor use Stochastic Frontier Analysis, which distinguishes modelling error from inefficiency. That is, the regulators' estimation approach has already made an adjustment to residuals. They then apply an upper decile adjustment in addition to this initial adjustment. Northern Ireland Utility Regulator use a benchmark slightly more lenient than the upper quartile.<br>This is dealt with in depth in **Oxera's Report on cost assessment issues (REP13)**, Section 4.1. |
| 9 | Impact of funding gap | | |
| 9.1 | A reduction in Capital Maintenance will have a significant impact on risk and performance. Anglian's DD Representation[124] and the Asset Management Plan Summaries[125] demonstrated the impacts through a series of scenarios.[126]<br>They demonstrated that reductions in capital maintenance will cause harm to Anglian as a business, which will be manifested as short-term shocks and long-term stresses. The value Anglian adds to customers, the environment and external systems will be reduced. | Ofwat's sole engagement with this information is in relation to the case study presented in Anglian's SOC relating to Drinking Water Quality.[127]<br>Ofwat accepts the logic of the Anglian submission but notes:[128]<br>• Ofwat is unable to determine the reliability of the data nor model used to derive the bar chart. Neither of the documents submitted in June and October 2019[129] allowed Ofwat to adequately test the validity of the results;<br>• It is unclear what data Anglian has used to derive the asset lives used in the analysis of future asset lives; | **Based on its published documents for PR19, Ofwat has no established framework comparable to that Ofwat used at PR99 to monitor companies' serviceability. Such an omission is a retrograde position even relative to the low point of PR99, which the EAC considered "intellectual neglect"[130], and seems to be at odds with Ofwat's own guidance of serviceability in MD161[131].** Anglian published and discussed a thought leadership paper on the Water UK web site Market Place for Ideas, "Capital Maintenance Planning – From a historical and future perspective", in July 2015[132] to demonstrate the divergence of approaches and to remind Ofwat of the significant improvements the sector has made in the area of investment planning. The aim was to ensure this could be taken forward as part of the approach to PR19. This has not happened.<br>**This is a matter of extreme concern and Anglian encourages the CMA to explore this critical issue.** |

[123] Response to Anglian, para. 3.74 and Response on Cost Efficiency (006), para. 6.39.
[124] Specifically Section 4.3: Assessing Future needs pages 21-32 of Anglian's DD Representation (SOC168) and Appendix 4c Investment area summaries (SOC193).
[125] Asset Management Dashboards (SOC364).
[126] Anglian's SOC, Chapter E.1: Botex, Section 4.2 and para. 630.
[127] Response to Anglian, Drinking Water Quality case study, pages 61-63.
[128] Response to Anglian, Drinking Water Quality case study, pages 61-63.
[129] Capital Maintenance Requirements (SOC157) and Capital Maintenance CAC (SOC213).
[130] House of Commons (2000), Environmental Audit Committee, Seventh Report, para. 208, available at https://publications.parliament.uk/pa/cm199900/cmselect/cmenvaud/597/59703.htm.
[131] Ofwat MD161 Maintaining Serviceability to Customers (REP48D).
[132] Capital Maintenance Planning (July 2015) (REP33).

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| | | • There is no quantitative data provided to support the assertions made by reference to the company's service-impact models.<br>• The company should have presented the historical and forecast trends in service and asset performance and costs and a deep dive on their functionality of the service-impact models.<br>• Ofwat expects the company to set out why, when faced with an efficiency challenge, reducing maintenance was the best course of action.<br>• Due to data asymmetry, where the company does not provide a compelling case, it is in the best interests of customers to take a precautionary approach, particularly where a company has historically outperformed. | Anglian's DD Representation included Asset Management Dashboards[133] that assessed the impact of reductions in Capital Maintenance for each Regulatory Accounting Guideline (RAG) level. These were further updated in a set of Asset Management Plan Summaries[134] to demonstrate the harm of reductions. Further evidence in the updated Resilience in the Round[135] assessment following the FD details the reduction in operational resilience as a result of the FD. Ofwat does not address this wider evidence in its Response, except with respect to the Drinking Water case study.<br>The purpose of these documents was to provide a "window" into Anglian's asset management approach, to supplement the detailed descriptions set out in the Business Plan[136] and supplementary submissions in PR19. This was to explain the drivers for its Botex needs in AMP7, including as a result of new service obligations and capital maintenance needs, and the robust process Anglian went through to determine those needs. By contrast, Ofwat's modelling approach fails to adequately address these factors.<br>**It is remarkable that Ofwat has failed to engage in this crucial area**.<br>Ofwat has not requested any underlying information supporting the analysis previously. Nor was there an adequate mechanism in the PR19 process to allow for in-depth engagement on this topic.<br>In failing to engage Ofwat has ignored evidence provided by Anglian and the Bush-Earwaker papers on the limitations of using historical expenditure to determine future Capital Maintenance needs of companies.<br>Ofwat's response to this evidence continues to incorrectly assert that this case study and Anglian's wider assessment of bottom up future requirements is targeted solely at justifying the difference between Ofwat's econometrics and Anglian's plan. This misrepresents the data provided and is framed around Ofwat's presumption that its econometrics are correctly able to assess future assess requirements. As set out above, Anglian disputes this. |

[133] Capital Maintenance Investment Summaries (SOC193).
[134] Asset Management Dashboards (SOC364).
[135] Arup Resilience Assessment (SOC 285)
[136] Specifically Chapter 10.10 and 10.11 of Anglian's September 2018 Plan (SOC001).

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| | | | This failure to recognise the limitations of Ofwat's econometrics and their ability to forecast future assets requirements is in dispute. **Part G.2: Reply on Capital Maintenance (REP08)** sets out Anglian's views on the limitations of Ofwat's econometrics and why they are not a suitable proxy for a detailed, bottom-up risk based assessment of future requirements as undertaken by Anglian.<br><br>In considering Capital Maintenance needs Anglian provides evidence, which Ofwat has ignored, based on advanced modelling techniques used by the business to develop forward looking risk based plans. Figure 38 of Anglian's SOC was an example of this.[137] Contrary to Ofwat's claim, Anglian does not "choose" to reduce maintenance activity in the face of an efficiency challenge. It seeks to utilise its capital maintenance allowance most efficiently to achieve the greatest benefit for its expenditure. Furthermore, it makes additional investment if necessary to meet the service expectations of its customers and to maintain the serviceability of its assets. However, Anglian believes that additional investment should be funded when it is driven by legitimate reasons relating to the nature of its asset base.<br><br>As Ofwat appears to understand from its Response,[138] the Asset Management Plan Summaries and case study are intended to illustrate the impact of a significant funding shortfall against already efficient base costs on the risks to the business, customers and the environment.<br><br>Ofwat's substantive comments on the Drinking Water case study suggest further interest in understanding Anglian's approach including asset lives, deterioration curves, service impact models and the analysis of these to derive its assessment of future expenditure needs.<br><br>Anglian provided Ofwat with the Review of Anglian's PR14 Approach to Investment[139] by KPMG who independently reviewed Anglian's investment approach to provide further detail to Ofwat. Anglian also provided the source files which underpin the analysis provided in the Asset Management Plan Summaries in the SOC.[140] |

[137] Anglian's SOC, Chapter E.1: Botex, Figure 38.
[138] Response to Anglian, pages 61 to 63.
[139] KPMG Review of Anglian's PR14 Approach to Investment (SOC192).
[140] Dashboards – Master Data file (SOC510).

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| | | | **Anglian agrees it would be of benefit to Ofwat and the CMA to provide an opportunity to demonstrate these tools and how these were used to derive Anglian's plan and the values demonstrated in the case studies.**<br><br>As discussed previously Anglian suggests that the CMA also engages the Water Industry Commissioner for Scotland (WICS) on its approach to determining the requirements for Capital Maintenance for its forthcoming price control period.<br><br>Ofwat's reference to previous totex outperformance implies a link between Anglian's approach to developing its business plan and outperformance of previous regulatory determinations. This statement deliberately conflates these two separate considerations. This is consistent with Ofwat's accusation that Anglian consistently bids high in its Business Plans,[141] which Anglian strongly disputes. Separately in **Part G.1: Reply on Uplift and Outperformance (REP08),** Anglian sets out the breakdown of previous outperformance, demonstrating that contrary to Ofwat's implication here, overall Anglian has spent its Botex allowance in each of the four price review periods. |
| **9.2** | Arup carried out an updated resilience assessment post the FD and demonstrated the impacts which the FD has on Anglian's maturity levels and resilience.[142]<br><br>The review shows the reduction in the maturity scores from Anglian's plan to the FD, concluding that the FD puts additional risk on the business to deal with shocks and stresses.<br><br>Anglian's current performance against the Arup maturity assessment is 17 out of 22 where Anglian have a score of 4 or higher. The FD reduces this to 12, with a significant impact on Financial and Operational resilience assessment areas. | Ofwat does not comment on the resilience in the round assessment.<br><br>Ofwat refers to the resilience objective when listing its statutory duties.[143] | Ofwat's PR19 Methodology identifies resilience as one of the four core objectives for PR19 and a future challenge. Resilience in the Round is a key theme for the price control. It is therefore surprising that Ofwat does not engage at all in the detailed analysis and independent evidence which Anglian submitted both during the PR19 process and in its SOC[144] on the impact of the funding shortfall on its resilience.<br><br>Ofwat's approach is fundamentally inconsistent - emphasising the concept of resilience on the one hand but taking insufficient account of bottom-up evidence that puts resilience planning into action on the other. |

[141] Ofwat Initial Presentation to CMA (20 May 2020), Slides 14 and 34 (REP11) - "consistently high totex bidding in Anglian's business plans".
[142] Arup Resilience Assessment (2020) (SOC285).
[143] Response to Anglian, para. 2.1.
[144] Arup Resilience Assessment (2020) (SOC285).

## Part A.2: Review of Growth arguments

Ofwat's FD fails to provide adequate funding for growth, leaving a significant funding gap between Anglian's assessment of the region's needs and the funding available. The combined impact is to leave Anglian significantly underfunded in AMP7 and inappropriately exposed to most of the risk associated with accommodating growth.

This compromises Anglian's ability to meet its statutory obligations and is inconsistent with Ofwat's duties and with the Government's SPS. It will lead to poorer customer service for developer customers, frustrating home building and creating increased business risk as investments to enable growth are reduced or deferred. It could also result in lower standards of performance by Anglian, including increased incidence of pollution incidents, harmful discharges to the environment, low water pressure and sewer flooding.

Ofwat's response to these is contained in various documents it has submitted to the CMA, including its response to Anglian's SOC ("**Response to Anglian**") and its Cost efficiency – response to common issues in companies' SOCs ("**Response on Cost Efficiency**").[145]

Anglian believes that the focus for the CMA's redetermination should be setting appropriate upfront cost allowances and ensuring appropriate risk sharing mechanisms should growth materialise at a level different to that reflected upfront in the redetermination. Ofwat's responses do not address these key concerns highlighted by Anglian. Anglian provided evidence in its SOC that:

(i) The drivers and scale of their impact on growth-related costs are not covered by Ofwat's base cost models and adjustments;

(ii) Its investment costs are efficient and Ofwat's assessment fails to demonstrate that the evidence provided by Anglian during the price review process has been systematically assessed;

(iii) Ofwat's Developer Services Revenue Adjustment ("**DSRA**") and (more generally) its *"overall framework"* does not *"offer considerable protection against the risk of higher growth"*[146] as Ofwat suggests.

The impact of Covid-19 on growth in Anglian's region is still unclear and may remain so for some time. A discussion of the initial impacts of Covid-19 on Anglian is being provided as a separate submission to the CMA. Given this uncertainty, the focus for this redetermination should be on risk-sharing, not forecasts. Anglian welcomes the opportunity to work with the CMA and Ofwat to develop appropriate true-up mechanisms to remove volume forecasting risk from companies and customers.

[145] Response on Cost Efficiency (006).

[146] Anglian Water: Initial submission to the CMA on Covid-19 impacts.

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| **1** | **Ofwat adopts unrealistic growth projections** | | |
| 1.1 | **Ofwat used ONS trend-based projections for its forecasts, which are inconsistent with:**<br>• the Environment Agency's and the Government's guidance; and<br>• outturn data.<br>Ofwat's forecast of connections in the FD places significant risk on Anglian if growth follows Local Authority forecasts during AMP7. This risk is exacerbated by other aspects of Ofwat's treatment of growth, as discussed below.[147] | *Ofwat "maintain[s its] position that it would not be appropriate to adopt companies' forecasts based on Local Authority data from their WRMPs. These forecasts have historically proven to be high. Latest evidence highlights a downward trend in population growth, and confirms that [Anglian] is not expected to be the region with the highest population growth*".[148] | Anglian reiterates its concerns about Ofwat's approach to deriving growth forecasts and sets out below its high-level reply to Ofwat's main arguments.<br>However, Anglian agrees that "*[t]here is uncertainty around population growth*"[149] and notes that the impact of Covid-19 is currently uncertain, and any attempts to quantify its long-term volumetric impact likely to be inaccurate at this stage.<br>Anglian's position is that the CMA can manage this unavoidable uncertainty in the best interests of customers and companies by working in two steps.<br>First, it can set a baseline allowance based on rigorously assessed efficient costs. Anglian's business plan costs, which have been built up over a number of years and subjected to an exacting process of internal and external challenge by qualified experts, represent such a baseline. The efficiency of the plan is further supported by models developed by Vivid Economics through a principled and systematic assessment process. The baseline Ofwat proposed at the FD, which was based on a flawed modelling approach that failed to account for the effect of the volume or profile of growth on efficient costs, cannot function as such a baseline.<br>Second, it can account for uncertainty through an effective true-up mechanism that neutralises the risk of forecasts not materialising due to factors outside of management control, most notably Covid-19. Appropriately calibrated, such mechanisms de-risk the inevitable differences between *ex ante* forecasts and outturn growth. Such approaches have regulatory precedent and would appropriately serve to diminish the need for the CMA to determine up front forecasts with precision.<br>Anglian welcomes the opportunity to work with the CMA and Ofwat to develop appropriate true-up mechanisms to remove volume forecasting risk from companies and customers. |

[147] Anglian's SOC, Chapter E.2: Growth, Section 5.1.
[148] Response to Anglian, para. 3.117.
[149] Response to Anglian, para. 3.101.

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| 1.2 | **Ofwat has inappropriately used the ONS dataset on households.**<br>The ONS dataset used by Ofwat is a projection for households, not properties directly, and year-on-year changes will not correlate directly with new-builds and connections. The Government's own planning guidance indicates this is not the appropriate source for projections of new-build housing and demonstrably does not track current and forecast new connection activity in Anglian's region. The dataset used by Ofwat also conflicts with the Environment Agency's guidance for WRMPs in England. The 2016 version of the 406 dataset (based on 2014 data) is currently the only dataset sanctioned for use by the Government as a starting point in assessing the need for additional housing in local plans.[150] | Ofwat has not fully engaged with the arguments put forward by Anglian. Ofwat argues that the ONS "*is the expert national statistical authority for the UK, and a respected and widely used source to forecast population growth*".[151] | Anglian does not dispute the credibility of the ONS.<br>It challenges the use of a particular data source for forecasting future housing need, in direct contrast with the Environment Agency's guidance for WRMP and the Government's own planning guidance. While Ofwat has used the latest figures from the ONS, Ofwat has ignored Government advice on which ONS dataset to use as the start point for planning housing need. Ofwat does not fully explain why it considers this appropriate nor does Ofwat attempt to reconcile the actual level of connections in Anglian's region in 2019-20 (24,294 for water[152]), which are already significantly higher than the number of connections suggested by the ONS 2016 rate of housing growth, which is 19,099 for 2019-20 (this is 21% lower than the actual). |
| | | Ofwat argues that "*[t]he latest ONS population projections predict lower growth rates in the UK, with [Anglian's] population growth not being the highest in the sector*".[153] | Whether or not Anglian's population growth is the highest in the sector is irrelevant. According to the latest ONS population projections, the change in the rate of growth for Anglian is marginal and remains the second highest. Additionally, this forecast is trend-based and does not reflect future drivers of population growth, such as housebuilding in the Anglian region or the OxCam Arc. It is uncertain what impact Covid-19 will have on the relative growth rate of each region. |
| 1.3 | **Ofwat's forecasts are significantly low relative to Local Authority's forecasts and Anglian's estimates.**<br>Anglian recognises that forecasting growth is difficult, due to inherent uncertainty in the housing market. However, over multiple AMP periods, growth in its region has been strong and multiple sources indicate that this will continue. This reinforces the need to make long-term investments to enable large development sites that will be built out over multiple AMP periods.[154] | Ofwat states that WRMP "*forecasts have historically over-estimated household growth"]* and that *"Anglian's forecast "is almost twice as high as the historical growth rate*".[155] | Anglian's latest forecasts have not relied solely on WRMP estimates. While in its September 2018 Plan, Anglian adopted forecasts in accordance with guidance for WRMPs, i.e. using Local Authority Planning data, which was independently assessed by external demographic consultants (Edge Analytics). Anglian's updated forecast submitted as part of the SOC, takes advantage of 18 months of additional information to reflect (i) Local Authority recent delivery against its plan from 2015-2016 to 2017-2018 (the housing delivery test); (ii) the degree to which a step-up is required from recent Local Authority delivery of homes to meet the future plan projections (the plan completions uplift); |

[150] Anglian's SOC, Chapter E.2: Growth, Section 5.1.1.
[151] Response to Anglian, para. 3.108.
[152] Draft figure being prepared for Anglian's Annual Performance Report.
[153] Response to Anglian, para. 3.114.
[154] Anglian's SOC, Chapter E.2: Growth, Section 5.1.2.
[155] Response to Anglian, paras. 3.106 to 3.107.

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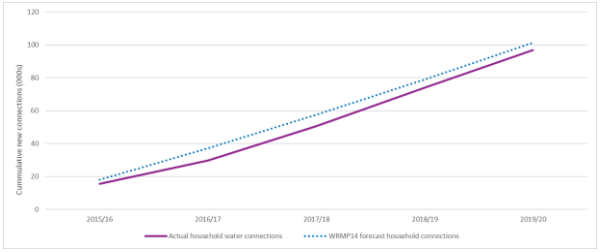
| | | | and (iii) whether there is sufficient supply of housing land for delivery of local plans (deliverable capacity).[156]<br><br>Historical WRMP forecasts have over- and under-estimated growth. As with any forecast, they are informed judgements based on a set of information available at the time. While at WRMP09 growth did not materialise in line with Anglian's forecast, as shown in the figure below in line with the forecast, at WRMP14 and in AMP6 it has.<br><br>**Figure 1 WRMP14 forecast and actual household connections**<br><br>  <br><br>*Source: Anglian* |
| 1.4 | | Ofwat states that if Anglian's forecast is plotted "*on a total connected properties basis, rather than new connected properties basis*",[157] which according to Ofwat has "*been found to suffer from reporting inconsistencies between companies […] this would clearly show that [Anglian's] connected properties forecast is significantly above the historical trend*".[158] | Ofwat's statement of reporting inconsistencies between companies is irrelevant to the CMA's consideration of the derivation of an appropriate growth forecast as part of its redetermination.<br><br>Furthermore, the fact that the forward-looking forecast is significantly above the historical trend does not invalidate that forecast as Ofwat implies.<br><br>An over-emphasis of new connections fails to recognise the full drivers of growth related expenditure.<br><br>As supported by engineering insight (and statistical evidence), the key components of establishing the investment need for network reinforcement and treatment are population growth and asset capacity. The volume of connections is only relevant for on-site activity, which for Anglian is around a fifth of the total investment plan.[159] |

[156] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 6.1.1.
[157] Response to Anglian, para. 3.110.
[158] Response to Anglian, para. 3.110.
[159] See Vivid Technical Note on Growth Modelling Issues (REP12) for further details.

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| 1.5 | | Anglian "*revised its household growth estimates twice in the span of six months*", which according to Ofwat "*highlights the uncertainty and apparent lack of confidence that Anglian Water has in its own forecasts*".[160] | For the avoidance of doubt, the forecasts used by Anglian are based on external data sources, aligned to the WRMP guidance.<br>As better information becomes available which enables forecasts to be updated it is, without doubt, good practice to reflect this better information. Rather than an "*apparent lack of confidence*",[161] Anglian's revised forecasts reflect the Company's commitment to providing the CMA with the most up-to-date and comprehensive evidence available to enable the CMA to reach its redetermination. To that end, Anglian also provides with this Response updated totex figures, which reflect the work undertaken since February 2020 to map these updated growth forecasts geographically, assess asset capacity and establish investment need across Anglian's water network and over 1,000 wastewater catchments, in light of Anglian's latest forecasts of new connections and population. For Anglian's September 2018 Plan, this process took 18 months to complete. |
| **2** | **Ofwat's modelling approach results in a flawed assessment of growth-related costs** | | |
| 2.1 | **Ofwat did not properly consult on its Botex Plus approach. Perhaps as a result, Ofwat's approach is simplistic and does not reflect industry reality.** At DD, and contrary to regulatory precedent where Ofwat had previously assessed growth as part of enhancement, Ofwat moved six growth-related lines of Enhancement expenditure into Botex, transferring £4 billion of industry expenditure and creating what it referred to as Botex Plus. (A seventh, transferred sewers and pumping stations, was added to the list at FD). No substantive changes were made to the IAP cost models (which were created to model Botex) at the same time. Notably, as discussed in 2.2 below, no new growth-related cost drivers were added.[162] This led to Botex Plus models which do not provide a reliable basis for forecasting the costs of companies' activities to meet future growth needs. | Ofwat continues to argue that "*modelling together operational, capital and growth-related expenditure is appropriate*" as:<br>• "*dealing with population growth is a routine part of water companies' businesses […] companies have incurred growth-related expenditure in the past and will continue to incur growth-related expenditure going forward*";<br>• "*growth related expenditure can be explained by similar cost drivers to operational and capital maintenance. Namely, company scale and population density*"; and<br>• no *significant* change is expected "*in what drives growth enhancement during PR19*".[163] | Anglian has previously noted that Ofwat did not properly consult on its Botex Plus approach. Perhaps as a result, Ofwat's approach is simplistic and does not reflect industry reality, in that:<br>• it negates the significant bespoke investments in strategic infrastructure (such as strategic sewers) which are needed to accommodate growth, and which are far from "**routine**". In any event, whether an activity is routine or not is not relevant for its inclusion in a cost model. What is more important is whether that activity can be explained by the same set of drivers as those included in the model and whether the estimated relationship with any drivers (or proxy drivers) is of the appropriate magnitude;<br>• it is inappropriate to use **scale** and **density/sparsity** as the sole drivers for network reinforcement and treatment costs or to argue that the relationship between these measures and Botex is the same as the relationship between these measures |

[160] Response to Anglian, paras. 3.101 to 3.102.
[161] Response to Anglian, paras. 3.101 to 3.102.
[162] Anglian's SOC, Chapter E.1: Botex, Section 4.4.
[163] Response to Anglian, para. 3.12.

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| | | | and growth. In fact, the variables Ofwat uses in its Botex model are at best only weakly correlated with the drivers of growth costs, which means that estimated relationships between drivers and costs are attenuated in Ofwat's models. As a consequence, companies such as Anglian with high-volume, high-complexity profiles of growth are substantially underfunded in this area.<br>• the fact that no significant change might be expected in types of growth drivers does not validate Ofwat's Botex Plus (which Ofwat has only begun to use in this price control). The models either properly reflect growth-related needs or they do not.<br>Ofwat's approach is diametrically opposed to that taken by Ofgem in the RIIO-ED1 price controls where the equivalent of growth "load related expenditure" was assessed by each expenditure type, recognising that there are different drivers for different activities.[164] The charging regime in electricity networks recognises these subtleties, with a "shallow-ish" charging structure where network reinforcement costs beyond one voltage level above the connection are fully funded by cost allowances to the network operator. Anglian notes that RIIO-ED1 includes a fully symmetric uncertainty mechanism in the form of the "Load related expenditure re-opener", based purely on expenditure relative to allowance.[165] |
| **2.2** | **No new cost drivers were added to Ofwat's Botex models to address the fact that they now were to be used to forecast growth.**<br>As reflected by the work undertaken by Vivid, Ofwat models fail **to properly account for** the following **complexity drivers** and associated costs:<br>• Remoteness (i.e. the distance of growth sites from the nearest town, reflecting the proximity of growth to supply centres; off-site reinforcement costs are higher when development sites are located further away from existing infrastructure. This can also be | Ofwat argues that "*[its] hybrid approach does take into account growth intensity and remoteness*".[168] In particular:<br>• Ofwat argues that cost drivers in its base cost models capture differences in **remoteness** between companies as (a) "*[its] wholesale water base cost models include a variable for population density/sparsity and the number of booster pumping stations, which are both related to remoteness*"; and (b) "*[its] wholesale wastewater base cost models include population density/sparsity, sewer length, pumping capacity per sewer length, load treated in different size* | Ofwat incorrectly suggest the cost drivers included in Ofwat's models measure the engineering factors behind intensity and remoteness.<br>In particular:<br>• growth **intensity** refers to the quantity of growth relative to the pre-existing local asset base. It is not, as Ofwat claims, simply the same as the volume of growth, but rather accounts for the fact that any given volume of growth may be more or less expensive to serve, depending on whether it breaches the existing installed capacity of offsite assets. The intensity variables presented in Ofwat's PR19 models do not include |

[164] RIIO-ED1 FD (REP16).
[165] Ofgem Strategy Decision for the RIIO-ED1 Electricity Distribution Price Control, pages 18 to 22 (REP17).
[168] Response on Cost Efficiency (006), para. 4.39.

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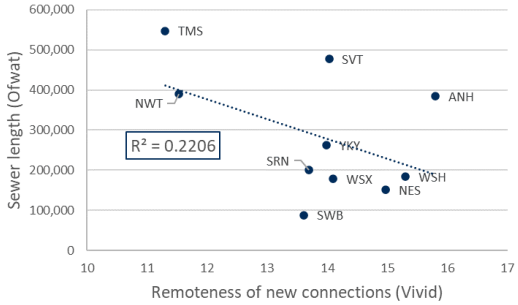
| | considered as growth occurring in sparsely populated areas); and<br>• Intensity (i.e. the level of growth relative to existing population; reinforcement costs are more likely to be needed where the local rate of growth is high relative to the existing population for which the assets were designed).[166]<br>Vivid's analysis showed that there are statistically robust relationships between remoteness and intensity complexity drivers and costs (in addition to sparsity).[167]<br>Anglian is materially different from the industry mean on these measures. Others may experience remote but less intense growth or intense but less remote growth meaning cross-industry comparison is more relevant for their costs. This means that Anglian's costs to enable growth are different from the rest of the industry, but still efficient. | *treatment works and number of sewage treatment works per property, which are all related to remoteness*".[169]<br>• Ofwat argues that "*[t]he growth unit cost adjustment was put in place to recognise that [its] base models may undercompensate companies with relatively high forecasts of population growth and therefore addresses growth* ***intensity***".[170]<br>Ofwat claims that, in any event, for wholesale water growth costs "*the main driver […] is the* ***number of new connections****, which is captured within [its] base cost models, growth unit rate adjustment and DSRA mechanism*".[171] | driver variables that capture this narrative, and therefore do not account for intensity; and<br>• growth **remoteness** pertains to the geographical profile of *growth* in a company's region, but the variables Ofwat cites as capturing this all measure the geographical profile of companies' pre-existing population or asset base. The two are not the same and are only weakly correlated,[172] meaning they cannot function as proxy variables.<br>**Figure 2** **Ofwat's remoteness driver for wastewater services plotted against the remoteness metric developed by Vivid in its growth assessment report**<br>  <br><br>*Source: Vivid Economics (note average data for AMP7)*<br>Additionally, while Ofwat seems to accept that the intensity and location of growth are important factors,[173] Ofwat's drivers are company level rather than growth specific and the impact of growth can only be estimated using the very weak relationship these have with overall company (Botex Plus) costs. The allowances generated by Ofwat's models do not account for any effect of differences in intensity, while the coefficients on its proxies for remoteness are attenuated, in the sense that they understate the marginal costs associated with increased |

[166] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 6.1.4.
[167] Anglian's SOC, Chapter E.2: Growth, Section 5.2.1 (i) and Vivid Economics Growth Report (March 2020) (SOC369).
[169] Response to Anglian, paras. 3.133 to 3.134.
[170] Response on Cost Efficiency (006), para. 4.40.
[171] Response on Cost Efficiency (006), paras. 4.36 to 4.37.
[172] Vivid Technical Note on Growth Modelling Issues, Paras. 7 to 9 and statistical appendix (REP12).
[173] Response to Anglian, para. 3.133.

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| | | | remoteness across both base and growth costs. This is an important reason why, even accounting for the unit cost adjustment Ofwat makes to its modelled allowances, Ofwat's approach performs poorly in explaining growth costs across all companies in the sector. The latter is highlighted by the very wide range of efficiency scores it generates.[174] |
| | | Ofwat claims that the **sparsity** complexity driver was excluded from Vivid's preferred wholesale water growth model "*as it was not found to be statistically significant*".[175] | Remoteness was not included in Vivid's preferred wholesale water growth model. However, remoteness is included in its preferred wholesale wastewater growth model. In addition, both models predicted higher allowances than Ofwat's simplistic approach. |
| **2.3** | **Growth rates vary spatially and temporally**.<br>There is not a stable relationship between the volume of connections and unit costs for growth per connection. The costs falling into the five-year window will vary significantly in magnitude dependent on the timing, location and nature of growth. Even in the medium term there is not necessarily a direct relationship between the recording of new connections and the expenditure needed to service the needs of those new properties. Off-site costs are lumpy. With network reinforcement and treatment upgrades, increases in capacity come in defined increments and it is possible that a small number of additional connections or increases in demand exceed available capacity, triggering an upgrade. The unit cost of two similarly sized developments, where one triggers network reinforcement and the other does not, would be very different. For different volumes and time periods, the incremental unit rates could be very different from the average unit rate for the total volume. | Ofwat did not fully engage with the arguments put forward by Anglian. Ofwat simply states that it "*assessed growth costs based on a comprehensive 'hybrid' approach, which combines the base cost models with a growth unit cost adjustment and deep dive analysis*" and that it *"remain[s] of the view that [Anglian] has failed to provide convincing evidence that our base cost models, deep dives and growth unit cost adjustment in combination do not provide a sufficient allowance*.[176] | Anglian welcomes the fact that Ofwat has sought to make adjustments to its approach and responded to feedback on its IAP model. However, the proposed final approach represents a poor remedy to the issues which persist, as evidence by Ofwat's attempted adjustment.<br>Anglian considers that Ofwat's characterisation of its own approach to growth as a "*comprehensive "hybrid approach'*"[177] masks the limitations of the base models for modelling growth. At a high level, Anglian notes that Ofwat is reluctant to outline with any degree of certainty what growth cost allowances it has provided.[178] Consequently, it seems difficult for Ofwat to categorically argue that its approach ensures companies receive appropriate allowances. Ofwat itself has described its approach to growth as being "*lump[ed]*" in with base costs.[179]<br>Ofwat claims to have undertaken a deep-dive review of Anglian's submission. The summary of Ofwat's review of the evidence provided (including Anglian's enhancement business cases, DD representation submission and October 2019 submission) is covered in five paragraphs.[180] The other pages referenced by Ofwat relate to introductory statements and discussion of risk-sharing mechanisms. In email correspondence received on 7 May 2020 (copied to the CMA) Ofwat confirmed that this represents the entirety of its assessment. |

[174] Vivid Technical Note on Growth Modelling Issues (REP12).
[175] Response on Cost Efficiency (006), para. 4.36.
[176] Response on Cost Efficiency (006), paras. 4.22 to 4.35 and Response to Anglian, page 40.
[177] Response to Anglian, page 40.
[178] Response on Cost Efficiency (006), para. 4.42.
[179] Ofwat's Third CMA Teach In, page 14 (SOC353).
[180] Anglian FD Cost Efficiency Additional Information Appendix, p ages 21 and 22 (SOC236).

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| | | | Anglian maintains that this is not adequate to be considered a deep dive of the evidence provided to support over £600 million of proposed investment. Anglian invites the CMA to undertake a more thorough review of the evidence, and Anglian will make its teams and systems available to the CMA to facilitate this. |
| **2.4** | **Ofwat's Botex Plus models fail to distinguish between new and existing per property cost, assigning a single cost to both**.[181] | Ofwat has not engaged with this point. However, its teach-in session on 25 February 2020 recognised that its Botex Plus models do not distinguish between the cost of servicing an existing connection and the cost of creating a new one.[182] | Anglian welcomes Ofwat's recognition that its Botex Plus models do not distinguish between the cost of servicing an existing connection and the cost of creating a new one. The updated expenditure gap is £284 million. This expenditure gap remains after Ofwat's growth adjustment, demonstrating that it alone is an insufficient remedy. |
| **2.5** | **The implied allowances and unit costs that Ofwat's models generate for growth are inconsistent with sensible estimates**.<br><br>There are "winners and losers" from Ofwat's approach, with wide variation between the funding requested and funding allowed for companies. There appears to be very little correlation with Ofwat's assessment of scope or efficiency for other areas of expenditure. This suggests that the models are very poorly suited to the purpose for which Ofwat has used them. Similarly, there is significant variation in the implied unit rates, particularly for water recycling. Such variation exists due to the lack of appropriate drivers for growth in Ofwat's modelling.[183] | Ofwat "*acknowledge[s] that [its] models do not identify separate allowances for growth expenditure, which is modelled altogether with base costs".*[184]<br><br>However, Ofwat then argues that *"every estimate of an 'implied' allowance for growth expenditure and 'implied' unit rates is likely to be imprecise and highly sensitive to the approach adopted […] a comparison of implicit allowances and implied unit costs should not be taken as reliable indicator of the appropriateness of the growth allowance*".[185] | Anglian maintains that Ofwat's allowances are too low, as is its off-model growth adjustment.<br><br>It is possible to compute implied allowances. As a matter of fact, Ofwat previously shared its implied allowance with Anglian.[186] Computing implied allowances is discussed in **Vivid Technical Note on Growth Modelling Issues (REP12)**.<br><br>Ofwat's approach to growth cost assessment at the FD leads to disparities between estimated costs and business plan costs that are much greater than could plausibly be attributed to differences in company efficiency, with five-fold variation between companies' efficiency scores in water and three-fold variation in wastewater (even where the off-model growth adjustment is accounted for).<br><br>The particular inadequacy of the off-model unit cost adjustment is highlighted by a simple comparison of the unit rates applied by Ofwat to its own evidence on efficient costs. Anglian notes Ofwat's own connection cost benchmark,[187] where the median costs range from £633 to £1,624. Given that this excludes significant categories of cost (i.e. new mains, network reinforcement and treatment) this shows that the unit rates used in Ofwat's adjustment are not realistic and do not withstand scrutiny. |

[181] Anglian's SOC, Chapter E.1: Botex, Section 4.4.
[182] Ofwat's Third CMA Teach In (SOC353).
[183] Anglian's SOC, Chapter E.2: Growth, Section 5.2.1(ii).
[184] Response on Cost Efficiency (006), para. 4.42.
[185] Response on Cost Efficiency (006), para. 4.42.
[186] See Ofwat's email to Anglian on growth allowances (SOC355).
[187] https://www.ofwat.gov.uk/wp-content/uploads/2017/02/IN-1702-New-connections-benchmarking-costs.pdf.

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| 2.6 | **The inadequacies of the Botex Plus models are also highlighted by their inelasticity**.<br><br>Ofwat's model implies that increasing the number of connections, represented by the properties driver by around 400,000 for both water and water recycling, from 900,000, can be funded with an additional allowance for the industry of £9 million. This figure is not credible. It implies a unit rate of roughly £10 for every connection above the ONS forecast at an industry level. Ofwat's model also implies that some companies face a negative unit rate.<br><br>The models' inelasticity to growth is also demonstrated by keeping all cost drivers constant at the 2019/2020 level during AMP7. This would represent a "no growth" scenario. In this scenario, Ofwat's Botex Plus model allowance for Anglian would reduce by £31.1 million for water and £38.6 million for water recycling (total £69.7 million). This is unreasonably low compared to Ofwat's own implied allowance of £402 million for Anglian to accommodate growth.[188] | Ofwat has not engaged with this point. | Ofwat has not commented on the inadequacies of its Botex Plus models, as highlighted by their inelasticity. This has direct impact on the efficiency challenge which Anglian is subject to. In particular, due to the inelasticity of Ofwat's Botex Plus models, scope and efficiency and pure efficiency challenge are effectively the same for growth according to the Botex Plus models. |
| 2.7 | **Ofwat conceded the lack of growth variables in its Botex Plus models and made company-specific adjustments at FD to reflect average growth rates.**<br><br>Ofwat's approach was to assess the variance between each company's forecast growth rate for the period 2020-2025 with the historical growth rate for the industry over the period 2011/12 to 2018/19 then multiply this variance by a unit cost rate per connected property. For unspecified reasons, where this calculation gave a negative figure, the adjustment was halved. This increased Anglian's allowance by c. £41 million (£12 million Water; £29 million Water Recycling).[189] | Ofwat has not fully engaged with the evidence put forward by Anglian. Ofwat simply notes that it "*accepted the company's representation that the integrated models may suffer from missing growth variables and that may lead to the base econometric models only funding the average historical growth rate across the industry*".[190] Ofwat states that, it "*calculate[d] the forecast number of new connected properties above or below the historical average growth rate, and multiply it by the efficient historical unit cost*" and that this adjustment, which led to an extra allowance of £40.6 million, "*is intuitive and supported by a sound rationale*".[191] | **Anglian reiterates that Ofwat's subsequent attempt to fix its inappropriate econometric models in setting cost allowances (without any bottom-up assessment, at least, as a cross-check, but ideally as the main basis of assessment) with an adjustment does not in fact address the needs of the Anglian region.**<br><br>First, the rates are too low. As shown in Table 14 of Anglian's SOC,[192] Ofwat's Botex Plus implied unit rate for Anglian is £1,128 for water and £2,502 for wastewater (these rates include Ofwat's £40.56 million adjustment, without the adjustment the rates are £1,006 for water and £2,256 for wastewater). This is significantly higher than the rates applied by Ofwat in its adjustment (£783 for water and £1,715 for wastewater).<br><br>Second, the use of a unit rate fails to account for the fact, acknowledged by Ofwat in its discussion of remoteness and intensity, that efficient unit |

[188] Anglian's SOC, Chapter E.2: Growth, Section 5.2.1(iii).
[189] Anglian's SOC, Chapter E.1: Botex, Section 4.4.
[190] Response to Anglian, para. 1.42.
[191] Response to Anglian, para. 3.127.
[192] Anglian's SOC, Chapter E.2: Growth, Section 5.2, Table 14.

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| | | | rates will vary between companies depending on exogenous factors other than volume. The importance of this is evident in the ranges of implied unit rates produced by Ofwat's unadjusted models (with the lowest rate being roughly half the highest). |
| 2.8 | **Ofwat included Enhancement expenditure associated with improving sewer flooding and low pressure performance in its assessment of growth expenditure.**<br>Ofwat argued that these costs generally follow a flat profile and are driven by population growth and size of the company. However, Anglian's investments relating to sewer flooding and low pressure enhancements are not driven by growth in new connections.<br>As part of facilitating growth, Anglian specifically designed its solutions to ensure no detriment to existing customers. Anglian does not (and cannot) recover these costs from developers to address existing issues in its network.<br>Anglian's flooding programme is designed to address existing issues in its sewer network. An important driver of costs for sewer flooding is to mitigate the impact of climate change, which is an item unrelated to the number of new connections. It is, therefore, not appropriate to allocate expenditure to improve service on low pressure and sewer flooding to new development and growth.<br>Consequently, these should be assessed separately from growth and Botex, on their own merits and in a consistent manner with the way in which costs for leakage were assessed.[193] | Ofwat has not fully engaged with the evidence put forward by Anglian and simply argues that:<br>• "*companies have always had a requirement to address **low pressure** and there has been no change to the statutory threshold they need to obtain*";<br>• "*only four companies reported enhancement expenditure against this activity for 2020-25".* Consequently, *"this is likely to be a result of inconsistent interpretation […] Including these costs in base costs therefore provides consistency*";<br>• "*costs are very immaterial at £7 million across the four companies that reported them*";<br>• "*[c]osts to reduce **sewer flooding** risk are largely driven by population growth and should therefore be assessed together with growth expenditure. As new properties connect to the network, the risk of sewer flooding increases unless companies invest to ensure the sewer network has sufficient headroom to accommodate the growth*";<br>• "*companies generally forecast a flat profile of investment over 2020-25, and that the investment is reasonably driven by population growth and the size of the company*";<br>• "*while climate change can also be considered a driver of this expenditure, the associated costs* | **Low pressure** – while there has been no change in the statutory requirement, the proposed enhancement funding represented investment to improve service by reducing the number of customers experiencing service below the standard.<br>Low pressure is a bespoke performance commitment, which may not have been put forward or prioritised by the customers of all companies.<br>While low in materiality, they represent another area of enhancement funding that has been disallowed which equates to a further efficiency challenge without merit.<br>**Sewer flooding** – it is incorrect to state that population growth is the driver for Anglian's enhancement expenditure for sewer flooding.<br>Developers are expected to pay to mitigate the impacts of new developments on existing networks and customers. The enhancement funding requested by Anglian was to address existing sewer flooding issues and mitigate the impact of climate change. The delineation between expenditure on new issues associated with growth and existing issues is explicitly clear in Ofwat's own Regulatory Accounting Guidance[195] and cross-subsidy in the way Ofwat is suggesting is prohibited by Ofwat's charging rules.[196]<br>Anglian disagrees that any climate change that has occurred over the course of previous price controls means that the base models appropriately capture future drivers of climate change linked resilience generally or specifically for sewer flooding. The EA's guidance on assessing flood risk includes a 5-10% uplift to rainfall event severity change in the 2020s and 2030s.[197] This demonstrates the expectation that severity of rainfall events and flooding is predicted to increase above this historic experience. |

[193] Anglian's SOC, Chapter E.2: Growth, Section 5.2.2.
[195] Ofwat, RAG 4.08 - Guideline for the table definitions in the annual performance report, available at: https://www.ofwat.gov.uk/wp-content/uploads/2019/01/RAG-4.08-Guideline-for-the-table-definitions-in-the-annual-performance-report.pdf.
[196] Ofwat's Charging Rules for New Connection, paras. 27 and 37 (SOC375).
[197] Flood risk assessments: climate change allowances, Table 2, available at: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances.

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| | | *will be captured in [Ofwat's] base models, as companies have been dealing with climate change over multiple price controls*".[194] | |
| 2.9 | **Reporting inconsistencies can be addressed without compromising the robustness of a standalone growth model.** | Ofwat argues that its "*integrated approach mitigates for known company reporting inconsistencies between operating, capital maintenance and growth-related expenditure […] These reporting inconsistencies between companies could therefore make standalone growth and base model results misleading*".[198] According to Ofwat, "*historical differences in reporting growth costs between companies […] is one of the reasons we model base and growth expenditure together)*".[199] | Anglian agrees that there are some inconsistencies between growth data submitted by different companies for PR19. The inconsistencies however fall short of a robust rationale for the course of action and modelling approach Ofwat has taken in its FD.<br><br>These issues are not insurmountable and could have been addressed if Ofwat's approach to interrogation of growth-related information had been systematic and consistent throughout the PR19 process. Anglian notes that Vivid's modelling for growth, as presented in SOC369, accounts for the opex issue highlighted by Ofwat, by modelling totex. While there may be some inconsistency in cost allocation between base and enhancement, Ofwat's RAG guidance is relatively clear and Anglian believes these issues to be non-material overall.[200]<br><br>As stated in Anglian's SOC, the models prepared by Vivid perform better (in terms of alignment with operational expectations and stability and acceptably for explanatory power) than Ofwat's IAP model for growth and Ofwat's FD models for Botex Plus (for both water and wastewater).[201]<br><br>Anglian requests that the CMA revises the proposed approach to assessing growth costs, for example, by taking account of Anglian's modelling approach and engineering-based assessments of growth costs (Anglian can make its models, C55 tool and staff available to the CMA for this purpose) and assessing sewer flooding and low pressure separately to growth. |
| | | Ofwat claims that "*Vivid Economics standalone growth models present a wide range of **efficiency scores**, which was one of the main reasons why [Ofwat] moved to an integrated base and growth modelling approach. The* | Anglian considers that Ofwat has mischaracterised Anglian's representations. Anglian argues that: (i) it is appropriate to use a model that is specific to growth;[204] and (ii) as with any model, it should inform judgement rather than replace judgement. The narrowing of efficiency |

[194] Response to Anglian, paras. 3.123 to 3.125.
[198] Response to Anglian, para. 3.121.
[199] Response on Cost Efficiency (006), para. 4.42.
[200] See Vivid Technical Note on Growth Modelling Issues (REP12) for further details.
[201] Anglian's SOC, Chapter E.2: Growth, Section 6.
[204] As noted in Anglian's SOC: "*The strength of these models is such that they can be used to inform cost assessment, either through setting cost allowances directly or supporting engineering-focused deep dives of costs*". Anglian's SOC, Chapter E.2: Growth, Section 6, para. 731.

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| | | *reporting inconsistencies between operating, capital maintenance and growth expenditure mean that stand-alone growth model results are likely to be misleading*".[202]<br>Ofwat also claims that Anglian "*itself admits that the stand-alone models developed by Vivid Economics could be used to inform cost assessment but not necessarily to set cost allowances directly*."[203] | scores and improvement in performance of Vivid's model relative to Ofwat's is discussed in row 2.6 of this table and in the **Vivid Technical Note on Growth Modelling Issues (REP12).**<br>Vivid's stand-alone models are robust to any data allocation issues, as discussed in **Vivid Technical Note on Growth Modelling Issues (REP12).** |
| **3** | **Ofwat's DSRA fails to provide adequate insulation against the full costs of high growth** | | |
| **3.1** | Ofwat created an inadequate "true-up" mechanism to adjust revenue in AMP8 if actual growth exceeds Ofwat's AMP7 projections. | Ofwat has not fully engaged with the arguments submitted by Anglian and instead maintains that Ofwat's "*overall framework offers considerable protection against the risk of higher growth*" and there is no need for "*an additional uncertainty mechanism*".[205]<br>Ofwat claims that PR19 offers companies protection against high growth through three main mechanisms:<br>• DSRA which "*provides a volume driver revenue adjustment for new development costs*";<br>• "*the cost sharing mechanism*"; and<br>• "*the resetting price control determinations every five years, which provides the opportunity to adjust for high growth rates*".[206] | The DSRA is not an adequate mechanism to provide full and appropriate adjustment to revenue for the costs of growth. Ofwat accepts that the DSRA does not provide full coverage of growth costs and has not addressed issues high-lighted regarding the computation of its efficiency challenge.<br>The on-going Covid-19 pandemic will have an impact on the housing market in Anglian's region. The scale and nature of this impact is unclear. Throughout the PR19 process, Anglian has championed the use of uncertainty mechanisms as an additional customer protection for its proposed investment programme.<br>Appropriately calibrated mechanisms de-risk the inevitable differences between *ex ante* forecasts and outturn growth. Such approaches have regulatory precedent and would appropriately serve to remove the precision of up-front forecasts as a major issue for diminish the need for the CMA to determine up front forecasts with precision.<br>In referencing the cost-sharing mechanism, Ofwat is knowingly suggesting that, should growth occur above the level that is assumed ex-ante in the price control, Anglian would only be able to recover a proportion of the costs (currently a third, which Anglian notes is in dispute) relating to growth. This mechanism is designed to share the under or outperformance between companies and customers for the delivery of known outcomes to incentivise efficiency. Its use here in the face of volume risk, outside of management control. is clearly inappropriate as a sufficient remedy. |

[202] Response on Cost Efficiency (006), para. 4.36.
[203] Response on Cost Efficiency (006), para. 4.38.
[205] Response to Anglian, para. 3.141.
[206] Response to Anglian, para. 3.142.

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| | | | As Ofwat is well aware, the future resetting of the price control offers zero protection to companies for variations that occur in the AMP7 period. This merely suggests Ofwat may not allow such exposure to persist in subsequent periods.<br><br>Ofwat accepts that the DSRA does not provide full coverage of growth costs.[207] The different treatment of network reinforcement (in scope for DSRA) and water recycling treatment (outside the scope of DSRA) is arbitrary. Both are required to enable growth and neither response one-to-one to connection volumes and yet Ofwat is content to include network reinforcement within the DSRA but not treatment costs. Ofwat does not explain why these two similar types of expenditure are treated differently.<br><br>Shortfalls in growth funding jeopardise Anglian's ability to deliver the investments its region needs and customers support, instead incentivising short-term fixes, risking services to new and existing customers and environmental harm, which goes beyond the current price control.[208] Additionally, if Ofwat's methodological shortcomings in modelling growth requirements coupled with its insufficient true-up mechanism are carried to future price controls, customer and environmental harm arising from underfunding growth would be further exacerbated, spanning across multiple AMPs. |
| | | According to Ofwat, the "*totex regulatory framework also gives companies the opportunity to use its allowance flexibly to deliver outcomes for customers. This enables the companies to adapt to changing circumstances during the price control if it is in the customers' best interest to do so*".[209] | Anglian does not consider that Ofwat's assertion that funds could be taken from elsewhere is a particularly compelling reason to argue against fully symmetrical growth risk-sharing mechanisms. As explained elsewhere in this Reply, Ofwat's FD delivers a shortfall in funding across all totex building blocks. Hence, there are no "extra pockets" of funding as Ofwat seems to suggest. Furthermore, the shortfall in funding forces Anglian to consider sub-optimal short-term solutions, which defer vital enhancements proposed by Anglian to future AMPs, compromising Anglian's ability to deliver long-term environmentally sustainable solutions. To the extent this approach distorts investment decisions away from the least-cost, whole-life solutions, it will increase overall costs to customers. |
| | | Ofwat states that "*No other company has argued for a different approach and companies in general appear to* | Ofwat's statement is irrelevant to the CMA redetermination. It is a matter for the CMA to redetermine specifically for Anglian whether Ofwat's |

[207] Response to Anglian, paragraph 3.145.
[208] Anglian's SOC, Chapter E.2: Growth, Section 7 and AECOM Growth Case Studies (SOC333).
[209] Response to Anglian, para. 3.143.

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| | | *support the proposed DSRA based on the feedback we have received*".[210] "*[O]ther wastewater companies also operate in relatively high-growth areas and have not requested an additional uncertainty mechanism for growth at sewage treatment works*".[211] | approach to growth is appropriate. Anglian also notes that Covid-19 has materially added to the uncertainties since the FD, further strengthening to case for an effective true-up. |
| 3.2 | **DSRA's scope is too narrow, so it does not provide adequate insulation against the costs of high growth.**<br>The true-up mechanism does not capture all growth-related costs but only those associated with developer chargeable activity. This means that the cost of site-specific activity and network reinforcement is captured, but other costs associated with growth are not (notably lumpy investments in treatment works, where the Company will carry the risk).[212] | Ofwat has not fully engaged with the arguments submitted by Anglian and simply reiterates that "*The objective of the DSRA was to encourage timely and quality new connections, and broadening the scope of the DSRA to include broader-related growth costs, as [Anglian] suggested in its response to [Ofwat's] draft determination, would not better achieve this. Wider growth-related costs are covered by cost sharing arrangements*".[213] | As discussed in 3.1, Ofwat accepts that the DSRA does not provide full coverage of growth costs but not explain the arbitrary difference in treatment of water recycling treatment costs and network reinforcement costs. |
| 3.3 | **DSRA is subject to an unrealistic 15% unit rates efficiency adjustment.**<br>Ofwat used company forecasts of gross developer-related growth costs and connections to derive a unit rate for its DSRA. These are then subject to a company-specific efficiency challenge applied (15.56% for water and 15.94% for water recycling for Anglian).<br>However, these efficiency challenges are not based on sound evidence and reasoning. Ofwat's Botex model was not designed to assess growth allowances (nor calculate efficiency challenges for growth expenditure) and it is not fit to do so.[214] | Ofwat has not fully engaged with the arguments submitted by Anglian and simply states that it "*consider[s] it is appropriate to apply the base cost efficiency challenge to the DSRA unit costs given that developer services are a key component of base costs. In turn, this ensures alignment between the DSRA mechanism and cost assessment.*"[215] | Ofwat does not address Anglian's concerns regarding the inappropriate derivation of its efficiency challenge. As explained in 2.6 above, due to the inelasticity of Ofwat's Botex Plus models. |
| 3.4 | **The DSRA only applies at PR24, creating further pressures on cash flows and financial resilience during AMP7.**<br>An end-of-period true-up is appropriate only if cost allowances are set on a realistic forecast of growth, which | Ofwat has not engaged with the arguments. | N/A. |

[210] Response to Anglian, para. 3.142 and Response on Cost Efficiency (006), para. 4.74.
[211] Response to Anglian, para. 3.156.
[212] Anglian's SOC, Chapter E.2: Growth, Section 5.4.1.
[213] Response to Anglian, para. 3.145.
[214] Anglian's SOC, Chapter E.2: Growth, Section 5.4.2.
[215] Response to Anglian, paras. 3.146 to 3.147.

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| | Anglian does not consider is the case with Ofwat's forecasts.[216] | | |
| 3.5 | **Anglian requests that the CMA implements a more effective true-up mechanism, to protect customers and Anglian if levels of growth vary from forecast.**<br><br>To appropriately share the risks of growth between Anglian and its customers, Anglian proposes that Anglian's Water Recycling Treatment uncertainty mechanism be adopted, and the unit rate challenge applied to Anglian's DSRA unit rates be removed.<br><br>Anglian does not consider the proposed true-up mechanism distorts incentives; however Anglian welcomes the opportunity to work alongside the CMA to address any concerns they might have.<br><br>In contrast with Ofwat's position, Anglian disputes that the proposed uncertainty mechanisms drive short-term decision-making. Instead, Anglian considers the opposite is true. By underfunding growth in the FD, and only providing risk sharing on a subset of costs, it is the FD that drives Anglian to make short-term decisions. | Ofwat argues that:<br><br>• costs related to enhancing sewage treatment works "do not vary one-to-one with population growth. The risk of incurring additional sewage treatment enhancement costs as a result of unexpected growth is lower than in retail or in new connections, and […] can be mitigated by effective long term planning";[217]<br><br>• Anglian's proposed mechanism "*could distort company decision-making and lead to sewage treatment capacity increases taking place during PR19 that were not originally in its plans given the added certainty the mechanism would bring in terms of cost recovery*";[218] and<br><br>• Anglian's proposed mechanism could be *"challenging to implement effectively"* and may lead to unintended consequences. "*If the mechanism is triggered at the incorrect level of capacity, this could lead to consumers funding investments twice*."[219] | Anglian agrees that treatment expenditure does not respond one-to-one with new connections. However, Anglian notes that this is also the case for network reinforcement which is covered in the DSRA. Ofwat has not addressed this inconsistency or justified why treatment expenditure and network reinforcement merit different treatments.<br><br>Ofwat's DSRA also gives rise to distortive incentive risks. By underfunding growth, Anglian is incentivised to opt for short-term solutions, risking environmental quality. Conversely, Anglian's proposed true-up encourages long-term, best-value investment decisions.<br><br>Additional mechanisms could also be built in to eliminate any distortive incentive concerns. For instance, Anglian's proposed mechanism could be paired with assurance requirements (similar to those proposed by Ofwat for the Internal Interconnector Programme ODI) where investment decisions are assured as being in relation to a specific need and that the best value option for the customer has been selected. Baseline levels are closely linked to the proposed investments in totex, and so are easy to audit against the latest investment proposals.<br><br>Given the uncertainty arising from Covid-19, Anglian considers that an appropriately calibrated, fully symmetrical growth risk-sharing mechanism serves to remove the precision of up-front forecasts as a major issue, diminishing the need for the CMA to determine up front forecasts with precision.<br><br>Anglian welcomes the opportunity to work with the CMA and Ofwat to develop an appropriate true-up mechanism to remove volume forecasting risk from companies and customers whilst providing the appropriate incentives for delivering efficient costs for customers. |

[216] Anglian's SOC, Chapter E.2: Growth, Section 5.4.4.
[217] Response to Anglian, para. 3.153.
[218] Response to Anglian, para. 3.154.
[219] Response to Anglian, para. 3.155.

## Part A.3: Review of Enhancement arguments

As set out in Anglian's SOC, Ofwat has challenged Anglian's Enhancement allowance on the basis of scope, need and/or inefficiency, arguing that Anglian has not provided sufficient justification or evidence for its Plan as well as finding that Anglian's costs are inefficient. Ofwat's response is largely a reiteration of the arguments put forward in the FD and Ofwat has failed to engage with Anglian's key arguments from **Chapter E.3: Enhancement,** of its SOC. As set out in **Part G.4: Reply on Enhancement cost efficiency (REP08)**, Ofwat argues that Anglian is inefficient but has itself failed to provide satisfactory evidence to substantiate this or to address Anglian's evidence regarding the limitations of Ofwat's models, which have been mischaracterised as inefficiency. Ofwat says it has not challenged Anglian's Enhancement need and has only challenged scope where Anglian's allowance enables resilience beyond Anglian's WRMP. As set out in **Part G.5: Reply on WRMP decision-making process (REP08)**, Anglian considers that (i) it has fully justified the robustness and transparency of its decision-making process; and (ii) that Ofwat's arguments mischaracterise the uncertainty of the guidance used by Anglian and fails to acknowledge that Anglian's Plan strikes a balance between known, firm requirements and potential futures ones, considering whole life costs of its options.

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| **1** | Enhancement (overall) | | |
| **1.1** | The challenges applied by Ofwat at FD remain flawed and methodologically incorrect and lead to higher costs and risk to customers and the environment, preventing delivery of the investment supported by customers to meet both statutory obligations and deliver best value solutions. The £161 million gap between Ofwat's allowance and Anglian's Plan reflects a poorly evidenced expenditure reduction which conflates efficiency and scope reductions. Factoring in efficiency challenges already applied by Anglian, the net impact results in an unrealistically large efficiency and scope challenge (£621 million) applied by the FD.[220] | Ofwat considers that Anglian's Enhancement allowance is efficiently funded for the company to meet its statutory duties and improve the resilience of its assets. Ofwat argues that it intervened where Anglian failed to provide sufficient and convincing evidence to justify that its proposed solutions meet these needs or where it perceived Anglian's costs as being inefficient.[221] | Ofwat explicitly challenges the need to build capacity in Anglian's WRMP. Ofwat's view of efficient costs does not recognise areas where the difference between its models and Anglian's costs are explained by factors other than efficiency. Please refer to **Part G.4: Reply on Enhancement cost efficiency (REP08)**. |
| **2** | WRMP – Process | | |
| **2.1** | After lengthy and constructive engagement with stakeholders, including Ofwat,[222] Anglian's current WRMP was published in 2019 and covers the period from 2020-2045. The significant and increasing pressures on the | Ofwat argues that it challenges the proposed capacity of some interconnectors programmes as, even after lengthy engagement, it was not persuaded by Anglian's justification. | Anglian notes that despite Ofwat's assertion that it has not challenged the need for investment relation to WRMP parts of Ofwat's challenge on scope explicitly challenge the need for Anglian's intrazonal transfers, e.g. for BHV Intra RZ Bury |

[220] Anglian's SOC, Chapter E.3: Enhancement, para. 755.
[221] Response to Anglian, para. 1.11.
[222] Anglian published its draft WRMP, which covers the 25-year period from 2020 to 2045, for public consultation between March and June 2018. Anglian received responses from a range of consultees, including Ofwat, and prepared a revised draft WRMP and Statement of Response in September 2018. The investment proposals included in the Plan submission in September 2018 were fully aligned to the draft WRMP. In November 2019 Anglian received approval from Defra to publish its September 2018 Plan.

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| | region's supply/demand balance due to population growth, reductions in abstraction required by the EA to protect the environment, climate change adaptation and drought resilience results in a WRMP expenditure programme which is nearly eight times larger than at PR14.<br><br>In response to inherent uncertainty around the scale of the challenge at WRMP24, particularly around future sustainability reductions and timing of water resources planning methodological changes, Anglian proposed a flexible planning approach, where options are developed in parallel until the WRMP24 supply/demand balance and options appraisal processes have been completed.[223] In particular, Anglian's proposed interconnectors programme has been designed to accommodate some of the future supply demand uncertainty associated with pressures on its supply demand balance that will occur at WRMP24, requiring investment in AMP8 and beyond, but which were not quantifiable within WRMP19.[224] These pressures include the need to be resilient to a one in 500-year drought event (as set out in the new Water Resources National Planning Framework[225]) and a move to using new UKCP18 climate change projections in WRMP24 and expected additional future growth.[226]<br><br>As Anglian repeatedly explained throughout the PR19 process,[227] Ofwat was fully consulted as part of the WRMP process where Anglian clearly set out the need for its proposed interconnectors investment.[228] In its DD | Ofwat maintains that it does not, however, challenge the need for investment relating to the WRMP.[231] | Haverhill Transfers Ofwat states "*a <u>need</u> is not clearly identified in the WRMP planning tables*".[232]<br><br>Anglian has provided justifications for schemes throughout the PR19 process and has sufficiently followed the appropriate decision-making process to develop the plan as recognised by the WRMP being signed off by the Secretary of State. Anglian included details on efficiency, optioneering and capacity need after its DD Representation in August 2019 (October 2019 Queries).[233] Further details are provided in response to the relevant specific points below and in **Part G.5: Reply on WRMP decision-making process (REP08)**. |
| | | Ofwat argues that Anglian's allowance enables investment in resilience beyond the minimum requirements identified within Anglian's WRMP.[234] | Anglian recognises that the allowed investment goes beyond a "least cost" solution i.e. the minimum requirements to satisfy security of supply based on known drivers at the time of drafting WRMP19. However, Ofwat's allowance does not provide the investment required for Anglian's Final WRMP19, which reflects its "Best Value Plan", incorporating the drought resilience standards in the Water Resources National Planning Framework, UKCP18 climate change projections and future growth. Further details are provided in **Part G.5: Reply on WRMP decision-making process (REP08)**. |
| | | Ofwat notes that Anglian's Enhancement expenditure relating to long-term supply-demand resilience (including supply-demand balance Enhancement expenditure, investment in metering and strategic regional developments) is over £110 million higher than for any other company and represents an | The fact that Anglian's resilience allowance is greater than that of other companies does not demonstrate that Ofwat's FD position is correct. Similarly, the argument in relation to Anglian having the highest allowance is arbitrary. |

223 Anglian's SOC, Chapter C: Ofwat's Duties in PR19, para. 425 and DD Representation, pages 204 and 205 (SOC168).
224 Anglian's SOC, Chapter E.3: Enhancement, Interconnectors case study.
225 EA's National Framework (SOC281).
226 The UK Climate Projects ("**UKCP**") is a climate analysis tool that forms part of the Met Office Hadley Centre Climate Programme which is supported by the Department of Business, Energy and Industrial Strategy (BEIS) and the Department of Environment Food and Rural Affairs (Defra). UKCP provides the most up-to-date assessment of how the climate of the UK may change over the 21st century.
227 IAP Response, pages 64 to 65 (SOC104); IAP Water Data Tables Commentary, pages 40 to 41(SOC107); and DD Representation, pages 195 to 198 (SOC168).
228 In the Resilient Water Supplies chapter of September 2018 Plan (SOC001) and in the Revised draft WRMP, pages 60 to 75 (SOC204).
231 Response to Anglian, para. 1.54.
232 Response to Anglian, Table 3.13.
233 See WRMP Response to Ofwat Queries (16 October 2019) (SOC219) and WRMP Response to Ofwat Queries (August 2019) (SOC222).
234 Response to Anglian, para. 3.195.

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| | Representation, Anglian also explained, again, in detail why the scope of the proposed investment was justified.[229]<br>Anglian developed its Plan specifically to build the best long-term solution, leading to savings of £18.1m in whole life costs.[230]<br>**Chapter E.3: Enhancement,** Section 5.2, in Anglian's SOC sets out the WRMP development process in detail. | 8.8% challenge on Anglian's requested amount. Ofwat also argues that other companies who requested a lower allowance than Anglian, e.g. Southern Water and Thames Water, also face significant supply-demand balance challenges.[235] | The FD fails to take into account the short and medium-term needs that are unique to Anglian's region.[236] These constraints mean that Anglian has to utilise solutions which may have a higher cost compared to other companies. |
| | | Ofwat notes that it is concerned that the "*uncertainty regarding the future requirements that are driving the company's investment*" does not result in an optimal long-term solution and could lead to a very different set of requirements and result in a considerably different best value plan.[237] | Anglian acknowledges that its Final WRMP19 goes beyond minimum requirements to consider factors that could be "core scenarios" in WRMP24.[238] However, Ofwat's arguments mischaracterise the uncertainty of the future guidance used by Anglian and fail to acknowledge (i) that Anglian's Plan strikes a balance between known, firm requirements and potential futures ones, considering whole life costs of its options; and (ii) that the recent publication of the National Framework in March 2020 and draft WRMP24 guidance[239] support the approach Anglian has taken in its plan to develop options to address future needs. |
| | | Ofwat does not dispute the WRMP on process and agrees that it positively engaged with Anglian. However, Ofwat notes that it has "*consistently challenged*" Anglian regarding the transparency and robustness of its decision making and identifying its preferred programme.[240] | Anglian considers that it has fully justified the robustness and transparency of its decision-making process to Ofwat throughout both its WRMP19 and PR19 engagements. Anglian has had several constructive engagements with Ofwat (e.g. 30 April 2019 (post IAP response), 1 August 2019 (session on cost assessment), and 7 October 2019, post DD-representation), and at each opportunity to present further explanation, Anglian has responded in full most notably through the requests for information in October 2019.[241] Further details are provided in **Part G.5: Reply on WRMP decision-making process (REP08)**. |

[229] DD Representation, pages 195 to 198 (SOC168).
[230] Anglian's SOC, Chapter E.3: Enhancement, Table 24.
[235] Response to Anglian, paras. 1.55 and 1.7.
[236] Anglian has a 180Ml/d swing in supply-demand balance in just 5 years and limited ability to develop supply-side options, with much of its supply area classified by the EA as over-abstracted or/and over-licenced, and all of Anglian's groundwater sources subject to caps to comply with the Water Framework Directive.
[237] Response to Anglian, paras. 3.198 and 3.213.
[238] Companies will submit their draft WRMPs in August 2022. See EA Draft Water Resources Planning Guidelines WRMP24, Section 3.10 (REP39).
[239] The draft Water Resources Planning Guidance for WRMP24 was issued for consultation with Technical Advisory Group (TAG) in May 2020.
[240] Response to Anglian, para. 3.205.
[241] See WRMP Response to Ofwat Queries (16 October 2019) (SOC219) and WRMP Response to Ofwat Queries (August 2019) (SOC222).

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| | | Ofwat emphasises that its principal challenge to Anglian's WRMP has consistently been requiring Anglian to explain its decision making and the process followed from identifying its "least cost" plan to selecting its "best value" plan – e.g. how Anglian selected capacities for its interconnectors and the sizing for inclusion in its best value plan).[242]<br><br>Ofwat is concerned that Anglian has built its "best value" plan on the basis that all interconnector routes selected in its "least cost" plan are required, with no supply options (e.g. desalination) being selected prior to 2029. Ofwat views Anglian's decision to restrict the selection of all supply options as extreme. Ofwat notes that Anglian makes reference to its "least cost" optimisation of solutions but it is unclear how this was used to inform its decision making.[243]<br><br>Ofwat also argues that since Anglian provided detail regarding its Least Worst Regrets Analysis to Ofwat in October 2019, it does not consider that this analysis was utilised in development of Anglian's draft WRMP or business plan.[244] With regards to the Least Worst Regrets Analysis Ofwat raises the following key challenges: (i) it is not clear how the levels of 'regret' was quantified; (ii) Anglian could potentially post stress testing or least worst regret analysis, edit options in its portfolio to better align with its revised requirements; and (iii) some scenarios are presented with return periods such as 1 in 500 years but for others the likelihood of occurrence is not indicated.[245] | In order to maintain security of supply, and to deliver sustainability reductions resulting from drivers such as the Water Framework Directive in AMP7, the only option available to Anglian is the transfer of water. This applies at the inter-WRZ and intra-WRZ level.<br><br>Ofwat fails to recognise that the EA was clear that it would not support desalination in AMP7. Therefore, given that this was a biding constraint, the baseline "least cost" plan was not feasible and Anglian had to consider alternatives. Anglian's choice of 2029 is justified as the lead time for other supply options shortlisted for development in AMP7 was at least 9 years.<br><br>The Least Worst Regrets Analysis[246] was a final analysis conducted after the development of the draft WRMP and business plan to test the robustness of Anglian's Plan. Details were provided to Ofwat in early October 2019.[247] It was intended to supplement the stress testing already undertaken during the WRMP process, as described in the WRMP Options Appraisal.[248] |
| **3** | Modelled efficiency | | |
| **3.1** | There are several problems with Ofwat's Enhancement models, with an outcome that the range of estimated inefficiency from the Enhancement models is much higher | Ofwat argues that its approach to determining the modelled allowance for Enhancement expenditure is robust and highlights inefficiencies in Anglian's Plan. It acknowledges the | Ofwat has failed to engage with Anglian's arguments in the SOC. Anglian notes that deep-dives were only applied in a limited set of models, and Anglian focused its analysis and |

[242] Response to Anglian, para. 3.206.
[243] Response to Anglian, para. 3.213.
[244] Response to Anglian, para. 3.214.
[245] Response to Anglian, para. 3.215.
[246] WRMP Least Worst Regret Analysis (SOC220).
[247] Following issue of the Least Worst Regret Analysis to the EA on 25 September 2019.
[248] Revised Draft WRMP Options Appraisal, Section 3.4 (SOC206).

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| | than the range from the Botex Plus models, these (i) fail to capture sufficient drivers and to recognise the idiosyncratic nature of Enhancement; (ii) fail to correct for different adopted solutions; (iii) lack benchmarking with other evidence (i.e. triangulation); (iv) inappropriately use the forecast upper quartile as a benchmark; and (v) inappropriately treat Enhancement opex in the same way regardless of whether this is a one-off expenditure or a recurring expenditure.[249] | potential limitations of Enhancement econometric models and notes it only used Enhancement benchmarking models where it considered that these were robust. Ofwat then improved the reliability of its assessments further through deep dive assessments, triangulating multiple models, and taking a programme level approach within the wastewater WINEP programme.[250] | response to those models without deep-dives. Triangulation also does not appear to have been carried out across the board by Ofwat. Contrary to Ofwat's assertion that it uses Enhancement econometric models benchmark where it considers they are robust, evidence from Oxera's analysis[251] demonstrates the wide confidence intervals for all Enhancement models. Ofwat has not addressed Oxera's analysis in its response. Further details are provided in **Part G.4: Reply on Enhancement cost efficiency (REP08)**. |
| **3.2** | Ofwat's Enhancement models do not capture sufficient drivers and its over-simplistic benchmarking assessment fails to correct for "different adopted solutions" where for a similar outcome there might be multiple solutions. Depending on the solution adopted, Ofwat's chosen cost driver may be completely irrelevant. Ofwat also does not appear to have considered the different approaches adopted by WASCs and fails to take into account the long-terms costs (as opposed to AMP7 costs).[252] | Ofwat argues that, where it was feasible and reasonable to do so, it used cost drivers that were independent of any specific solution e.g. – Ofwat refers to the WINEP network storage scheme model for which it would have modified the cost driver to be more neutral of different types of solution.[253] | Ofwat's explanation does not address the issue Anglian presented. A critical requirement for cost modelling is the need to balance costs with cost drivers.[254] Ofwat's models include Anglian's costs but do not include an associated cost driver.[255] Contrary to Ofwat's assertion, these models are dependent on companies using a particular solution and, by default, Anglian Water's costs will look inefficient. Further details are provided in **Part G.4: Reply on Enhancement cost efficiency (REP08)**. |
| **3.3** | Ofwat has not cross-checked (i.e. triangulated) its simple benchmarking models with other evidence. Ofwat's failure to account for such variations will result in reasonable differences in costs incorrectly being attributed to relative efficiency levels. Through the PR19 process (i.e. at IAP and DD) Anglian submitted various challenges regarding the relevant results from Ofwat's modelling.[256] | Ofwat argues that it triangulated results from multiple models to arrive at a more considered view – e.g. phosphorus removal schemes in WINEP. Ofwat notes it adopted a programme level approach for WINEP to correct for its models' limitations, i.e. it set its view of efficient costs from the summation of the output of all areas rather than based on efficient costs within each Enhancement area.[257] | Ofwat's triangulation is extremely limited, across econometric models with few cost drivers and alternative models with changes generally to only one cost driver, while not considering alternative cost driver definitions. Given the idiosyncratic nature of Enhancement expenditure, reviewing and triangulating with bottom-up evidence is critical.[258] |

[249] Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.4 and Oxera Confidence Intervals Analysis (SOC509).
[250] Response to Anglian, paras. 3.6 and 3.172.
[251] Anglian's SOC, Chapter E.3: Enhancement, para. 800 and Figures 56 and 57; and Oxera Confidence Intervals Analysis (SOC509).
[252] Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.4.
[253] Response to Anglian, para. 3.171.
[254] Oxera Confidence Intervals Analysis (SOC509).
[255] The example Anglian provided in footnote 466 of its SOC, was for spill frequency – some investments do not require storage (but screen upgrades) and are therefore not captured by Ofwat's cost drivers – storage volume and the number of sites.
[256] Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.4; IAP Response, page 56 (SOC104) and DD Representation, page 120 (SOC168).
[257] Response to Anglian, paras. 3.6 and 3.172.
[258] For example, Ofwat has perhaps undertaken the greatest (albeit still limited) triangulation for its P-removal model. However, using a threshold of 1mg/l (rather than 0.5mg/l) gives a significant change in allowance, yet Ofwat has not included this sensitivity, which means it has not been sufficiently triangulated. On WINEP, a substantial portion of expenditure is driven by P-removal. Therefore, the WINEP-in-the-round assumption is highly dependent on how companies are reflected in the P-removal model, and generally the overall threshold of 1mg/l dependent on the P-removal models which defeats the purpose of Ofwat's programme level approach –Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.4.

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| 3.4 | Ofwat uses an inappropriate and *ad hoc* benchmark - the forecast upper quartile – for Enhancement areas including WINEP. In the past, Ofwat has stated that stretching cost benchmarks are based on the confidence they have in the accuracy of their modelling. Anglian highlighted the risk that allowed expenditure is being driven by unrealistically optimistic forecasts by some companies, rather than efficiency. Anglian considers that an average benchmark would be appropriate in light of the uncertainty of the models.[259] | Ofwat notes it used the forecast upper quartile as a benchmark but only in Enhancement areas where it considered the accuracy of the models sufficient, such as WINEP. Ofwat argues that there is no evidence it is aware of to show that the upper quartile level is driven by unrealistically optimistic forecasts by some companies.[260] | Ofwat does not address Anglian's arguments and evidence in the SOC. Oxera's analysis shows that Ofwat's Botex Plus models are not accurate enough to set any historical catch-up target for Anglian.[261] Given the inferior accuracy of Ofwat's Enhancement models, no historical catch-up target should be applied to Anglian's Enhancement costs. |
| 3.5 | **Smart metering:** Ofwat's benchmarking models do not take into account the increasing marginal cost of meter installations. For areas with high meter penetration, installing additional smart meters is more costly.[262] Anglian submitted a smart metering cost adjustment claim of £42.4 million. £3.1 million of the gap represents the higher unit costs associated with areas that have a higher meter penetration.[263] | Ofwat notes that it had tested for inclusion of metering penetration data and this had no material impact on the model fit or outputs but added uncertainty in terms of data confidence. Therefore, it decided not to incorporate this variable.[264] | Anglian maintains that its costs are higher due to the nature of installations driven by high meter penetration and that Ofwat's model does not adequately account for this.[265] The analysis conducted by Vivid economics[266] demonstrates that there is potential for a slight improvement to the explanatory power of the metering model through the inclusion of a penetration variable. Ofwat's model is very inaccurate, being based only on 16 observations. Given the lack of accuracy in Ofwat's model, Anglian maintains that bottom up evidence should be used. |
| 3.6 | **P-removal:** Anglian presented data from Vivid Economics at IAP and DD which demonstrated improved model fit using 1mg/l consent threshold, compared to the 0.5mg/l threshold used Ofwat's modelling.[267] | Ofwat's notes that its selection of the 0.5 mg/L threshold was based on engineering rationale and the representations by some companies that this was the level below which costs increase significantly (non-linearly).[268] | Anglian argues that for an area of such significant investment, a simple model, which is heavily reliant on the complexity threshold - is not appropriate. This area of Enhancement expenditure is very significant (£2.5 billion across the industry) and has such significant implications over Ofwat's overall view of efficiency on WINEP. A deep |

[259] Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.4 and Oxera Confidence Intervals Analysis (SOC509).
[260] Response to Anglian, paras. 1.5 and 3.173.
[261] This greater inaccuracy in Ofwat's Enhancement cost models is due to a number of reasons, as set out in the SOC, including Ofwat modelling with only ten observations, modelling with forecast drivers and using very few cost drivers for very idiosyncratic part of the cost base. Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.4 and Figures 56 and 57; and Oxera Confidence Intervals Analysis (SOC509).
[262] As a greater proportion of meters to be installed under these programmes will be difficult and costly relative to areas of low meter penetration.
[263] Anglian's SOC, Chapter E.3: Enhancement, Smart metering case study.
[264] Response to Anglian, para. 3.164.
[265] The modelling used does not reflect the type of meter installations and how this is changing due to the types of installation required at the remaining properties to be metered. For example, the proportion of screw in installations in AMP5 was 16% falling to 11% in AMP6, whereas internal installations increased over the same period from 11% to 41%. Internal meter installations are typically 4 to 5 times more expensive than screw in fits. Anglian also has a higher proportion of higher cost smart meter installations included in its AMP7 installation rollout, which Ofwat does not factor in to its meter installation model.
[266] IAP Response, page 70 (SOC104).
[267] Anglian's SOC, Chapter E.3: Enhancement, WINEP phosphorus removal case study.
[268] Response to Anglian, para. 3.175.

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| | | | dive should be considered where Ofwat's simple model deviates significantly from a company's assessment on costs, as is the case for Anglian. Anglian set out in its business plan the different drivers of costs on P-removal[269] Consent levels greater than 1Mg/L can be met through existing chemical dosing, natural capital solutions and optimisation of existing assets. Below 1Mg/L, Dynasand and Mecana units, with higher associated costs are needed in addition to chemical dosing. |
| **3.7** | **P-removal:** As the FD resulted in a £45 million funding gap for P-removal. To meet this gap, Anglian will not be able to install Mecana disk filters, instead relying on chemical dosing in isolation. Anglian argues that the whole life cost and the capital carbon emissions for the P-removal schemes that Anglian proposed to deliver in its Plan are lower than the solutions it will have to deliver as a result of the FD. | Ofwat notes that it does not mandate a particular solution but sets its view of efficient cost based on comparative analysis – Anglian remains responsible for the choice of correct treatment and compliance with quality requirements. Anglian has not provided sufficient evidence to allow Ofwat to judge the risk of implementing chemical treatment alone – but notes this has been the primary treatment process implemented historically and remains appropriate technology.[270] | Whilst Anglian agrees that Ofwat does not mandate a particular solution in the price review process, with the allowance for P-removal being £45 million short of the costs required, Anglian must look to alternatives that deliver at lower cost and higher risk. Anglian's SOC clearly sets out the increased risks that result from Ofwat's FD.[271] This ignores customers' preference that Anglian should invest to protect the environment, and that this should not be deferred to future AMPs.[272] |
| **3.8** | **Lead:** Anglian notes that Ofwat bases its benchmarking on the number of pipes, rather than length of pipes, being replaced. With customer support, Anglian had proposed to replace longer sections of pipe and, as a result, Anglian's costs look high on a "number of pipes" basis, this is not as a result of inefficiency, but simply due to Ofwat's flawed benchmarking assessment.<br>Anglian's Plan also included £1.4 million Enhancement opex costs for the water in buildings programme.[273] Ofwat absorbed these costs into the lead model on a per pipe | Ofwat notes that its FD approach to modelling costs for reducing lead standards is theoretically sound and received substantial support from companies, (following the DD, only Anglian and Thames made further representations).[276] | Ofwat has not engaged with Anglian's arguments in the SOC. As per Anglian's SOC,[277] Ofwat's lead standards model is one of the least accurate Enhancement models used by Ofwat, with the widest confidence intervals around the cost prediction. Ofwat only has one lead standard econometric model and an equivalent unit cost model, both based on number of pipes replaced, i.e. there is no triangulation with accounting models accounting for other drivers such as pipe length replaced. Even with an average benchmark, the cost models used to set the allowance need to be well specified. A critical requirement for cost modelling |

[269] September 2018 Plan Wastewater Data Tables Commentary, page 24 (SOC005).
[270] Response to Anglian, para. 3.176.
[271] For example, relying on chemical dosing leads to more volatile P-levels which are flow dependant, whereas the solution proposed in Anglian's plan provides for lower and more stable P levels.
[272] Anglian's SOC, Chapter E.3: Enhancement, WINEP phosphorus removal case study.
[273] An integrated package of measures used to assess and manage the risks to consumers posed by the quality of water within public buildings.
[276] Ofwat argues that following IAP it made a number of changes in response to companies' feedbacks: (i) dropping the use of the total number of communication pipes as a model driver in favour of the number of communication pipes replaced; (ii) moving from averaging the results of an historical and a forecast model to modelling forecast expenditure only in recognition of the ambition of companies' plans for the period 2020-2. Ofwat also noted that it triangulated the results of the econometric log-linear model which allows to better capture economies of scale - Response to Anglian, para. 3.178 and 3.179.
[277] Anglian's SOC, Chapter E.3: Enhancement, Figure 56.

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| | basis with no explanation of this in the model. These costs are separate and should have been modelled outside the lead model.<br><br>In response to the DWI goal to be "lead free" by 2050, Anglian's Plan proposed replacing 5,250 lead pipes in customers' homes over the next five years. In response to a further funding gap of £12 million at FD, Anglian's AMP7 programme will be primarily reactive, and it is unlikely that Anglian will be able to replace all customer side lead pipes. Instead, it will need to continue to dose ortho phosphoric acid to prevent lead uptake into the water.<br><br>Anglian notes that Ofwat's lead standards model is one of the least accurate Enhancement cost models used by Ofwat[274] and that its approach does not lead to long-term sustainable solutions.[275] | | is the need to balance costs with cost drivers. Ofwat's lead standards model fails in this regard as it does not account for Anglian's replacement of longer sections of pipe and simply models on the basis of the number of pipes replaced.<br><br>Furthermore, Anglian being one of only two companies to make representations on Ofwat's model does not justify the model. |
| | | Ofwat argues that (i) the forecast median unit cost of £1,353 is credible as it is higher than the historical median unit cost (£1,083) and (ii) the unit cost model provides a valid alternative result to that of the econometric model. Ofwat notes that, in comparison, Anglian's forecast unit cost of £5,284 is the highest in the industry.[278] | Ofwat has not considered that the wide range of unit costs (£505 - £5,254) may be due to factors other than efficiency, despite the evidence provided on length of pipe replaced.[279] The range of costs undermines the statistical soundness of Ofwat's model. |
| | | Ofwat argues that Anglian did not provide any convincing evidence of longer supply pipes when compared to other companies nor that a cost-per-meter model is better. Ofwat notes that it (i) considered that a costing approach based purely on meter rate did not adequately reflect the opportunities and cost efficiencies that could be expected; and (ii) would expect a model based on cost per meter rate to benefit companies estimating a greater pipe length and expect increasing economies of scale. Ofwat notes that at FD it made an additional deep dive allowance to both Anglian and Thames for the replacement of supply pipes, based on the efficient cost per pipe.[280] | Ofwat's argument that a model based on cost-per metre rate would benefit companies estimating a greater pipe length actually supports Anglian's argument. An econometric model with length of pipes as a cost driver would control for economies of scale, just as Ofwat has done with its econometric model using number of pipes, so this is not an issue. Based on Anglian's historical costs and cost base models, the unit cost to replace a lead communication pipe was £1028, at an average length of 2 metres, which broadly aligns with Ofwat's median costs. It is only the increase in the average length of pipe to 20 million in AMP7 which increases Anglian's unit costs to £4,429 per pipe[281] Ofwat's deep-dive model states that Anglian's costs were based on a per metre basis at £514 per metre. However, this is the unit cost for communication pipe replacement only. When the 20m customer pipe is factored in, the unit cost is £212 per meter, thus Anglian's costs demonstrate significant economies of scale which is are not acknowledged in Ofwat's deep-dive |

[274] Anglian's SOC, Chapter E.3: Enhancement, Figure 56.
[275] Anglian's SOC, Chapter E.3: Enhancement, Lead case study.
[278] Response to Anglian, para. 3.179.
[279] Response to Anglian, para. 3.179.
[280] Response to Anglian, paras. 3.181 and 3.182.
[281] IAP Water Data Tables Commentary, page 148 (SOC107).

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| | | | assessment. Ofwat then go on to make a deep dive adjustment based on costs per pipe. Ofwat's cost-per-pipe analysis does not address the issue that Anglian has in relation to Ofwat's model failing to reflect length of pipes for companies - such as Anglian - who have a plan to replace longer sections of pipe. |
| | | Ofwat argues that it found limited evidence for the efficiency of Anglian's proposal to adopt a separate phosphate dosing solution and applied an efficiency challenge and notes that Anglian was the only company to propose separate phosphate dosing solutions.[282] | The details of how Anglian built up its costs are provided in its DD Representation,[283] and in **Part G.4: Reply on Enhancement cost efficiency (REP08)** provided alongside this response. In developing its Plan Anglian assessed that the best value option in mitigating levels of lead in drinking water was an integrated package of measures including both pipe replacement and phosphate dosing. |
| | | Ofwat argues that Vivid Economics' recommendation at IAP was to maintain the modelling approach while assessing treatment costs separately, which is the approach Ofwat claims to have adopted.[284] | Anglian acknowledges that the report referred to the IAP models and not Ofwat's subsequent models. However, Vivid's report at DD still highlighted a "*[b]roader recommendation to justify model choice and triangulation weights remains, as unclear how median unit cost model arrived at*".[285] Therefore, and for the reasons set out above in relation to the length of lead pipes, Ofwat's model remains inadequate. |
| | | Ofwat notes that, overall, it considers that it has fully taken into account the DWI's long-term aspirations by funding companies' ambitious forecast plans and making additional allowances to Anglian and Thames for the replacement of additional pipes on the customer side, and that it has adequately considered Anglian's alternative treatment solution. However, Ofwat does not consider that customers should pay for Anglian's inefficient cost proposal.[286] | The cost model (including deep dive, as noted at 3.10 above) that Ofwat uses to arrive at its allowance for lead leads to a significant challenge on top of those efficiency challenges Anglian had already applied to its Plan. DWI considers lead to be a significant health risk and requires companies to consider the benefits of replacement of the customer's side pipework within their lead strategies. Whilst Anglian's Plan delivers on this approach, Ofwat's FD makes insufficient allowance for the costs of delivering this. |

[282] Response to Anglian, para. 3.183.
[283] DD Supplementary Evidence, Section 4.2, Figure 2 (SOC169).
[284] Response to Anglian, para. 3.184.
[285] Vivid Economics Enhancement Cost Assessment Modelling (August 2019), page 4 (SOC196).
[286] Response to Anglian, para. 3.185.

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| **4** | Company specific efficiency challenge | | |
| **4.1** | At IAP, Anglian had already set out its concerns with Ofwat's company-specific efficiency challenge, which was capped at 15%.[287] At DD, Ofwat reduced the company-specific efficiency challenge to 10%. When making its DD Representation, Anglian re-iterated these concerns and highlighted that Ofwat's DD analysis persisted with the application of company-specific factors even though evidence had been provided on the efficiency of individual areas of Enhancement.[288] | Ofwat argues that the evidence provided by Anglian – e.g. the KPMG Report on tendering costs,[289] did not cover all activities. Where Ofwat considered that no evidence was provided, it applied the 10% company-specific efficiency challenge. For activities that were covered, Ofwat reduced the efficiency challenge from DD to 2.5%, but still considered there was scope for Anglian to achieve further efficiencies.[290] | The KPMG report focussed on a sample of costs (covering 60% of interconnector programme) that had been subject to a tendering exercise. Ofwat selectively maintains its 10% efficiency challenge on those parts not covered by tendered costs, failing to recognise that all costs (regardless of the KPMG sample) were developed in the same way as part of Anglian's interconnector programme (please refer to **Part G.4: Reply on Enhancement cost efficiency (REP08)**).<br><br>Despite acknowledging the KPMG Report by reducing Anglian's efficiency challenge down from 10% at DD, Ofwat does not justify the 2.5% efficiency challenge applied on the costs covered by the tendering exercise which, like the 10%, is an arbitrary figure. |
| **5** | Challenge to investment need | | |
| **5.1** | Ofwat has challenged the need for investments where it considers that: (i) Anglian's investments should not be classified as Enhancement (e.g. water resilience); (ii) Anglian's investments are not required as there are other alternatives (e.g. bioresources); (iii) the need for expenditure was not considered (e.g. metering); or (iv) Anglian has not adequately evaluated the available options (e.g. interconnectors optioneering).[291] **Chapter E.3: Enhancement,** Table 20, in Anglian's SOC illustrates how Ofwat's need challenge has been applied to Anglian's Plan. | Ofwat argues that it did not challenge the need to invest in any area of the company's Enhancement programme.[292] | Whilst it is framed as an efficiency challenge, in all the cases in this section (need) Ofwat does challenge the need for the expenditure – e.g. (i) the need for sludge investment is rejected in favour of a third-party solution which is not possible to deliver; (ii) the efficiency of the expenditure that Ofwat rejects on metering is not considered in the FD; and (iii) Ofwat rejects an investment to improve the level of water resilience as base expenditure, but base expenditure is not intended to provide Enhancements in resilience. |
| **5.2** | **Smart Metering**: Increased meter installation costs (e.g. for new connections reactive and proactive replacements) were not considered by Ofwat and resulted in a £7.4 million | Ofwat notes that the costs associated with different types of meter installations is £1.9 million (not £7.4 million) of its challenge, and explains it made no additional allowance for | The £7.4 million gap relates to different types of meter installations costs and the £1.9 million to the costs of the "smart increment" for new connections. Ofwat fails to |

[287] IAP Response, page 54 (SOC104).
[288] Anglian's SOC, Chapter E.3: Enhancement, Sections 3.2.5. For example, a report by KPMG showed that Anglian had undertaken a tendering process for the WRMP strategic interconnectors which showed that the modelled unit rates in the Plan were below average in all cases - KPMG Strategic Pipeline Scheme Review, page 2 (SOC132).
[289] KPMG Strategic Pipeline Scheme Review (SOC132).
[290] For example, in delivery of the multiple projects together with combined tendering and design processes - Response to Anglian, para. 3.217.
[291] Anglian's SOC, Chapter E.3: Enhancement, Sections 3.1.2 and 3.2.2.
[292] Response to Anglian, paras. 1.11, 1.54, 3.5 and 3.189.

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| | gap for smart metering.[293] **Chapter E.2: Growth** in Anglian's SOC sets out that growth cost should be included within Enhancement expenditure and that this is insufficiently reflected in Ofwat's Botex Plus models. | new connections meter installation as this is included its growth allowance.[294] | address Anglian's arguments that growth cost should be included in Enhancement expenditure and that this has insufficiently been reflected in Ofwat's Botex Plus models. |
| | | Ofwat notes that the remaining £5.5 million smart meter challenge occurs because it used the cost per unit that Anglian included in its business plan DD narrative for the replacement of existing meters with smart meters explanation for smart meter technology costs in its FD *£44.30*, as opposed to the unit costs the company presented for the overall costs of different meter replacement types.[295] | Ofwat has conflated the relevant unit costs. Anglian set out the unit costs for different types of installations in its IAP response.[296] Anglian then provided the costs **purely for the smart metering technology** in its DD response. It is from the latter that Ofwat incorrectly derives its Enhancement allowance unit cost of £44.30, without referencing the full costs previously provided.[297] Anglian notes that Ofwat did not put forward any clarificatory queries after DD Representation. |
| **5.3** | **Bioresources**: The FD suggested Anglian procure the necessary bioresources additional capacity via trade contract with a third-party. This fails to recognise that (i) current regulations severely restrict the capacity for non-WASCs to manage or store sewage sludge, and (ii) the other WASCs that could be contracted are also capacity constrained. Overall, Anglian's Plan promoted the solution with the lowest whole life cost (WLC).[298] The funding gap at FD for bioresources represent £6.8 million.[299] | Ofwat argues again that it does not challenge the need for Anglian to appropriately treat and dispose of sewage sludge, but that Anglian had not provided sufficient and convincing evidence that it had assessed the full range of options available, including from the wider bioresources market. Ofwat considers that non water and sewerage companies can obtain revised environmental permit to allow them to manage and store sewage sludge.[300] | Anglian provided substantive evidence on the third-party market for sludge treatment throughout the PR19 process. Anglian's IAP submission[301] sets out the trading discussions Anglian had, with other companies, the modelling used to understand potential for third party trades and Anglian's support for the development of co-treatment solutions.[302] Ofwat's position on the possibility for non-WASCs to obtain the necessary permits to manage and store sewage sludge fails to recognise that, in practice, due to costs and regulatory hurdles for third-party non-WASCs, almost all of the UK sewage sludge is managed by WASCs.[303] |

[293] Anglian's SOC, Chapter E.3: Enhancement, Section 3.1.2.
[294] Response to Anglian, para. 3.165.
[295] Response to Anglian, para. 3.166.
[296] This highlighted the different unit costs of installing meters proactively before meters reach the end of their life, and the higher costs where Anglian replaces meters on a reactive basis -IAP Water Data Tables Commentary, page 65 of WS2 (SOC107).
[297] Referenced in Ofwat's model as £50.61 for meters replaced at end of life, £48.79 for meters replaced for earlier replacements and £80.99 for smart meter installations at new connections, as shown, but not acknowledged, in Ofwat's FD Metering Enhancement Feeder Model, Deep-dive ANH tab, cells J57:J59 (SOC378).
[298] Anglian's SOC, Chapter E.3: Enhancement, Sections 3.1.2, 3.2.2 (iii) and Bioresources case study.
[299] Anglian's SOC, Chapter E.3: Enhancement, Table 20.
[300] Response to Anglian, para. 3.189.
[301] Wastewater Data Tables Commentary, pages 45 and 54 to 58 (SOC106).
[302] This point was also explained in the September 2018 Plan, pages 124 to 126 (SOC001).
[303] The treatment & use of sewage sludge in agriculture is controlled under the Sewage Sludge Use in Agriculture Regulations. These regulations apply to the sludge producer (i.e. the water industry), but don't apply to any third-party companies wishing to treat &/or recycle sewage sludge. Third party companies treating/recycling sewage sludge to agriculture have to comply with the Environmental Permitting Regulations (EPR), with an approval required from the Environment Agency for each application. The increased operational & investment cost associated with operating under the Environmental Permitting Regulations results in very little sludge being treated by third party companies, with almost all of the UK sewage sludge production being managed by the water industry.

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| 5.4 | **Water resilience**: Anglian notes that its water treatment resilience Enhancement allowance (£8.9 million) has been rejected on the basis that it should be considered Botex and not Enhancement. The proposed water resilience investment is about upgrading the asset to result in a lower-risk profile (and therefore represents an Enhancement service and not a base cost).[304] | Ofwat does not dispute the need for Anglian to ensure that its electromechanical assets are maintained to meet prevailing standards of operation and are fit for purpose. However, Ofwat considers that these maintenance activities are a part of the normal running of Anglian's operations and within its wholesale base allowances.[305] | Ofwat's statement does not address Anglian's previous submissions that this investment will enhance (and not maintain) existing levels of resilience. It is not a like-for-like replacement, but a new approach resulting in a lower risk to customers and is not a base cost.[306] |
| 5.5 | **SEMD**: At FD Ofwat considered that any further Security and Emergency Measures Direction (SEMD) costs should be met through the Company's base totex allowance which resulted in a £3.3 million gap. | Ofwat acknowledges that Anglian's planned 2020-25 projects will improve security further and are as a result of requirements which arose during 2015-20. However, Ofwat maintains that any further SEMD costs should be met through Anglian's base totex allowance as it had provided sufficient funding at PR14. Ofwat notes that Anglian failed to provide lack of evidence for its high costs or to demonstrate how its costs were derived and notes that its adjustment at FD was not based on need.[307] | Anglian notes it is incorrect to state that the costs are reflected in Anglian's PR19 base allowance and PR14 Enhancement expenditure.[308] Anglian notes that these costs were derived from specifications received from SEMD auditors during the AMP6 process and are therefore an additional requirement, not included in Anglian's PR14 allowance. |
| 5.6 | **WRMP Optioneering**: Ofwat applied a 10% optioneering challenge to four of Anglian's WRMP schemes.[309] Ofwat's challenge fails to recognise the limited availability of options for the majority of Anglian's WRZs. This is even more apparent at the sub-WRZ, "planning zone" level. Anglian's optioneering process is robust, starting with more than 800 unconstrained supply-side options. Anglian's approach follows WRMP19 guidance and its active involvement in trading in the upstream market also means that Anglian considers every available opportunity and not just those developed "in-house".[310] | Ofwat applied an efficiency challenge to four intra-zonal schemes arguing that that the need for those schemes was not justified by Anglian as it failed to provide specific examples of options considered and assessment of best value solutions. As a result, Ofwat made an adjustment to protect customers from potentially inefficient costs.[311] | Anglian provided evidence throughout the PR19 process and in its WRMP of how it conducted its optioneering process.[312] As a result, Ofwat removed the optioneering challenge from all inter-zonal transfers. However, Ofwat left optioneering challenges only on intra-zonal transfers.[313] Ofwat's optioneering challenge is arbitrary and does not reflect that intra-zonal transfers are the only option to address deficits at a planning zone level as (i) no additional sources of supply are available and (ii) transfers from other companies and third parties are not feasible options.[314] Ofwat's optioneering challenge to these schemes is therefore unjustified. |

[304] Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.2(i), Water resilience case study and Table 20.
[305] Response to Anglian, para. 3.189.
[306] September 2018 Plan Water Data Tables Commentary, page 54 (SOC004); IAP Water Data Tables Commentary, page 77 (SOC107); and DD Supplementary Evidence Section 5.2 (SOC169).
[307] Response to Anglian, para. 3.189.
[308] DD Supplementary evidence, section 6 (SOC169).
[309] BHV Intra RZ Bury Haverhill Transfers (£1.52 million); SD Resilience Diddington WTW (£220,000); RTS Intra RZ – Woburn PZ (£360,000); and RTS Intra RZ – Meppershall PZ (£320,000).
[310] Anglian's SOC, Chapter E.3: Enhancement, Sections 3.1.2 and 3.2.2.
[311] Response to Anglian, paras. 3.189 and 3.216.
[312] DD Supplementary Evidence, Section 11.3 (SOC169).
[313] These are zones where on a whole WRZ level there is no deficit, but within the WRZ there are smaller planning zones which do have a deficit.
[314] WRMP Response to Ofwat Queries (August 2019), Response to question 6 (SOC222).

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| **6** | Challenge to investment scope | | |
| **6.1** | **WRMP**: Ofwat has challenged several of Anglian's proposals relating to water interconnectors as it considers that the capacity for the relevant schemes exceed the capacity required to close the deficits in the period to 2045 in Anglian's current WRMP. Ofwat's approach in the FD fails to recognise that Anglian had based and planned the capacity for the relevant interconnector schemes, as set out in its Plan, to address future supply demand uncertainty, resilience needs and future strategic scheme utilisation.<br><br>Anglian took a stress testing approach to quantifying the most appropriate interconnector capacities for delivery in AMP7. Providing for this capacity now, rather than delaying subsequent upsizing in future AMPs, will ensure better long-term value for customers.[315]<br><br>Anglian argues that the capacities have also been tested to allow the full utilisation of a new strategic reservoir being developed through Ofwat's strategic regional solution programme. Anglian has sought to help address these pressures through investment in AMP7 where doing so results in a lower whole life cost for customers.[316]<br><br>Anglian argues that Ofwat's intervention in the interconnector programme includes reducing the capacity of the connection between Bury and Ipswich from 20 Ml/d to 10 Ml/d. Accepting Ofwat's capacity reduction would | Ofwat argues that it only challenged scope where it considered there was insufficient justification for the proposed capacity of the interconnectors in Anglian's "best value" plan. Ofwat notes that it (i) challenged scope by basing its cost allowance on a lower capacity interconnector; (ii) but did not set a maximum capacity to limit what Anglian can deliver.[321] | Drawing on best evidence of potential future capacity needs (WRMP24 and National Framework), Anglian included in its plan capacities which were greater than those required for WRMP19.[322] The alternative to building this capacity now, is to build the smaller capacity as per Ofwat's FD and replace this with a larger capacity in subsequent AMPs, leading to a higher whole life financial cost (additional £18.1 million) and carbon cost (additional 15,158 tonnes of CO2 emissions) than Anglian's Plan.[323] |
| | | Ofwat argues that in its FD it only challenged the interconnector scope where the selected capacity was significantly larger than the maximum utilisation in the least cost plan and Anglian provided insufficient evidence to support this.[324] | Ofwat's argument does not take into account that Anglian's increased capacity (i) accounts for future uncertainties not reflected in the WRMP19 planning tables (ii) dovetails with future supply options (iii) ensures the grid is a coherent size, enabling deployment of future supply options and facilitating transfers in a major outage event. Anglian' s approach is consistent with future challenges (WRMP24 and National Framework) and is the best value solution for customers across AMP periods. Anglian set this out in the interconnectors case study in the SOC.[325] |
| | | Ofwat notes that (i) the WRMP24 guidance has not yet been issued and there remain decisions to be made regarding the assessment process; and (ii) the impact of this new planning approach on the whole system, would need to be fully assessed to understand how it impacted Anglian's requirements.[326] | |
| | | In relation to option ESU8, Ofwat notes that the evidence provided by Anglian is unclear and that it considers there to be considerable uncertainty regarding the transfer requirements following development of potential strategic resource options.[327] Ofwat also notes that the least cost plan | Six alternative options are included in the EBSD modelling for East Suffolk WRZ. The smaller (10Ml/d) capacity transfers in the Alternative LCP limit the new resources options available to meet future needs. Only new resource options in East Suffolk WRZ or South Essex WRZ (e.g. |

315 Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.1.
316 Anglian's SOC, Chapter E.3: Enhancement, Interconnectors case study.
321 Response to Anglian, para. 3.209.
322 As set out in the WRMP stress tests, Revised Draft WRMP Supply Side Option Development, Section 6 (SOC207) sets out how options were developed and justified for each water resource zone.
323 Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.1, Table 24.
324 Response to Anglian, para. 3.210.
325 Anglian's SOC, Chapter E.3: Enhancement, Interconnectors case study, page 183.
326 Response to Anglian, paras. 3.210 and 3.211.
327 Ofwat argues that Anglian did not (i) clearly present all (drought and non-drought) resilience risks for Ipswich/Alton WTW; (ii) explain how it calculated a required capacity for transfer based on this assessment; or (iii) identify any alternative options it has considered to increase Ipswich's resilience. Ofwat argues that given the limited information provided for the scenarios Anglian is considering and the asymmetry of data between regulator and company with respect to network system operation, the impact of its final determination is unclear - Response to Anglian, paras. 3.197, 3.216 and Table 3.13.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | result in significant residual risk at what is already Anglian's highest-risk site. The intervention to reduce capacity between Wisbech and Stoke Ferry from 20 Ml/d to 15 Ml/d also presents a very significant risk. These reductions mean that, even with sufficient capacity between Bury and Ipswich, it would not be possible to transfer the necessary volume of water from areas of surplus in the north of Anglian's region to secure supplies under future drought scenarios.[317]<br><br>Without the capacity upgrades proposed, Anglian will not be able to deliver the benefits associated with these single source resilience schemes. Whilst the resilience programme makes an allowance to connect isolated communities to an additional supply source, the capacity requirement in the interconnectors to deliver this resilience is not allowed.<br><br>Ofwat has focused its challenges on individual interconnectors, failing to appreciate the wider implications for the operability and long-term resilience of Anglian's supply system as a whole. This was illustrated in **Chapter E.3: Enhancement,** Figure 55, in Anglian's SOC which demonstrates the impact of Ofwat's decision to reduce the capacity from 20 to 15 Ml/d for the Wisbech to Stoke Ferry interconnector and from 20 to 10 Ml/d for the Bury St Edmunds to Ipswich interconnector.[318]<br><br>Opex efficiency constraints applied to the smart metering and leakage programmes present a significant risk, and the overall opex constraints associated with the FD impact the water efficiency programme.[319] | assessment will include some uncertainty (which will be reflected in the 10 Ml/d sizing) and, as a result, that it found limited justification for the upsizing of this interconnector. | Felixstowe desalination plant, Colchester water reuse) would be available rather than the winter storage reservoir, trading options or other options further afield.[328]<br><br>The 20Ml/d capacity of Anglian's BVP also provides resilience to Alton WTW. Anglian's latest modelling of the single source of supply resilience needs of Alton WTW shows a need to send 19.7Ml/d through ESU8 to meet the deficit caused by the failure of Alton WTW and maintain supply to the systems that lose their current resource as part of sustainability reductions.<br><br>The challenges presented to this area are presented in **Chapter E.3: Enhancement,** WRMP Case Study 1, in Anglian's SOC.[329] |
| | | Ofwat notes that, in relation to option SFN4, it did not consider that Anglian provided evidence to justify an allowance for a capacity of greater than 35 Ml/d in the FD.[330]<br><br>In relation to option NFN4, Ofwat notes that it did not consider that Anglian provided evidence to justify an allowance for a capacity of greater than 15 Ml/d in its FD.[331] | SFN4 and NFN4 provide a key link between surplus in Lincolnshire and the east of Anglia's region. This is the likely point in which a strategic reservoir would feed into the system and, if undersized, will prevent the reservoir from being fully deployed could result in new local resources requirements in addition to the reservoir. Anglian is planning for the combined impacts of further environmental reductions and greater drought resilience in its WRMP24. The capacity of SFN4 at 40 Ml/d would provide future capacity to meet these combined impacts. Reducing NFN4 to 15Ml/d upstream of the 20 Ml/d capacity links would restrict the ability of resources to be transferred south and east to meet these impacts. |
| | | In relation to option NTM1. Ofwat notes that the capacity presented and costed by is not fully justified in the evidence provided by Anglian, with the capacity of 3.5 Ml/d selected | Nottinghamshire WRZ goes into deficit in the WRMP due to growth/environmental impacts. The three WTWs in the WRZ all have single source of supply deficits due to the discrete |

317 Anglian's SOC, Chapter E.3: Enhancement, WRMP Case study 1: Ipswich and East Suffolk Water Resource Zone.
318 Anglian's SOC, Chapter E.3: Enhancement, Interconnectors Case study.
319 Anglian's SOC, Chapter E.3: Enhancement, WRMP Case study 3: Norfolk Resource Zone.
328 This capacity constraint is illustrated in Figure 55 of Anglian's SOC.
329 Anglian's SOC, Chapter E.3: Enhancement, WRMP Case study 1: Ipswich and East Suffolk Water Resource Zone.
330 Ofwat argues that this transfer illustrates its concern that if the range of potential capacities for the interconnectors is limited, this may result in sub-optimal solutions - Response to Anglian, para. 3.216 and Table 3.13.
331 Ofwat argues that Anglian does not provide a clear explanation of the requirements under future drought scenarios and how the system would be utilised with the addition of a strategic reservoir, and that such requirements are therefore subject to considerable uncertainty - Response to Anglian, para. 3.216 and Table 3.13.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | Anglian argues that the 2Ml/d option delivers the capacity to address the likely deficit associated with the immediate loss of Deployable Output from East Ruston WTW but does not address further licence reductions and additional industrial demand, from other impacted abstractors. The 5Ml/d option proposed by Anglian has been designed to accommodate these future changes and avoid the risk of stranded assets.[320] | being higher than 2.1 Ml/d the capacity as required following stress tests.[332] | nature of the WRZ and limited internal connectivity.[333] The full capacity link (3.5Ml/d) would provide immediate resilience benefit and is an enabler to ensuring full resilience in the zone. If the transfer into the WRZ were limited to 2.1Ml/d, this link would have to be duplicated in the future. |
| | | In relation to option NNR8, Ofwat notes that the capacity presented and costed is not fully justified/evidenced by Anglian, with the capacity of 5.0 Ml/d selected being higher than the 3.4 Ml/d capacity as required following stress tests. Ofwat argues that it is unclear what additional resilience benefit Anglian's refers to as Anglian has not provided any additional evidence to explain how the reduction in capacity impacts the resilience at the water treatment works identified.[334] | This would provide resilience to Anglian's High Oak WTW and provide resilience to Little Melton WTW. At 3.5Ml/d this would be too small to provide this resilience benefit. |
| | | In relation to the East Ruston scheme, Ofwat notes that its challenge was not entirely due to scope but primarily due to uncertainty regarding future requirements, including those from non-household customers. At FD Ofwat included an uncertainty mechanism to provide additional totex if Anglian provides evidence for an extra need of 2 Ml/d. Ofwat argues that (i) Anglian did not provide sufficient evidence to justify a capacity of 5 Ml/d; and (ii) the scheme was only included by Anglian in its DD Representation in August 2019, with further supporting information provided in October 2019.[335] | Anglian provided the evidence to justify its capacity in its response to Ofwat's queries in August 2019.[336] This was a late Environment Agency request raised in March 2019 and was not submitted late in the process due to Anglian. The uncertainty mechanism does not reflect the need to build the capacity now to protect against future additional environmental impact, rather than build 2Ml/d capacity and upsize in future. |
| **7** | Frontier Shift | | |
| **7.1** | As a result of the additional 1.1% future productivity challenge applied by Ofwat, Anglian is subject to a total future productivity challenge of 5% per annum. Ofwat's future productivity challenge on Enhancement costs | On frontier shift double count, Ofwat accepts that there could be scope for double counting as Enhancement costs are based on company estimates of future costs. In particular Ofwat admits that if upper-quartile companies have applied a | The issue with the application of Frontier shift to WINEP is that Ofwat applied this challenge on top of a forward-looking view of costs which factor in productivity improvements. Ofwat also references the productivity improvements that |

[320] Anglian's SOC, Chapter E.3: Enhancement, Footnote 402.
[332] Ofwat argues that it is unclear what additional resilience benefit Anglian's references relates to as Anglian has not provided any additional evidence to explain how the reduction in capacity impacts the resilience at the water treatment works identified - Response to Anglian, para. 3.216 and Table 3.13.
[333] The WTWs are unable to support each other if one were to fail.
[334] Response to Anglian, para. 3.216 and Table 3.13.
[335] Response to Anglian, paras. 3.207, 3.216 and Table 3.13.
[336] WRMP Response to Ofwat Queries (August 2019), point 2 (SOC222).

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| | clearly double counts the productivity growth that the benchmark WASCs have already included in their costs. This approach is also inconsistent with Ofwat's approach on retail. Anglian considers that no net frontier shift overlay should be applied when forward-looking benchmarks are used.[337] | frontier shift adjustment to their WINEP, then the WINEP allowances would already capture frontier shift productivity requirement. Yet Ofwat argues that frontier shift assumptions for Enhancement tend to be limited, are offset by RPE adjustments and that there is no evidence that the upper quartile companies have applied a frontier shift estimate that is greater than the corresponding RPE.[338] | can be made from large programmes of work. However, Anglian had already reflected this in its DD Representation when it removed £37.7 million from the plan to reflect WINEP programme synergies.[339] Anglian's consideration of Ofwat's argument in relation to RPE is addressed in **Part G.6: Reply on Frontier shift (REP08)**. |

[337] Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.3 and Chapter E.4: Frontier shift.
[338] Response to Anglian, paras. 3.257 and 3.258 and Ofwat's Response on Cost Efficiency (006), paras. 7.66 to 7.74.
[339] DD Representation, page 117 (SOC168).

## Part A.4: Review of Opex/Capex Misallocation arguments

The Response to Anglian considers issues in relation to the misallocation of opex and capex. Ofwat acknowledges Anglian's claim that its FD misallocates opex by c.£157m for AMP7 but does not engage in detail with its criticism of Ofwat's models, or consider the impact of the misallocation. Ofwat has repeated the statements made at the FD. The table below sets out Anglian's main lines of attack from **Chapter E.5: Misallocation of opex and capex** of its SOC, the Response to Anglian on these issues and Anglian's comments.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| **1** | Ofwat erred in the opex/capex allocation at FD | | |
| **1.1** | At FD, Ofwat treated base and growth costs together in a Botex Plus model. It did not account for the fact that growth expenditure included in the Botex Plus model had a significantly higher proportion of capex (c.98%) than the base costs (c.33%).<br>Ofwat disallowed a significant proportion of Anglian's proposed growth expenditure (which was capital intensive).<br>However, it assumed that the disallowed Botex Plus expenditure was almost equally split between opex and capex. In reality, the majority of the costs disallowed were capex.<br>This led to c.£157 million of opex being incorrectly characterised as capex.[340] | Ofwat has not rebutted the potential shortfall. It has merely asserted that the "*PAYG rates applied in the final determination were consistent with the basis set out by Anglian Water in its business plan, adjusted for changes made to base and enhancement costs*."[341] | Ofwat's response is misleading – the PAYG rates applied at the FD were not consistent with Anglian's business plan.<br>Anglian proposed allocating opex and capex using the natural rate i.e. opex recovered through PAYG in the same period. As set out in detail in Anglian's SOC, Ofwat has erred in its calculation and did not apply the natural rate and this is hugely detrimental, leaving the company with c.£157 million less opex than it needs to run the business over the AMP.[342] |
| **1.2** | Ofwat changed its approach from the DD by separating the assessment of enhancement costs from base costs, noting that the former had a greater proportion of capex.<br>Ofwat acknowledged that applying the opex/capex split to the totex gap as a whole could lead to the *"challenge being more evenly split between opex and capex than the companies' expenditure profiles would suggest it should* | Ofwat has not engaged with this argument. It has merely asserted that it "*made adjustments to PAYG rates applied in the final determinations to maintain each company's approach*" and "*amended the approach to how we made this adjustment after the draft determinations.*"[344] | Ofwat did amend its approach after the DD, but only in relation to enhancement costs. This did not address the shortcomings arising from considering growth and base costs together. |

[340] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, Section 5.
[341] Response to Anglian, page 167.
[342] Anglian's SOC, Chapter D: Risk and return, para. 481.
[344] Response to Anglian, para. 6.63.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| | *be"*. It failed to see that the same logic applies to growth costs.[343] | | |
| **2** | Ofwat's FD does not provide sufficient justification for why base and growth costs should be considered together | | |
| **2.1** | At a "soft consultation" between the DD and the FD, Anglian proposed that Ofwat either calculate the split of operating and capital expenditure on base, growth and enhancement separately or make an adjustment to account for the challenge on growth costs which it considers to be primarily capital in nature.[345] | Ofwat has said that companies were "*generally supportive*" of the revised approach. As set out below, it has not engaged with Anglian's arguments but has merely reiterated its justifications from the Securing cost efficiency technical appendix published at the FD.[346] | N/A |
| **2.2** | Ofwat conflated the cost assessment and cost recovery elements of the price control. The calculation of the current opex/capex split does not impact cost allocations – it is only related to revenue recovery. Having similar cost drivers, as assumed by Ofwat, does not impact whether the costs are related to opex or capex.[347] | Ofwat has merely repeated its position from the FD: "*We model base and growth costs together as both types of expenditure have similar cost drivers and to minimise cost allocation inconsistencies between them. We do not separately challenge base and growth costs, rather we have a single challenge for both costs*."[348] | Ofwat has not engaged with Anglian's argument. Having similar cost drivers does not impact whether costs are related to opex or capex. |
| **2.3** | While Ofwat has made some methodological changes that may narrow the challenge on growth costs, these changes do not remedy the misallocation of opex and capex.[349] | Ofwat has merely repeated its position from the FD: "*We have changed aspects of our approach to modelling base and growth costs, such as making an additional allowance for high growth companies*."[350] | Ofwat has not engaged with Anglian's argument. The methodological changes do not remedy the misallocation. |
| **2.4** | Since Ofwat has already calculated the allowance attributable to growth, it would be easy to address the misallocation by considering separately the appropriate opex/capex split for base and growth costs.[351] | Ofwat has repeated its position from the FD: "*As we do not set separate allowances we do not consider it to be appropriate or feasible to attempt to split the allowance for base and growth costs to separately calculate the split of opex and capex*."[352]<br>It has added that "*Anglian Water itself acknowledges that the 'allowance' for growth is not directly visible*".[353] | Ofwat has not engaged with Anglian's argument.<br>Ofwat has instead quoted a line from **Chapter D: Risk and Return** of Anglian's SOC out of context. The full quote is "*The 'allowance' for growth is not directly visible but Anglian's calculations suggest that, looking across the sector, it provides anything from 52% to 164% of companies' business plan expenditure*". This merely indicates that the growth allowance has to be calculated and indeed, Ofwat has already made this calculation (and shared with Anglian |

[343] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, Section 5.
[345] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, para. 871.
[346] Response to Anglian, para. 6.65.
[347] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, para. 873.
[348] Response to Anglian, para. 6.68.
[349] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, para. 873.
[350] Response to Anglian, para. 6.68.
[351] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, para. 873.
[352] Response to Anglian, para. 6.68.
[353] Response to Anglian, para. 6.68.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| | | | its methodology for calculating the growth element of Botex Plus costs). |
| **3** | Ofwat's misallocation impacts Anglian's financeability | | |
| **3.1** | **Ofwat's financeability assessment has not accounted for the additional c.£157 million of opex that Anglian will actually have to spend.**<br>The Oxera Financeability Report[354] shows that the **Anglian's actual financial ratios will be lower than the minimum required for a Baa1 rating:**<br>(a) Anglian's correct AICR (accounting for the misallocation) will be 1.31x rather than the 1.50x derived by Ofwat (where 1.50x-1.70x is the range required for a Baa1 rating); and<br>(b) Anglian's correct FFO/Net Debt ratio (accounting for the misallocation) will be 8.90% rather than the 9.49% derived by Ofwat (where 10-15% is the range required for a Baa1 rating).[355] | Ofwat has not engaged with the impact of the misallocation on the financeability assessment. It merely acknowledges that "*Anglian Water claims we did not account for misallocation of opex as capex when calculating the financial ratios for the financeability assessment*", it does not address the impact on the financeability assessment.[356] | N/A |
| **4** | Ofwat's misallocation is inconsistent with the totex framework | | |
| **4.1** | Ofwat has previously tried to equalise incentives relating to both opex and capex, to remove the perceived incentive to invest in capital expenditure (i.e. a "capex bias"). However, Ofwat's general approach to cost assessment at PR19 combined with the misallocation reduces the opex allowance and represents a significant step back from enabling the most efficient, whole life cost totex solutions to be delivered for the long-term benefit of customers and the environment.[357] | Ofwat has not acknowledged or engaged with Anglian's arguments around the totex framework. In the introduction, Ofwat merely asserts that "*The allowed PAYG revenues are sufficient to fund Anglian Water's opex*".[358] | N/A |

[354] Oxera Financeability Report (SOC448).
[355] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, Section 5.
[356] Response to Anglian, para. 6.61.
[357] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, Section 6.
[358] Response to Anglian, para. 1.89.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| **5** | Ofwat's misallocation will have a long-term impact on the business and customers | | |
| **5.1** | The c.£157 million misallocated is equal to c.£32 million per annum, or about 20% of total salary costs in Anglian's opex budget.<br>**To remain financeable and mitigate the opex shortfall, Anglian has an incentive to focus on short-term expenditure reduction. This will reduce the quality of service provided to customers and increase the certainty of needing greater levels of expenditure in future periods to recover from this harm.**[359] | Ofwat has not acknowledged or engaged with the long-term impact on the business. | N/A |

[359] Anglian's SOC, Chapter E.5: Misallocation of opex and capex, Section 7.

# Anglian Water PR19

# Part B: Review of Cost Service Disconnect arguments

## Part B: Review of Cost Service disconnect arguments

Ofwat's Response considers issues in relation to the Cost Service Disconnect in the Response on Overall Stretch and the Response to Anglian.

Ofwat's response is largely a reiteration of the arguments put forth in the FD and specifically the previous Overall Stretch Appendix (SOC229) prepared as part of the FD materials. Ofwat has updated the scatter plot analysis previously prepared using the final version of the FD efficiency models and correcting for the deficient computation of rankings Anglian highlighted in its SOC (**Chapter F: Cost service disconnect**). Ofwat actively seeks to show that disputing companies suggest there is an "*inverse relationship*"[1] between cost efficiency and service quality whilst retaining the view that their analysis shows companies can achieve good cost efficiency and good outcome performance.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| **1** | **Overall position** | | |
| **1.1** | Underlying Ofwat's approach to cost allowances and to outcome delivery incentives (ODIs) is a belief that there is no trade-off between cost reduction and quality. Ofwat argues that companies can perform well on both but has not provided sufficient evidence to demonstrate that this is the case. By adopting this position, Ofwat unduly benchmarks high-quality networks against the costs of low-quality networks, and then disallows the additional cost of the former as "inefficiency".<br><br>Ofwat was able to advance only very tenuous evidence in support of its surprising view that there is no such trade-off: a weak correlation between the ranking of a company by its measured cost efficiency and its ranking on an average of quality measures. Ofwat provided details of its analysis only in March 2020. Anglian has now reproduced this and finds it to be thoroughly unreliable. This is particularly worrying given the weight Ofwat has placed on this analysis and the importance of the issue for the sector as a whole.<br><br>Economic theory, common sense and regulatory precedent all suggest that higher quality – like any valued output – is generally not free. Companies will increase output to the point at which the marginal cost of increased quality makes further increases uneconomic. Regulatory systems contain incentives for leakage reduction and other measures of quality, so if improvement were costless, companies would logically improve them without end. Historical evidence and planning tools used in the sector all reflect the rising marginal cost of further quality improvement, which Ofwat used to recognise but does not in the FD.<br><br>It costs more to create and maintain a high-performing network than a mediocre one and it costs more to push the frontier of what is possible than merely to catch up. Pushing the frontier benefits customers across the country, as it shows what can be achieved and provides a path for others to follow. By undervaluing quality, Ofwat's approach not only fails to allow high-performing companies sufficient funds to properly finance their functions, it also contains a long-run incentive for mediocre performance.<br><br>As a high-performing company, Anglian is particularly exposed to this, especially on leakage for which it is the sector leader. Anglian has had to incur costs, both in terms of people and equipment, in order to achieve the frontier position it occupies on leakage. Anglian's plans to further reduce leakage and improve the resilience of the network are similarly not costless. Anglian has provided ample evidence of this to Ofwat.[2] | Ofwat argues that *"Anglian Water suggests that [Ofwat's] analysis of the company level relationship between cost efficiency and service quality is flawed. As set out above and separately in 'Introduction and overall stretch', [Ofwat's] analysis remains robust after taking into account the points raised by the disputing companies. [Ofwat] continue[s] to consider that at a company level there is a positive correlation between cost efficiency and service quality"*.[3]<br><br>Ofwat's principal arguments are:<br><br>• the data does not show an inverse relationship between cost and service;[4]<br><br>• some companies have achieved historically good service and cost efficiency (e.g. Portsmouth Water and Wessex Water); [5] and<br><br>• Ofwat has allowed additional costs for improving leakage performance to Anglian.[6] | Ofwat's further analysis, specifically its revision of its scatter plot diagrams,[7] do not advance any additional robust evidence to support the tenuous relationship upon which Ofwat relies as set out in Anglian's SOC.[8]<br><br>It is not clear how Ofwat has taken this into account, beyond correcting its error in combining rankings out of 17 with rankings out of 10.[9] Ofwat has not adequately engaged with Anglian's broader criticisms of this analysis. More widely, it continues to largely set aside specific economic evidence on the cost-service relationship, preferring instead to rely heavily on its own assessment of relative performance achieved previously. Not only is the evidence base weak, Ofwat's approach also fails to recognise the merits of an incentive-based regime in which cost allowances reflect higher costs of better performance.<br><br>Anglian elaborates more fully on the challenges that Ofwat's approach presents in its Challenges to incentive-based regulation Paper, appended to this submission.[10] |
| **2** | **Ofwat argues that its data does not show an inverse relationship between cost and service** | | |
| **2.1** | **Ofwat inappropriately benchmarks high-quality networks against the costs of low-quality networks.**<br><br>To substantiate its blanket conclusion that improving to the future forecast upper quartile level of performance does not have expenditure (or risk) implications, Ofwat relied on a scatter plot of total efficiency and quality ranks (where 1 = worst performance and 17 = best performance).<br><br>Anglian, together with ICS Consulting,[11] reproduced this analysis on the basis of information supplied by Ofwat in March 2020. The reconstruction of this chart shows that it is not a sufficiently robust piece of analysis on which to base policies with wide-ranging (malign) consequences for the sector. Overall, Ofwat's "evidence" is poorly constructed, lacks robustness and is wholly unfit for the purpose to which Ofwat has sought to put it.[12] | Ofwat states that "*[it] agree[s] with Anglian Water that there can be a trade-off between service quality and cost, and improvements in service quality can come at a higher cost (although that this is not necessarily always the case). However [Ofwat] dispute[s] the inference that Anglian Water is taking from [Ofwat's] company level analysis. [Ofwat's] analysis does not suggest that better outcomes should cost less, but that cost efficient companies can also be high quality*".[13] Ofwat argues that "*The analysis is not seeking to demonstrate a relationship between costs and outcomes in the terms that seem to be suggested by Anglian Water*".[14]<br><br>Ofwat presents several variations on the scatter plot Ofwat published at FD, including providing more granularity, using a cardinal scale and reversing the rankings.[15] Ofwat argues that "*[i]n all cases, [it] do[es] not observe an inverse relationship between service quality and cost efficiency at a company level*".[16] | Ofwat's focus on the "inverse relationship" mischaracterises Anglian arguments. Anglian would not expect a comparison of average rankings of several measures of service quality against average rankings of several measures of cost efficiency as assessed through flawed modelling, across companies facing different regional and operational circumstances, to illustrate any robust relationship at all.<br><br>The cost efficiency ranks are biased as the models exclude quality of service as well as many other key cost drivers, while the quality of service ranks are biased as they do not account for company-specific factors. Indeed, this is precisely what Ofwat's corrected scatter plots show. Ofwat is placing extraordinarily high evidential weight on a non-relationship between two artificial, constructed variables. Ofwat has not advanced further credible evidence to suggest that its PR19 settlement is robustly derived using sound economic analysis of the relationship between service delivered and the costs of doing so.<br><br>Nor does Ofwat's approach seek to properly account for customer preferences, nor engage on arguments that companies' operating |

1 Response to Anglian, paras. 5.6, 5.15 to 5.17, 5.37 and Table 5.1, page 153.
2 Anglian's SOC, page 218. See also Anglian's SOC, Chapter D: Risk and return, Section 3.5.
3 Response to Anglian, para. 5.37.
4 Response to Anglian, paras. 5.6, 5.15 to 5.17, 5.37 and Table 5.1, page 153.
5 Response to Anglian, para. 5.15.
6 Response to Anglian, para. 3.221.
7 Response on Overall Stretch, para. 7.23.
8 Anglian's SOC, Chapter F: Cost service disconnect, Section 3.2.
9 Response on Overall Stretch, para. 7.27.
10 Challenges to incentive-based regulation Paper (REP18).
11 See ICS Report on Ofwat's Overall Stretch Appendix (SOC280).
12 Anglian's SOC, Chapter F: Cost service disconnect, Section 3.2.
13 Response to Anglian, para. 5.23.
14 Response to Anglian, para. 5.25.
15 Response on Overall Stretch, para. 7.23.
16 Response to Anglian, para. 5.17.

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| | | | regions or other operational considerations may affect their costs for delivering a specific level of service.<br>Ofwat has corrected its scatter plots to resolve a glaring error that Anglian pointed out in its SOC (averaging across rankings out of 17 and those out of 10)[17] but has not altered its conclusions. Ofwat's corrected scatter plots do not add anything to the previous Ofwat evidence base. |
| **3** | **Ofwat argues that some companies have achieved historically good service and cost efficiency** | | |
| **3.1** | **Ofwat relies heavily on historical outperformance to justify the overall level of stretch.**<br>Ofwat's tenuous and unreliable finding that there is a weak positive correlation between companies' historical performance on costs and outcomes is disproven by historical data and by the analysis of costs that Anglian carries out in the normal course of planning its business. As illustrated in Anglian's SOC, for key performance measures, marginal costs increase with levels of service performance.<br>Ofwat generally dismissed this type of marginal cost evidence alleging information asymmetries (i.e. according to Ofwat, companies have incentives not to reveal the "truth"). However, this ignores well-established best practices for investment prioritisation used within the water industry and which have been previously advocated by Ofwat.[18] It also suggests that outperformance during PR14 is something to be regretted, rather than reflecting companies appropriately responding to regulatory incentives. By responding to incentive regulation, companies share outperformance with customers at roughly 50% and reveal lower costs as the starting point for the subsequent price review.<br>An analysis of Ofwat's assumed stretch in PR19 compared with the improvement achieved since PR14 also reveals inconsistencies in Ofwat's defence of the 2020-2025 stretch in outcomes. For example, Ofwat has assumed lower rates of improvements for internal sewer flooding and pollution incidents, for 2024-2025, which helps mitigate the risk from Ofwat's unrealistic assumptions about costs. By contrast, for supply interruptions these risks are significantly exacerbated by close to a fourfold increase in the outcomes stretch for this measure at PR19.[19] | Ofwat points to its previous Overall Stretch Appendix (SOC229) as support to the "*wide range of analysis to make sure that cost and service proposals were appropriate including historical evidence of cost and service performance, company forecasts and cross company benchmarks*".[20]<br>Ofwat's SOC response on the justification for the stretch in PR19 labelled "considerations for the CMA"[21] clearly sets out Ofwat's view that previous RORE, cost outperformance and successful delivery of ODIs as the rationale for the "*calibrat[ion] [Ofwat's] broader final determination package*".[22] | The introduction of emphasis on the "considerations for the CMA" [23] clearly sets out where Ofwat has placed its emphasis in reaching its FD conclusions – based on the previous outturn positions. See Anglian's related Challenges to incentive-based regulation Paper.[24]<br>Ofwat's overlay of its own assessment of historic cost and of ODI performance is not an adequate substitute for considering the underpinning economic costs of improvements to service. Anglian provided evidence from its own internal planning tools on the relationship between cost and quality,[25] to accompany its SOC and welcomes the opportunity to engage further should the CMA find it useful. In addition, Oxera's Report on cost assessment issues shows that it is possible to include measures of quality in the cost models and that these demonstrate rising cost curves (with the exception of highly dense networks).[26] |
| | | Ofwat states that *"[it is] not suggesting that better service quality reduces costs, [Ofwat is] simply suggesting that some companies have achieved high service quality and cost efficiency, and [Ofwat] see[s] no reason why other companies cannot do the same and that [Ofwat's] calibration of service and cost is appropriate for PR19*".[27]<br>Ofwat also claims that "*the potential impact on costs should not be used as a cover for companies such as Anglian Water achieving a lower level of service quality than their peers*".[28] | Suggesting that Ofwat "cannot see why other companies cannot do the same" is not an evidence-based position; accounting for differences in the costs of maintaining or increasing the level of service will have different cost profiles for different companies. Anglian has explained the engineering and economic realities behind the cost estimates in its Plan.[29] Ofwat's approach is simply to wave this away. Its unjustified assumption that base costs fund future levels of service improvement, particularly for a company at the frontier such as Anglian, is a very significant flaw in the price control. |
| | | Ofwat states that it "*do[es] not dispute that Anglian Water has delivered high service quality in the past. [Ofwat] do[es] dispute whether it is proposing to deliver those services at an efficient cost in the future*".[30] | Ofwat has also argued that Anglian's costs are inefficient but has itself failed to provide satisfactory evidence to substantiate this or to address Anglian's evidence regarding the limitations of Ofwat's models which have been used to support its mischaracterisation of Anglian's proposed costs as inefficient. For example, Ofwat's base costs fail to appropriately recognise the costs of maintaining frontier leakage performance as a result of a lack of any robust consideration of quality.<br>The same applies for enhancement costs. The teach-in that Ofwat provided the CMA on its models[31] also neglected to address how it had developed its enhancement models. By contrast, Anglian has demonstrated the steps it has taken to ensure that the costs in its Plan are appropriate and Anglian's own benchmarking assessments, shared with Ofwat, do not show inefficiency in relation to its Enhancement costs. Without further meaningful evidence being presented by Ofwat, Anglian cannot reconcile the reality of an efficient Enhancement programme with Ofwat's assertions that its Enhancement costs are inefficient (see **Part A: Review of Cost arguments (REP02)** and **Part G: Reply to Ofwat's Response on Cost issues (REP08)** for further details). |
| | | Ofwat states that *"[Its] proposal for a step change is not based on historical outperformance, however it is informative in particular on how companies respond to the challenges that [Ofwat] set[s]. Water companies, including Anglian Water have consistently outperformed their totex allowances over the past four price controls. Anglian Water's average totex outperformance is 5.7% and it has earned significant outperformance payments on two of its three PR14 upper quartile performance commitment levels. Anglian Water has also outperformed their base return having total shareholder return in excess of 10%. [Ofwat] consider[s] the overall level of stretch across costs and outcomes is stretching but achievable for an efficient company"*.[32] | Ofwat's stated position is clearly contradictory. It claims that its proposal for an (unfunded) step change is not based on historic outperformance, but clearly it is. It lists the previous performance of the company as evidence that its stretch is justified; it bases its view that there is no cost-service trade-off on its scatter charts of (averages of rankings of its own assessment of) historical outcomes and it has not engaged with the evidence on marginal costs and customer valuation that Anglian would expect to underpin any assessment of future service quality plans. |
| | | "*The overall level of stretch on costs and outcomes in PR19 is similar to PR14, with the key difference being that [Ofwat] ha[s] 'baked in' the performance improvements [Ofwat] expect[s] companies to make in the price control. [Ofwat's] stretch on outcomes is similar to that which has been achieved in PR14. For Anglian Water, the stretch on historic* | As before, Ofwat specifically states that its stretch target is not based on any assessment of underpinning cost requirements to achieve it, nor on how these may vary dependent on current levels of service and company specific differences (see also 0 above). |

17 Response to Anglian, para. 5.19.
18 For example, the water industry "Common Framework" for investment planning. PR09 Final Methodology, Section 3.4 (SOC406).
19 Anglian's SOC, Chapter F: Cost service disconnect, Section 3.3.
20 Response to Anglian, para. 5.21.
21 Response to Anglian, paras. 5.9 to 5.13.
22 Response to Anglian, para. 5.9.
23 Response to Anglian, paras. 5.9 to 5.13.
24 Challenges to incentive-based regulation Paper (REP18).
25 Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 7.1.
26 Oxera's Report on cost assessment issues (REP13).
27 Response to Anglian, para. 5.25.
28 Response to Anglian, para. 5.16.
29 Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built.
30 Response to Anglian, para. 5.23.
31 Ofwat Initial Presentation to CMA (20 May 2020) (REP11).
32 Response to Anglian, Table 5.2, pages 161 to 162.

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| | | *base costs is just 2.7%, which is below the sector average. At the same time, as [Ofwat] show[s] in 'Introduction and overall stretch', company improvement over PR14 provides insight into the achievability of the performance commitment levels [Ofwat] ha[s] set*".[33] | |
| **4** | **Ofwat does not properly address the criticism made on upper quartile performance cost service disconnect** | | |
| **4.1** | Ofwat considers that achieving upper quartile common performance commitments goes hand in hand with achieving or outperforming upper quartile base expenditure allowances.<br>While this may be necessary to support Ofwat's predetermined view, it is not realistic, as it ignores the underlying marginal costs of achieving performance commitments (and those will legitimately differ across commitments and companies – a point that the CMA previously recognised in *Bristol (2015)*).[34] | Ofwat states that "*The company mischaracterises [Ofwat's] position on this issue. [Ofwat] do[es] not expect companies to be upper quartile on all outcomes, as [Ofwat is] not expecting a company to be good at everything. [Ofwat] recognise[s] that even an efficient company may be good in some areas and less good in others. [Ofwat] would, however, expect an efficient company, on average, to have net zero ODI payments. Overall, the data indicates that it is possible for a company to have both upper quartile outcome performance and upper quartile cost efficiency at the same time*".[35] | Ofwat's statement does not engage with the principal argument that it should take into account the marginal costs of achieving a given service level.<br>Ofwat's statement conflates two separate points. Ofwat has not advanced robust evidence to demonstrate the net-zero position on ODIs. The reference to "data" is presumably a reference back to the scatter plots which Anglian has previously shown to be weak and unreliable evidence. Ofwat does not advance more robust data to support this position but does draw on previous performance as justification.[36] |
| | | Ofwat states that *"[n]otwithstanding the impracticalities of doing so, it is also not clear that [Ofwat] should take variations in status quo performance levels and marginal costs into account in setting ODI rates. This is because is many cases differences in starting performance and cost are due to factors within management control and making an adjustment for such factors could perpetuate inefficiencies".*[37] | Ofwat fails to properly account for customer preferences, nor engage on arguments that companies' operating regions or other operational considerations may affect their costs for delivering a specific level of service. Ofwat assumes that any difference between its view and companies' cost are fully ascribed to "inefficiency" or within management control. Ofwat has itself failed to provide satisfactory evidence to substantiate this mischaracterisation of Anglian's proposed costs as inefficient. |
| **4.2** | Anglian's SOC included a case study on water supply interruptions, which illustrates Ofwat's cost service disconnect.<br>Ofwat's view at PR14 was that improvements could be achieved within current base spending by using existing resources more smartly. Anglian made a large number of changes to practices and procedures that could improve performance with existing resources. Despite these initiatives, the required improvements in interruptions to supply could only be achieved with an additional investment of £17.9 million.[38] | Ofwat states that *"the company does not explain how it has determined the allowance within its PR14 base funding for water supply interruptions and therefore does not demonstrate the extent to which this expenditure on improving water supply interruptions is in fact 'additional' to base*".[39] | Ofwat does not fully engage on the future marginal cost evidence[40] put forward by Anglian or the Company's case study on I2S,[41] which exemplifies that meaningful improvements in performance cannot be achieved without corresponding increases in costs, as shown by PR14. Anglian welcomes the opportunity to discuss with the CMA any queries in relation to these. |
| **5** | **Ofwat argues that it has allowed sufficient additional costs for improving leakage performance to Anglian** | | |
| **5.1** | By undervaluing quality, Ofwat's approach not only fails to allow high-performing companies sufficient funds to properly finance their functions, it also contains a long-run incentive for mediocre performance.<br>As a high-performing company, Anglian is particularly exposed to this, especially on leakage for which it is the sector leader. Anglian has had to incur costs, both in terms of people and equipment, in order to achieve the frontier position it occupies on leakage. Anglian's plans to further reduce leakage and improve the resilience of the network are similarly not costless. Anglian has provided ample evidence of this to Ofwat.[42] | Ofwat states that *"[it] recognise[s] that improving leakage performance beyond the frontier increases costs and allowed the additional requests for funding from all companies in the upper quartile of leakage performance, including Anglian Water. Using [Ofwat's] alternative modelling specifications, two of which included leakage, [Ofwat] also considered whether any companies' allowances were likely to be insufficient in the round. On this basis, [Ofwat] provided Anglian Water with an additional £50.2 million. [...] None of the evidence that Anglian Water provides suggests that it requires an uplift of base expenditure allowances to meet its PR19 water supply interruptions level. Anglian Water's historical performance shows that its level is achievable, and sector evidence shows that efficient companies can achieve upper quartile performance on water supply interruptions".*[43]<br>Ofwat states that "*[it] further recognise[s] the company's leakage performance in [Ofwat's] enhancement allowance of £71.4 million to deliver reductions beyond its 2019-20 level*".[44] | Ofwat's FD approach accepts the principle of leakage at the frontier costing more by making an allowance to both base and enhancement costs. Both allowances are insufficient and not based on the marginal cost evidence Anglian advanced (see **Part E: Review of Leakage arguments (REP06)** for further details).<br>In providing the additional allowance for leakage, Ofwat has recognised that its simplistic view that no additional cost need be incurred in improving service is incorrect. A more consistent approach, recognising the importance of sound estimates of marginal costs and motivated by customer valuations of improved service, is needed. |
| | | More generally, Ofwat states that "*[b]ased on historical performance [it] expected some improvement in quality over time without increasing cost*"[45] and claims that *"[it] <u>allowed enhancement costs</u> where there was good evidence that further improvements in service require an efficient company to incur higher costs*".[46] | Water network engineering is complex and Anglian advanced specific examples of evidence as part of the SOC that illustrated some activities that improved service that did not increase costs.[47] These related specifically to interruptions to supply and water quality contacts. However, Anglian also demonstrated a further range of activities that do require cost increases to achieve the change in performance.[48]<br>With the exception of Ofwat's insufficient enhancement expenditure[49] for shifting the leakage frontier, Ofwat makes no account for the marginal costs of service improvement in other areas. This does not accord with its stated position in its SOC Response.[50] |
| **6** | **Other justifications advanced by Ofwat are not compelling** | | |

[33] Response to Anglian, Table 5.2, page 162.
[34] Anglian's SOC, Chapter F: Cost service disconnect, Section 3.1, para. 915.
[35] Response to Anglian, para. 5.30.
[36] Response to Anglian, paras. 5.9 to 5.13.
[37] Response to Anglian, Table 4.1, page 131.
[38] Anglian's SOC, pages 19 to 20.
[39] Response to Anglian, para. 4.14.
[40] Anglian's SOC, Figure 4, page 20.
[41] Anglian's SOC, water supply interruptions case study on pages 19 to 20 and 225 to 226.
[42] Anglian's SOC, Chapter F: Cost service disconnect, Section 1 and page 218.
[43] Response to Anglian, Table 5.1.
[44] Response to Anglian, Table 3.5, page 40.
[45] Response to Anglian, para. 5.27.
[46] Response to Anglian, para. 5.27.
[47] Anglian's SOC, water supply interruptions case study on pages 19 to 20 and 225 to 226. See also Anglian's SOC, para. 990.
[48] See e.g. Anglian's SOC, Chapter F: Cost service disconnect, Section 3.3.
[49] Response to Anglian, para 1.37.
[50] "*We agree that there can be a trade-off between service quality and cost, and improvements in service quality can come at a higher cost*." Response to Anglian, para 1.67.

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| **6.1** | **Other companies not seeking a redetermination is not probative that the overall level of stretch is achievable.** | Ofwat argues that "*Thirteen companies did not dispute the final determinations while four companies did. Some of these companies such as Dŵr Cymru and United Utilities proposed significant improvements in cost efficiency in their business plan. PR19 used comparative benchmarking on costs and outcomes and a single industry allowed return on capital and so allowing comparison across companies. Overall the stretch for the disputing companies is lower than it is for a number of companies that accepted the final determination. These companies accepted the determinations in the round, and so it seems reasonable to assume that those companies that accepted the determinations considered that the overall level of stretch was achievable and they could meet their performance commitments within the funding allowed*".[51] | The sector comparison and the decisions of 13 other companies are irrelevant to the request for the four companies' references for a redetermination. It is not reasonable to assume that any company exercising its right to ask the CMA for a redetermination has no case, merely because other companies, in their different situations, did not do so.<br>Anglian also asks the CMA to reflect on wider third-party submissions such as Southern Water, South West Water, Wessex Water and Dŵr Cymru (Welsh Water) in its assessment of Ofwat's approach and in formulating its own approach to assessing the costs of service quality. |

[51] Response to Anglian, Table 5.2.

# Anglian Water PR19

## Part C: Review of Cost sharing rates and uncertainty mechanisms arguments

## Part C: Review of Cost sharing rates and uncertainty mechanisms arguments

Ofwat's Response considers issues in relation to cost sharing rates and proposed risk mitigations relating to Direct Procurement for Customers ("**DPC**") and the costs associated with metaldehyde treatment specifically in its **Response to Anglian**.

In respect of cost sharing rates, the proposal to use cost sharing rates as a matter of principle is not is dispute. Rather, it is Ofwat's methodology, which evolved during the PR19 process, and which claims to align incentives for efficient business plans that Anglian disputes. In truth, as stated in Anglian's SOC, Chapter D: Risk and return, Ofwat's approach merely serves to penalise those who legitimately disagree with it on both scope and efficiency during the regulatory process. A movement away from Ofwat's FD position in the redetermination would not have the negative impact on future incentives that Ofwat asserts. This mechanism has further significance given Ofwat's proposal for dealing with cost implications arising from Covid-19 and the balance of risk between companies and customers.

In respect to the risk mitigation for DPC, Anglian encourages early certainty from Ofwat's consultation such that this issue could be addressed ahead of the CMA's redetermination. For metaldehyde, Ofwat has made no further comment, so Anglian retains the view that a workable mechanism for addressing these costs should be proposed by the CMA as part of the redetermination.

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| **1** | **Cost sharing rates** | | |
| **1.1** | "*The cost-sharing mechanism provides Anglian with only a small proportion (35%) of any under-spend while exposing it to the majority of any over-spend (65%). This mechanism was imposed on Anglian because it did not, and does not, agree with Ofwat's cost assessment, for the reasons explained throughout this Statement of Case. It creates no incentives for efficiency*".[1] | *"Asymmetric cost sharing rates were introduced to simplify the menu incentive applied at PR14. They were designed to maintain strong incentives on companies to deliver stretching cost estimates in business plans in the context of asymmetric information and to provide ongoing incentives for cost efficiency. Asymmetric cost sharing is a long standing tool used by Ofwat and in other regulated sectors. Anglian Water's arguments on cost sharing rates must be considered taking account of the wider aims of the incentive regime and with consideration of the impacts over the long term. Our approach recognises that companies benefit from an asymmetry of information in preparing business plans. It is therefore important to incentivise companies to put forward stretching business plans and to deliver efficient services to customers. Anglian Water has requested (and continues to request in this process) the largest increase in totex relative to company historical levels of expenditure, in the sector. Throughout the PR19 process we have set out our concerns that its requested costs are were inefficient by some margin, and the company has at no stage in the process provided us with sufficient evidence to allay these concerns.*<br><br>*Recent reviews of the sector have highlighted the need for regulators to explicitly account for information asymmetry. Anglian Water had significant opportunity through the PR19 process to convince us of the need for the costs requested in its business plan, which it failed to do. In our view it has not corrected these evidential deficiencies in its statement of case to the CMA. Adjusting cost sharing rates at this stage of the process may well undermine incentives for companies to challenge themselves on efficiency at future price reviews."*[2] | Anglian continues to support the merits of a strong, clear incentive-based approach to regulation. Anglian fully supports the regulatory principle of companies accepting risks to their returns, including penalties and rewards. It believes that since privatisation, it has responded to this framework more effectively than any other company in the sector.<br><br>Anglian's Challenges to incentive-based regulation Paper (REP18) submitted as part of this response sets out a range of concerns with Ofwat's PR19 approach, the harm caused to future incentives and proposes some remedies for the CMA to consider as part of its redetermination.<br><br>Anglian does not agree with the basis of Ofwat's suggestion that the CMA should retain the original sharing rates. As set out in the SOC,[3] Anglian retains the view that Ofwat's approach penalises companies for legitimately disagreeing with Ofwat on scope and cost efficiency. Both of these are central matters for the CMA to reconsider.<br><br>It would therefore be inconsistent to update these matters during the redetermination, but retain a penal cost sharing rate based on Ofwat's FD. To do so would harm future incentives for ambitious business plans. |
| **1.2** | Anglian's SOC set out Anglian's two broad concerns with the application of Ofwat's cost sharing framework.[4]<br><br>The first is that it presumes that the regulator is correct in its assessment. Anglian is not incentivised to do what its customers want, nor to focus on those areas where it believes that it can achieve the best performance, nor more generally to be creative in finding the frontier-pushing solutions that the Company has achieved in the past. Instead, it is incentivised simply to implement Ofwat's FD in whatever way it can but not to improve upon it - even if to do so, it must seek quick fixes, comply minimally with its legal obligations and defer requisite expenditure for future customers to pay. While, historically, the UK's regulatory system has allowed companies to find their own innovative solutions (something which Anglian has been particularly effective in doing), this ability is substantially eroded in Ofwat's FD.<br><br>The second concern is that the scheme penalises companies which put forward evidence-based plans, as Anglian did, that Ofwat does not support. Anglian believes that its engagement is appropriate and in the best interest of its customers. Anglian has sought to provide evidence in support of that and to engage with Ofwat to explain it. It has also moved and compromised as a result of that engagement but has consistently sought to | *"Further, at draft determinations we changed our approach to the calculation of cost sharing rates. We said that we would put 50% weight on companies' August 2019 cost forecasts to determine their cost sharing, so companies were incentivised to disclose better information about their efficient costs in response to our draft determination. It would be wrong for us not to act on information disclosed through our incentives, in particular given that it is in essence customers who pay for this improved information".*[5]<br><br>*"In the PR19 methodology consultation, companies had full sight of our intention to remove cost sharing menus applied at PR14 and to introduce asymmetric cost sharing rates. Our aim in doing so was to simplify the regulatory approach compared with PR14, and to provide increased incentives on companies to deliver stretching cost forecasts in business plans in addition to providing ongoing incentives to deliver cost efficiency and protection in the event of overspend. It is not appropriate to consider the rationale for asymmetric cost sharing rates without broader consideration of the rationale for adopting the cost sharing mechanism.*<br><br>*Anglian Water had significant opportunity through the PR19 process to convince us of the need for the costs requested in its business plan (including those for resilience), which it failed to do. Our approach recognises there is an asymmetry of information between companies and us (and in the case of the redetermination, the CMA), and in the absence of appropriate incentives, companies <u>are</u>* | See above. |

[1] Anglian's SOC, Chapter A: Executive Summary, Section 1, para. 22.
[2] Response to Anglian, paras. 1.76 to 1.78.
[3] Anglian's SOC, Chapter D: Risk and Return, Section 4.2, para. 509.
[4] Anglian's SOC, Chapter D: Risk and Return, paras. 504 to 511.
[5] Response to Anglian, para. 3.60.

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| | propose the Plan that the customer feedback and technical evidence tells it is the right one. Anglian is now putting that same evidence forward to the CMA. The Company believes that this engagement with Ofwat and with the CMA is the right way to act and is in the interests of consumers. Anglian is concerned that it would be disadvantaged for having maintained a principled disagreement through the process and eventually bringing its case to the CMA as allowed for in the legislation.<br>However, Ofwat's approach to cost-sharing does penalise companies that take their case through to the CMA. Anglian believes that this is wrong in principle and requests that the CMA consider whether as a matter of policy it wishes to endorse it. At a minimum, however, if the CMA concludes that significant parts of Ofwat's FD need to be over-turned, then it would be perverse to maintain cost-sharing penalties imposed on Anglian because it correctly challenged that FD. | *likely to bid up requested cost allowances. Our approach ensures companies that have the most efficient business plans and subsequently deliver the most efficiencies retain the greatest share of outperformance; companies with the least stretching plans and that deliver the least efficiencies bear a greater proportion of the cost of underperformance.*<br>*But it is important to recognise any decisions the CMA takes that affect the totex cost sharing rates in our final determination could impact on the incentives for submission of efficient business plans in the future. We submit that the CMA should retain the cost sharing rates in our final determination for the disputing companies. We would welcome further engagement with the CMA on this issue".*[6] | |
| **2** | **Uncertainty in recovering expenditure for a direct procurement for customers scheme and the introduction of a ban on metaldehyde** | | |
| **2.1** | In its FD, Ofwat recognised that Anglian could be exposed to additional costs during AMP7 that would be beyond management control, relating to Elsham treatment works and transfer scheme and the metaldehyde programme. In both cases, there is a strong possibility that Anglian will incur expenditure for reasons entirely outside its control without the ability to recover that expenditure. Such liability is wrong as a matter of regulatory principle: it exposes the Company to unnecessary, uncontrollable and purely downside risk.[7]<br>In brief, Ofwat proposes that the mechanism for recovery of these currently unfunded costs (if incurred) should be by means of an interim determination of K (IdoK). However, Anglian's Licence specifies that an IdoK is unavailable unless the value of the claim for additional funding is at least equal to 10% of turnover. Based on Anglian's current turnover, there is no realistic prospect of deploying the IdoK mechanism to recover the costs of either the Elsham treatment and transfer scheme or the metaldehyde programme. Therefore, if these risks materialise, Ofwat will have breached its duty to ensure that Anglian is able to finance the proper performance of its functions.<br>The obvious way to deal with both of these issues is through a workable reimbursement mechanism. This would be straightforward as, in each case, there will be an external, verifiable cause determining whether the expenditure should take place.[8] | "*With regard to the Elsham scheme, the company is aware that when we published our final determination we committed to consider the case, following consultation, for amending Condition B to introduce a specific interim determination process with bespoke criteria for direct procurement for customers. We have also since re-iterated our intention to engage with stakeholders during 2020 on an interim determination for direct procurement for customers mechanism. The company is therefore over-stating the risk in this area and this issue can be addressed outside the CMA process for Anglian Water and the other companies in a similar position*".[9] | As a matter of good regulation, a company should have all relevant information available to it when making its decision to accept or refer its Final Determination to the CMA. This was not the case regarding the Elsham DPC scheme at the time of Anglian's decision to refer Ofwat's FD to the CMA. In Anglian's case, the expenditure sums (c.£120 million) are significant.<br>Notwithstanding this fact, Anglian will engage openly with Ofwat on its forthcoming consultation and, should this provide a workable solution to the problem, would then propose that the issue need not then be dealt with as part of the CMA redetermination. |
| | | "*With regard to the potential costs arising from the absence of, or delays in introducing, a ban on the use of metaldehyde as a pesticide, we accepted that costs forecast by Anglian Water could be material. We included a Notified Item for this issue in the Anglian Water's final determination as we considered this approach best protects the interests of customers and provides the company with protection to the extent that material costs arise*".[10] | Ofwat's response simply restates their previous decision to include a notified item.[11] As such, this does not engage with the evidence in Anglian's SOC that this route offers no meaningful protection to the risk faced by Anglian which is c.£50 million in relation to metaldehyde. Anglian reiterates that the obvious way to deal with this issue is through a workable reimbursement mechanism. This would be straightforward, as, in each case, there will be an external, verifiable cause determining whether the expenditure should take place. Anglian's view on this remains unchanged and Anglian invites the CMA to consider how such a mechanism could be provided for as part of the redetermination. |

6 Response to Anglian, paras. 6.13 to 6.15.
7 Anglian's SOC, Chapter A: Executive Summary, Section 5.3, para. 119.
8 Anglian's SOC, Chapter A: Executive Summary, Section 5.3, paras. 122 and 123.
9 Response to Anglian, para. 1.57.
10 Response to Anglian, para. 1.58.
11 Response to Anglian, para. 1.58.

# Anglian Water PR19

## Part D: Review of ODIs arguments

# Part D: Review of ODIs arguments

Ofwat's Response considers issues in relation to the Outcome Delivery Incentives ("**ODIs**") in "Outcomes – response to common issues in companies' statements of case" (the "**Response on Outcomes**") and "Response to Anglian Water's Statement of Case" (the "**Response to Anglian**").

Ofwat has an important role to play in challenging submissions from companies. However, Ofwat has struggled to balance applying its methodology consistently, taking account of customer evidence and economic principles, with an urge to make interventions in the minutiae of Anglian's ODI package, that was initially assessed as best in class by Ofwat, supported by customers and challenged by Anglian's independent Customer Challenge Group (known as the CEF). Based on wider industry concerns on overall quality of customer engagement research and its application, Ofwat has sought to make unconnected interventions at a micro level which were not reconciled back to the overall balance of risk and return for improving service, contrary to clearly received feedback from Anglian's customers during the engagement process. Ofwat has failed to translate its generic concerns with all companies' engagement activities into specific and well-evidenced justifications for its interventions into Anglian's ODIs.

To illustrate the breadth, extent and detail of Anglian's customer valuation work, Anglian draws the CMA's attention to: (i) the overview of the Company's Societal Valuation Programme (SOC037), which shows the various individual pieces of research that were undertaken as part of Anglian's customer valuation efforts;[1] and (ii) Anglian's ICS Valuation Completion Report (SOC038) which, for example in Figure 10.2, shows how many data points were used during triangulation (which was also conducted in line with CCWater's guidance, as illustrated in Anglian's September 2018 Plan).[2]

Ofwat's statement "*that companies claim that PR19 demands too much from them and that their customers' interests would be better served by lower service and/or higher prices*"[3] mischaracterises Anglian's statement of case. Anglian is disputing on two fundamental aspects: (i) customers do not agree with the service levels Ofwat is determining (e.g. I2S); and (ii) Ofwat's FD does not fund delivery of these services (i.e. thereby creating a cost service disconnect, which is discussed in **Part B: Review of Cost Service Disconnect arguments**[4] and should be read in conjunction with this table along with **Part E: Review of Leakage arguments**.[5] As noted in Oxera's Report on cost assessment issues,[6] average leakage across the companies that set the cost benchmark has been broadly flat over AMP6. That is, given that these companies set the cost benchmark, the base allowance from Ofwat's models, which include no leakage measures, only funds a stable leakage level. Anglian faced (and outperformed against) a target level of leakage much lower than that for the benchmark companies. A forward–looking leakage target of a 15% reduction entails a far lower level of leakage by 2024/25 for Anglian than for the benchmark companies.

Anglian requests that the ODI package the CMA sets in its determination properly reflects the full range of economic evidence and customers' interests and preferences and sets stretching targets but a reasonable balance of risk and reward. Anglian suggests key areas of focus should include:

(i) appropriate incentives to encourage frontier shifting leakage performance;

(ii) appropriate performance commitment level and funding allowances for water supply interruptions;

(iii) underperformance collars linked to customer evidence; and

(iv) water quality contacts performance commitment level that reflects customer priorities and funding allowances.

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1 Societal Valuation Programme (SOC037), Figure 3.
2 September 2018 Plan, page 153 (SOC001).
3 Response on Outcomes, para. 1.2.
4 Part B: Review of Cost Service Disconnect arguments (REP03).
5 Part E: Review of Leakage arguments (REP06).
6 Oxera's Report on cost assessment issues (REP13).

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| **1** | **Ofwat's approach largely sets aside customer views** | | |
| **1.1** | At PR14 Ofwat set a number of common PCLs on the basis of historic upper quartile performance (based on 2011-2012 to 2013-2014 data), with a glidepath over the first three years of the review to upper quartile. At PR19, Ofwat considered that setting PC targets on the basis of historical upper quartile performance was not sufficiently stretching, as in many cases companies had exceeded these. It therefore based targets on industry level forecasts of the forward-looking upper quartile performance. This implies that Ofwat is dispensing with, or at very least diminishing, the requirement that companies should develop their own stretching targets in consultation with customers and in line with the customer priorities revealed through those consultations. Ofwat makes no reference to customer views and in effect ignores customer evidence (that companies would have used to underpin their stretch improvements to 2024-2025) in its FD. This gives effect to dispensing with the economic link between cost and service.[7] | Ofwat acknowledges that it has overruled customer research in the following cases:<br>• better align the outcomes package with high quality evidence of customer preference with evidence from the relevant company;[8]<br>• take account of poor-quality or biased research;[9]<br>• account for unexplained variation in ODI rates;[10] and<br>• provide additional scrutiny of what is achievable.[11] | Anglian, with challenge from its Customer Engagement Forum, has weighed and triangulated the various sources of customer evidence when developing its performance commitment and ODI package.<br>It is not clear where Ofwat has accounted for the high-quality of Anglian's submission when balancing evidence from customers and economics with wider industry data revealed during the PR19 process. Notably, Ofwat has not deviated from its approach in certain areas (such as common upper quartile performance commitment levels), even in instances where it was not supported by the Company's customer evidence, which was assessed by Ofwat as being of the highest quality.<br>As a matter of principle, it is not the role of an individual company to demonstrate or justify why its customers' valuation of service varies from other companies', nor is it to assess the relative quality of other companies' research. If there is unexplained variation in incentives, Ofwat could have reviewed the detailed evidence provided by companies to establish the most reliable sources.<br>Ofwat argues that it has used information revealed during the price review process to challenge companies over what is achievable. Anglian does not challenge this principle. For example, in the case of growth, it is prudent to update a position where more up to date information is available. However, as discussed in 2.1 and 3.1 below, it remains unclear how Ofwat satisfied itself of the robustness of the wider range of industry data of varying quality. |
| | | On ODI rates, Ofwat states that there was unexplained variation in company submissions on willingness to pay and that there was not a practical method of adjusting rates to reflect new performance commitment levels.[12] | As discussed in 1.1 above, Ofwat could have reviewed the detailed evidence provided by companies to establish the most reliable sources, thereby ensuring that its approach captured legitimate different preferences for different levels of service. |

[7] Anglian's SOC, Chapter G: ODIs, Section 4.1.1.
[8] Response on Outcomes, para. 5.6.
[9] Response on Outcomes, para. 5.7.
[10] Response on Outcomes, para. 5.8.
[11] Response on Outcomes, para. 5.9.
[12] Response on Outcomes, para. 5.8.

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| | | | Ofwat incorrectly ascribes all variation to differences in quality of research. Ofwat also fails to acknowledge the approaches to triangulation companies such as Anglian took to present balanced, robust customer preferences based on a range of information and sources. |
| | | Ofwat argues that "*[a]s set out in [its] PR19 Methodology, customer views are just one of the inputs [Ofwat] asked companies to consider in setting stretching performance commitment levels*" and that "*[Ofwat] ha[s] been consistently clear about this during the PR19 process*".[13] | Customer engagement materials often included a wealth of information, such as historic performance and economic links. For example, when engaging on willingness to pay values (and designing the corresponding engagement methods), companies used achievable levels of service, historic performance and bill impacts. Ofwat's characterisation fails to reflect this dimension within companies' approaches.<br><br>Ofwat's assessment confirmed Anglian as sector-leading, specifically in relation to how Anglian applied customer engagement to its ODI package. Ofwat recognised Anglian's PCLs and ODIs as being well-evidenced, reflecting customer priorities "*developed on the basis of robust customer valuation research which has been appropriately triangulated to set incentives that reflect customer preferences and priorities across its package*".[14]<br><br>Anglian does not consider that Ofwat's approach has been "*consistently clear*", as Ofwat argues.[15] While Ofwat argues that, "*as [it] set out in [its] PR19 methodology, a company's own customer research is an important, but not the only, input into [Ofwat's] approach*",[16] Ofwat also states that:<br><br>• "*[its] role is to inform, enable and incentivise good quality customer engagement that puts customers at the heart of decision making. To maintain the focus on customers rather than the regulator, [it] do[es] not want to place ourselves – or any other third party – between companies and their customers*";[17]<br><br>• "*Customer engagement is a vital element of PR19. […] The risk in a monopoly business is that companies focus on* |

[13] Response to Anglian, page 129.
[14] IAP Test Question Assessment, page 1 (SOC410).
[15] Response to Anglian, page 129.
[16] Explanation of our FD for Anglian, page 8.
[17] Customer Engagement Policy (May 2016), page 29, available at https://www.ofwat.gov.uk/wp-content/uploads/2015/12/pap_pos20160525w2020cust.pdf (emphasis added).

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| | | | *devising a plan that will satisfy the regulator and lose sight of what customers need and want.*"[18]<br>• it "*expect(s) companies to be responsible for engaging directly with their customers (as they are best placed to develop a genuine understanding of customer needs and requirements) but to use this information to drive decision making and provide excellent levels of service to all customers*";[19]<br>• *"customers views should be at the heart. More generally, companies should ensure their plans reflect the needs and requirements of current as well as future customers*"[20]<br>• "*Customer engagement will be central to [its] assessment of customers' business plans at PR19, as part of the initial assessment of business plans process*";[21]<br>• "*Customer engagement is a vital element of PR19 […] Customer engagement will provide essential evidence for company proposals in their business plans*;[22]<br>• "*A high-quality business plan is grounded in excellent customer engagement, with a wide range of evidence*".[23] |
| | | Ofwat states that "*the disputing companies argue that their customers' best interests would be best served by lower service or higher prices*."[24] | This is a mischaracterisation of Anglian's statement of case. Anglian is disputing on two fundamental aspects: (i) customers do not agree with the service levels Ofwat is determining (e.g. I2S); and (ii) Ofwat's FD does not fund delivery of these services (i.e. thereby creating a cost service disconnect). |

[18] Ofwat's PR19 FD Policy Summary, page 29 (SOC228) (emphasis added).
[19] Customer Engagement Policy (May 2016), page 3, available at https://www.ofwat.gov.uk/wp-content/uploads/2015/12/pap_pos20160525w2020cust.pdf (emphasis added).
[20] Customer Engagement Policy (May 2016), pages 19 to 20, available at https://www.ofwat.gov.uk/wp-content/uploads/2015/12/pap_pos20160525w2020cust.pdf (emphasis added).
[21] PR19 Final Methodology, page 22 (SOC314) (emphasis added).
[22] PR19 Final Methodology, page 24 (SOC314) (emphasis added).
[23] PR19 Final Methodology, page 239 (SOC314).
[24] Response on Outcomes, para. 5.13.

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| **2** | **Ofwat's approach is affected by a number of methodological shortcomings which contributed to creating very stretching (and sometimes inconsistent) targets** | | |
| **2.1** | **Low number of data points and limited cross-checks**<br>Ofwat treated companies' forecasts of upper quartile performance as equally valid data, without conducting robust cross-checks on the realism of such forecasts against historic performance. Ofwat's methodology encouraged companies to submit stretching targets that Ofwat has made more stretching through upper quartile interventions. [25] | Ofwat maintains that the use of a forward-looking upper quartile, based on forecasts of upper quartile from the industry, is appropriate.[26] | Ofwat's assessment of achievability for its Final Determinations was not made to PCLs proposed by individual companies but instead was limited to analysing industry-wide data as a whole.<br>Some of Ofwat's analysis remains flawed – the comparison of stretch for water supply interruptions[27] shows improvement from 2012-13 in AMP6. Improvements in AMP6 from 2012-13, which Ofwat cites, represent the delivery of relatively easy or 'low hanging fruit' interventions. Additional gains will cost more.<br>In addition, Ofwat chooses to focus on a single year's performance for Anglian, although supply interruptions can be very volatile from year-to-year and dependant on external events.[28] A more meaningful comparison would be over AMPs. Anglian achieved an improvement in supply interruptions over AMP6 of 15%, while the stretch for AMP7 is 55%.[29]<br>Equally, Ofwat's use of industry average forecast data to justify these forecasts bears no legitimate weight as Ofwat does not couple this with a legitimate assessment of the company-specific costs of achieving it. It is an undeniable fact that the costs for different companies to achieve the same level of service will vary due to regional differences and their current performance relative to the target. Ofwat does not include service quality within its cost models. So any level of service beyond that achieved historically by the benchmark companies is based on judgement. |
| **2.2** | **Incorrect conclusions drawn from AMP6**<br>Ofwat argued that, in general, companies have achieved the upper quartile common PCs set in PR14, therefore Ofwat considers it appropriate to set more stretching targets. As discussed in the ICS Report on Ofwat's Overall | Ofwat states levels of stretch as percentage improvements in AMP7 are not dissimilar to those achieved in AMP6.[31] Ofwat states that in AMP6 performance commitments were more focused towards penalties than rewards, and | Ofwat's conclusion fails to acknowledge (i) that companies have responded to the incentives of regulation and stretch to reveal new information; (ii) the investment risk and efforts required from companies to achieve improvements; (iii) that rates of change achieved (or achievable) are dependent on companies' relative positions; and (iv) that |

[25] Anglian's SOC, Chapter G: ODIs, Section 4.1.2(i).
[26] Response on Outcomes, Chapter 7.
[27] Response to Anglian, page 128.
[28] Anglian's SOC, Chapter G: ODIs, Section 4.1, Figure 73.
[29] Anglian's SOC, Chapter F: Cost service disconnect, Section 3.3, Table 29.
[31] Response to Anglian, page 163.

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| | Stretch Appendix (SOC280), this assertion over-simplifies mixed performance across measures and companies. This high-level statement masks considerable variation across measures.[30] | questions why Severn Trent were removed from Anglian's analysis.[32] | improvements in AMP6 represent the delivery of relatively easy or 'low hanging fruit' interventions against historical (i.e. achieved) UQ targets, whilst AMP7 targets forward-looking (i.e. yet to be achieved) UQ targets.<br><br>Moreover, Ofwat's crude assessment of percentage changes achieved in previous periods as justification for an equivalent percentage change in a future period fundamentally fails to acknowledge that there may be differences in the marginal costs of achieving further increases in performance.<br><br>Over time, as performance improves further, improvements become harder to achieve, so percentage improvements should fall over time rather than increase. This is true at the industry level as the industry convergence on performance but also at the individual company level. Anglian is already in the upper quartile for many measures or better than the industry average. As such, all other things being equal, its rate of future improvement would be expected to be lower. This is a similar concept to rising marginal cost as service improves. Anglian considers it appropriate to highlight how a single company impacts the sector's overall performance assessment conducted by Ofwat. The reason for highlighting the analysis without Severn Trent is that it was the only company that had reward available for external sewer flooding in AMP6 and made significant rewards from this by leaving their flooding ODIs uncapped (to the cost of their customers in the form of higher bills). Ofwat corrected the PCLs and incentive rates for the last two years of AMP6 to ensure that these disproportionate rewards would not be gained again. For this reason, Severn Trent could be considered an outlier. |
| **2.3** | **Ofwat's approach is inconsistent with CMA precedent and other regulatory practice** (such as Ofgem for RIIO-2).[33] In *Bristol (2015)*, the CMA commented that it was '*not convinced that a blanket use of the industry upper quartile target was a superior method*'.[34] The CMA also noted that '*for Ofwat to consider that upper quartile performance* | Ofwat highlights that, at PR19, it has considered a wider range of factors than cost-benefit analysis to set service levels. Ofwat suggests the onus should be on companies to set PCLs for Ofwat to scrutinise rather than for Ofwat to establish the optimal level of service.[36] Ofwat concludes that: "*For the reasons set out above, [its] view from experience* | Anglian considers that there is an inconsistency between Ofwat's statements highlighting the importance of customer evidence (valuation) and economic evidence of costs and Ofwat's effective preference for benchmarking as the basis upon which to challenge companies and justify its interventions. |

30 Anglian's SOC, Chapter G: ODIs, Section 4.1.2(ii).
32 Response to Anglian, page 129.
33 ICS Report on Ofwat's Overall Stretch Appendix, page 3 (SOC280).
34 *Bristol (2015)*, Appendix 9.1, pages A9(1)-8 to A9(1)-9 (SOC275).
36 Response on Outcomes, paras. 4.7 to 4.10.

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| | *(historical or otherwise) would match economic levels appeared unlikely to us in general*'.[35] | *remains firmly that the complexities of such an exercise, and its inherent vulnerability to subjectivity on the part of the companies, render this an unsuitable approach*."[37] | Company submissions, from investment values to marginal cost rates, are subject to assurance (either financial or technical) and challenge by customer challenge groups. Ofwat undermines the competency of customers and the strength of customer engagement undertaken by some companies. For example, Anglian's societal valuations gave customers choices around service improvements (i.e. current performance, +1, +2 and -1 in stated preference studies).<br><br>Despite this, Ofwat downplays the importance of customer and economic evidence in setting ODIs. This undermines 10 years of development and expertise on cost benefit analysis in the sector. Customer values for common elements of service is not the same as common values for the same unit of service. For example, it would be legitimate for customers to value differently a unit increase of leakage reduction for a frontier company compared to a company with poorer leakage performance. It is a basic tenet of valuation that customer valuations will vary depending on the unit of improvement or deterioration in question. |
| **3** | **Ofwat's component-by-component interventions were not target nor proportionate, failed to reflect company-specific factors and were not reconciled back to the overall balance of risk and return** | | |
| **3.1** | The package that Anglian had proposed, which has been supported by its customers in the round and includes all elements of the ODIs considered together, has been subject to a process of dismantling by Ofwat. Interventions made at a micro level have lost sight of the bigger picture. Several of the interventions made in isolation to specific elements of Anglian's ODIs materially detract from the clear direction that Anglian received from its customers during the engagement process. Ofwat's approach to | Ofwat states that "*The interventions [it] made were targeted and proportionate based on the wider set of information available to Ofwat (such as comparative information) that was not available to customers*"[39]. Ofwat then provide some analysis of changes to incentive rates for five ODIs.[40] | Ofwat has an important role to play in challenging submissions from companies. However, there is limited evidence that Ofwat's interventions "*were targeted and proportionate*", as Ofwat claims.[41] Anglian notes that:<br>• Ofwat suggests that it would intervene where *"companies' proposed ODIs for the common performance commitments are not supported by good evidence"*.[42]<br>• Anglian conducted high-quality research with *"a clear line of sight from the results of its customer engagement to the outcomes in its business plan"*[43], as agreed with Ofwat at IAP. |

35 *Bristol (2015)*, para. 9.16 (SOC275). See Anglian's SOC, Chapter G: ODIs, Section 4.1.2(iii).
37 Response on Outcomes, para. 4.10.
39 Response to Anglian, para. 2.32.
40 Response to Anglian, para 2.33.
41 Response on Outcomes, para. 5.12.
42 Ofwat's Detailed Actions for Delivering Outcomes for Customers, page 98 (SOC418).
43 IAP Company Categorisation, page 4 (SOC346).

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| | setting incentive rates effectively decouples companies' incentive rates from their company-specific research, which was directly linked to the marginal benefits of moving from the current service position to deliver their proposed AMP7 levels of service.[38]<br><br>Examples of methodological shortcomings in Ofwat's component-by-component interventions are set out in 3.3 to 3.6 below. | | Furthermore, Anglian "*appropriately triangulated*" data around sources to develop robust positions.[44]<br><br>• Despite assessing Anglian's outcomes package as high-quality in all assessment areas, Ofwat's host of interventions included 65 actions for Anglian to address as part of its IAP response.[45] This was followed by continued intervention at Draft Determination and Final Determination.<br><br>• Ofwat adapted some of Anglian's incentive rates but not others to align with reasonable ranges, despite all of the incentive rates being the result of the same high-quality customer engagement.<br><br>• Ofwat's analysis in the Response to Anglian focuses on ODI rates. However, it does not discuss how Ofwat changed Anglian's caps and collars (which were based on performance commitment-specific customer evidence) to increase penalty exposure for Anglian. Anglian notes that another way of adjusting incentive rates would have been to adjust marginal cost inputs to account for the differing levels of service proposed by Ofwat.<br><br>Consistent with broader statements made in Ofwat's response to companies' statements of case, it appears that Ofwat concludes that, where companies are targeting a different level of performance, this is driven by 'not stepping up' relative to peers rather than taking full account of customer preferences or the costs of achieving comparable performance.<br><br>Ofwat has consistently failed to recognise that achieving the same level of service in different company regions may not be either of equivalent cost to achieve nor of equivalent customer preference to seek. Ofwat specifically references companies seeking 'cover' from their costs as a rationale for not achieving comparable service. Anglian believes this is a legitimate economic concern that has been explored with customers. |

[38] Anglian's SOC, Chapter G: ODIs, Section 6, para. 1016.
[44] IAP Test Question Assessment, page 1 (SOC410).
[45] Ofwat's Detailed Actions for Delivering Outcomes for Customers (SOC418).

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| | | Ofwat states that it took company-specific factors into account when approaching caps and collars[46] | On the one hand, Ofwat has adjusted Anglian's caps and collars, distorting the incentive package agreed with Anglian's customers. On the other hand, it has not been consistent with its interventions across the industry. Consequently, Ofwat has distorted company incentives and provided inconsistent risk and opportunity. There is no clear evidence on how Ofwat has accounted for company-specific factors in reaching its decisions. |
| **3.2** | **Ofwat's use of standardised approaches with poor data quality**<br>Proposed ODI rates were subject to a series of tests, following which Ofwat decided whether intervention is merited. Whilst Ofwat claimed that it had tested the overall quality of customer valuation evidence and triangulation and also conducted deep-dives of the marginal benefit components of the proposed ODI rates, the use of standard ranges (which do not even provide a representative portrayal of the industry) for incentive rates limits customer choice and influence over incentive rates, contradicting Ofwat's stated focus on customers' views. In some instances, Ofwat took the most punitive rate, resulting in it accepting customer evidence on outperformance rates for particular PCs for a company but rejecting it for the corresponding underperformance rate, or vice versa.[47] | Ofwat defends its use of reasonable ranges as being based on the data available to it at the time of its assessment.[48] | The data used by Ofwat to determine ranges are influenced by a number of factors, including differential levels of performance between companies. Ofwat has not engaged on the quality of this data. Anglian continues to challenge the use of ranges for disparate data sets with arbitrary standard deviations to determine what is reasonable.<br>Anglian agrees with Ofwat that it is likely that industry customer engagement varied in quality. However, Ofwat fails to specifically offer a credible rationale for its interventions in Anglian's proposal given its previous assessment of Anglian's customer engagement as sector-leading. The justification for intervention, based on generic concerns surrounding the quality of industry research, is poorly targeted and fails to recognise the specific focus that Anglian's Customer Engagement Forum and its dedicated sub-panel had on this area of the Company's Plan. |
| | | Ofwat states that Anglian *"is proposing that the CMA takes no account of the broader set of information available to Ofwat as a sector regulator."*[49] | Anglian is not proposing that the CMA disregards wider information available to it. Ofwat's position characterises customer research as a single input and fails to recognise the quality, depth and range of inputs that feed into that research. It also fails to recognise the response companies made to two previous criticisms of such research. Anglian notes that the Consumer Council for Water was satisfied that Anglian had followed its approach to appropriate triangulation of data, a point Ofwat ignores.<br>Anglian's proposal is that the CMA considers the quality of the broader set of information before relying on it to make numerous and substantial |

[46] See for example, Response on Outcomes, para. 11.15.
[47] Anglian's SOC, Chapter G: ODIs, Section 4.3.2(i).
[48] Response to Anglian, page 130.
[49] Response to Anglian, para. 4.8.

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| | | | interventions. Ofwat has not assessed the quality of information from individual companies, e.g. achievability of proposed performance commitment levels accounting for company circumstances or the quality of their societal valuation programmes. |
| **3.3** | **Ofwat's approach fails to recognise differences in performance levels**<br>Ofwat's FD also fails to recognise that different companies are currently performing at materially different service levels and this has implications for current costs and willingness to pay for future changes to service (e.g. customers who experience high levels of service would be expected to be willing to pay less for improvements than those experiencing lower service levels).[50] | Ofwat states the "*[n]o company has provided evidence to demonstrate that differences in performance levels can explain the wide variation in ODI rates [Ofwat] observed across companies*".[51] | As a matter of principle, it is not the role of an individual company to demonstrate or justify why companies' rates vary. To suggest that companies should do so is inappropriate.<br>Anglian submitted extensive evidence, supported by economic literature and data, highlighting the implications of differing levels of service on cost allowances.52 Anglian notes that another way of adjusting incentive rates would have been to adjust marginal cost inputs to account for the differing levels of service proposed by Ofwat.<br>The matter for the CMA to consider is whether Anglian's proposed rates associated with its performance commitments are appropriate. |
| **3.4** | **Ofwat's approach to caps and collars sets inconsistent opportunities to outperform**<br>As a result of the different approaches that companies took to setting the P90s, companies have different caps on the amount of outperformance that they can achieve on certain common ODIs. These limits are not related to customer preferences; therefore, some customers will miss out as their company does not have the same level of incentive to improve as other companies. The current P90s are not consistent, despite consistent PCLs and incentive rates, and therefore arbitrarily provide different opportunities to outperform.<br>Additionally, neither P10 nor P90 reflects likely outturns. Ofwat has not considered more likely outturns, just the | Ofwat states that it took account of company-specific factors when approaching caps and collars.[54] | As explained in 1.1 above, Ofwat's use of data undermines customer evidence on caps and collars. As illustrated in Anglian's SOC,[55] there is a clear asymmetry between Ofwat's range of expectations for outperformance and underperformance payments. This is the case for Anglian but also for many other WASCs. Compared to the business plans, the potential for outperformance is reduced for seven companies. For five companies, their P90 outperformance is lower than Ofwat's indicative range of 1-3%. In other words, in general, the downside scope is greater than the upside; and for Anglian (and many others), the FD downside is greater than the Plan.[56] |

[50] Anglian's SOC, Chapter G: ODIs, Section 4.3.2(ii).
[51] Response to Anglian, page 131.
[52] See for example, Anglian's SOC, Chapter F: Cost service disconnect, Section 3.4.
[54] Response on Outcomes, para. 11.15.
[55] Anglian's SOC, paras.1008 to 1010.
[56] See also 4.1 below.

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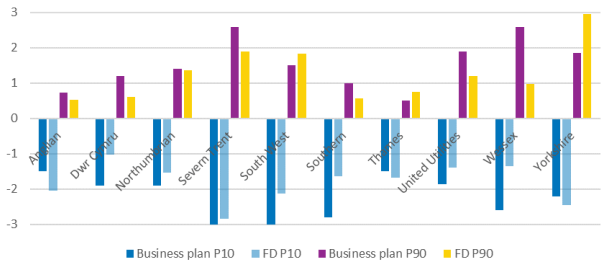
| | extremes. A more appropriate and balanced approach would be to assess rewards and penalties closer to P50.<br><br>Overall, there is a substantial increase in risk as a result of capping potential outperformance and extending the downward skew.[53] | | **Figure 1 Analysis of ODI RoRE ranges**<br>  <br>*Source: Anglian's SOC, Figure 74*<br><br>Consistent with Ofwat's wider approach, i.e. setting cost allowances, Ofwat has not demonstrated robustly how it has accounted for company-specific factors. Instead, it has treated a specific level of performance as a signal of what can be achieved by all companies, irrespective of regional factors and underlying costs. |
| **4** | **Impact on Anglian, its customers and the environment** | | |
| **4.1** | **Anglian's ODI package is heavily skewed towards penalties**<br><br>Ofwat's FD builds in asymmetry towards penalties for companies. This comes from the combination of stretching PCLs requiring upper quartile performance across the board, and Ofwat's default calculation of incentive rates, resulting in higher penalty unit rates relative to outperformance rates.[57] | Ofwat states that its methodology was clear that ODIs may not be symmetric and explained how it formed its own view of ODI risk, based on company submissions.[58] | Ofwat has now revealed its detailed approach to estimating the risk of ODI packages. This approach is based on company assessments of risk, to which Ofwat has applied a scaling factor in order to calculate the package RoRE. Anglian's RoRE analysis was conducted on the basis that it would be fully funded to deliver its obligations and service improvements. As this assumption is not the case under the Final Determination, Anglian's RoRE analysis is not an appropriate starting point for Ofwat to conduct its own assessment of ODI risk.<br><br>It remains unclear how Ofwat has reflected the downside skew on ODIs in satisfying itself that the overall risk and return in the package the FD delivers, including the cost of capital, is appropriate. |

[53] Anglian's SOC, Chapter G: ODIs, Section 4.3.2(iii).
[57] Anglian's SOC, Chapter G: ODIs, Section 5.1.
[58] Response on Outcomes, para. 11.13.

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| | **The cost service disconnect and asymmetry between penalty and reward creates perverse incentives**<br><br>Not only does the FD create a shortfall in allowances, it also distorts incentives. By setting cost allowances too low for companies to achieve PCL targets and by allowing high penalties as a result of missing these targets, Ofwat effectively dispenses with incentives to improve customer service, in exchange for a one-off reduction in bills. This is despite the fact that customer research has shown that customers are willing to pay more for improved levels of service. Customers will not receive improved levels of service and, as a result of companies being penalised, they will have less ability to invest in improving service in the future. Ofwat's revised ODI ranges could result in companies hitting the 'worst performance' penalty collar and then having no real incentive to improve performance.<br><br>In the longer term this means companies will not be incentivised to continue to improve performance as maintaining that level will not be funded.[59] | Ofwat states that better service quality does not increase costs, that at PR14 no additional funding was provided to achieve historic upper quartile and that it took account of historic performance when setting future looking upper quartile targets.[60] Ofwat claims that base costs allow efficient companies to improve service.[61] | Anglian's statement of case does not deny that there are improvements that can be made without increasing marginal cost. Anglian's SOC notes that "*Whilst there are some areas where performance improvements can be achieved without increases in costs (for example, Anglian has achieved some improvement in Water Quality Contacts through optimisation and targeted use of social media to educate customers regarding minor quality issues); for the vast majority of PCs, there is an unavoidable trade-off between cost and levels of service, well-evidenced in this industry as in others*".[62]<br><br>However, Anglian reiterates that comparisons of historic percentage improvements downplay the importance of economic analysis of efficient levels of service and of customer preferences.<br><br>Indeed, Oxera's Report on cost assessment issues[63] demonstrates that, by including quality of service in the cost models, costs do increase as service performance increases and accounting for this would therefore increase Anglian's cost allowance. This demonstrates that Ofwat's approach fails to allow for such cost increases necessary to achieve service performance improvements. Furthermore, it illustrates that, in the case of leakage, the benchmark companies and the industry on average achieved minimal improvements over AMP6 compared to the stretching targets for AMP7.[64] Thus, minimal costs for leakage improvements were allowed for in Ofwat's base cost models. |
| | | Ofwat also states that on water supply interruptions *"Anglian Water is arguing that it cannot meet its PCL"*.[65] | Anglian has not argued that it cannot meet the PCL. It has argued that customers did not support targeting that level or that there is sufficient funding to achieve it.[66] |
| | | For water quality contacts, Ofwat highlights that while Anglian is currently a good performer, its industry dataset | Water quality contacts is not a common performance commitment. Anglian's customers have been clear that they are satisfied with the current level of performance and that other areas of service delivery |

[59] Anglian's SOC, Chapter G: ODIs, Section 5.2.
[60] Response to Anglian, paras. 5.22 to 5.28.
[61] See for example, Response on Outcomes, para. 3.5.
[62] Anglian's SOC, Chapter G: ODIs, Section 4.2, para. 990.
[63] Oxera's Report on cost assessment issues (REP13).
[64] Oxera's Report on cost assessment issues (REP13).
[65] Response on Outcomes, para. 9.12.
[66] Anglian's SOC, Chapter A: Executive Summary, Section 5.1.

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| | | suggests Anglian may not be upper quartile at the end of AMP7.[67] | should be prioritised. Anglian provided its customers with comparative information regarding performance at the time of the engagement, which occurred before the submission of business plans. The level of stretch proposed by Ofwat for a measure that is not a common performance commitment, and which places additional stress on Anglian's cost allowances, without associated funding, is a clear example of Ofwat's component-by-component interventions distorting the incentive package proposed by Anglian and supported by customers. Anglian also notes that Ofwat's hypothetical future upper quartile is based on industry data and only became available after Anglian submitted its September 2018 Plan. |
| | | Ofwat highlights that Anglian is already delivering performance in-line with the Final Determination for internal sewer flooding and external sewer flooding.[68] | Ofwat has highlighted two performance commitments out of 26 with financial incentives. For the remaining performance commitments, significant improvement (involving investment) is required to avoid penalties. Anglian notes that it proposed a more stretching performance commitment level for internal sewer flooding than Ofwat's final determination and included a reward deadband for external sewer flooding, so more improvement was required before outperformance incentives applied (Ofwat removed this deadband in the Final Determination). The deadband was proposed on the basis that weather impacts performance on sewer flooding, and while recent years have been favourable, the Environment Agency's guidance on assessing flood risk includes a 5-10% uplift to rainfall event severity change in the 2020s and 2030s.[69]<br><br>Only three of the suite of performance commitments for companies are based on forward-looking upper quartile performance. Therefore, it appears reasonable to assess outcome delivery incentive performance in the round. |

[67] Response to Anglian, page 132.
[68] Response to Anglian, paras. 4.9 to 4.11.
[69] Flood risk assessments: climate change allowances, Table 2, available at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances.

# Anglian PR19

## Part E: Review of Leakage arguments

# Part E: Review of Leakage arguments

As set out in Anglian's SOC, Ofwat's FD creates outcomes contrary to the policy aims set out in its methodology and the views of Anglian customers. Ofwat's response is largely a reiteration of the arguments put forth in the FD and Ofwat has failed to engage with Anglian's key arguments in its SOC.

As reflected in **Chapter H: Leakage** of Anglian's SOC, as the frontier company in the sector, Anglian is in a unique position in that (i) the costs of maintaining its existing low level of leakage are significant; and (ii) continuing to drive forward the frontier in AMP7 beyond the cost of maintaining current levels comes at a higher marginal cost. Anglian requests that the CMA appropriately reflect the expenditure required to maintain and improve Anglian's leakage performance (for example, by reversing Ofwat's rejections of its cost adjustment claim and removing the company-specific efficiency challenge on leakage Enhancement).

Ofwat's calibration of the leakage ODI creates a scenario where Anglian could be pushing the frontier but incurring penalties for so doing. Anglian therefore also requests that its ODI mechanism as proposed in its business plan is reinstated, including:

(i) a base cost adjustment of £137 million[1] required to maintain leakage at Anglian's industry-leading AMP6 outturn performance funded "at risk" by Anglian's shareholders;[2]

(ii) the full Enhancement expenditure required to deliver a further 30Ml/d of leakage reduction (23Ml/d from leakage enhancement) at a cost of £77 million;

(iii) a highly stretching PCL of 166Ml/d (a 15% improvement on the forecast industry upper quartile); and

(iv) penalties for deteriorating performance, and not for improving performance from Anglian's already leading position (i.e. apply a deadband between current performance and PCL) as well as an enhanced reward beyond Anglian's PCL reflecting the extent to which this performance is beyond industry upper quartile and the benefits this would have for customers outside of Anglian's region through knowledge sharing.

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| **1** | **Leakage – Base** | | |
| **1.1** | The marginal costs of leakage based on historical reported performance shows that the marginal cost of leakage increases as leakage performance improves.[3] Ofwat's models | Ofwat claims that Anglian has not provided compelling evidence that maintaining a low level of leakage requires additional cost. Ofwat consider that there is not a particularly strong correlation (R2 = 0.54) between leakage levels and the cost of maintaining leakage in the relationship that Anglian derives. Ofwat further | Ofwat has failed to substantially engage with the multiple sources of evidence which highlight that maintaining leakage at industry leading levels does require additional cost. Anglian has referenced reports from Nera,[7] UKWIR[8] and PwC[9] highlighting the greater costs of maintaining leakage as the |

1 This is the updated figure as provided in DD Representation (SOC168).
2 Anglian's SOC, Chapter H: Leakage, para. 1031: "*During PR14, Anglian's owners made the commitment that funding improvements in the level of leakage in AMP6 would be done at the risk of shareholders rather than through customers' bills*."
3 Anglian's SOC, Chapter H: Leakage, Section 3, Figure 78.
7 NERA Report on Leakage Reduction Funding (SOC133).
8 UKWIR Leakage Report (SOC416).
9 PwC Leakage Report (SOC417).

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| | do not recognise that the marginal cost of reducing leakage increases at lower levels of leakage.<br><br>Whilst Ofwat initially admitted that maintaining Anglian's frontier level of performance inevitably required increased Base costs by allowing £55 million in partial acceptance of Anglian's cost adjustment claim of £148 million at IAP, it ultimately reversed its position and failed to make the corresponding allowances.<br><br>At FD, Ofwat rejected Anglian's cost adjustment claim but allowed a £50.2 million uplift (£24.5 million of which was leakage driven) to Anglian's "Botex Plus" allowances on the basis of adjusting for alternative specifications to its econometric models, so implicitly admitting the insufficiency of the Base allowance. | notes that (i) evidence from econometric modelling, on the impact of leakage performance on costs, is generally weak and inconclusive and (ii) that Yorkshire Water provided evidence that poor leakage performance requires additional costs.[6] | level of leakage reduces. Ofwat's own Base modelling alternative specification model is used by Ofwat to support an adjustment to Base costs. Indeed, as noted in Anglian's SOC, during PR19, Ofwat's approach to reflecting leakage in Base allowance has fluctuated and been unstable.[10]<br><br>Anglian's own data, as presented in Anglian's SOC, shows a clear relationship between the observed level of leakage and the costs of maintaining that leakage level.[11] Ofwat quotes the strength of this statistical relationship as 0.54.[12] The correct value is 0.755. Such a relationship is significantly stronger relative to Ofwat's own analysis used to support its conclusions relating to the relationship between service quality and cost efficiency[13] (see **Part H: Reply on Cost service disconnect**).[14] |
| | Within these models, the coefficients of the additional variables are not significantly different to zero and, as such, add no significant explanatory power to the models. Further, although the two leakage models suggested that Anglian should receive an extra £98 million, this allowance was averaged out with three other models (for growth, average pumping head and length of mains) which had a much smaller influence on costs and resulted in a diluted allowance of £50.2 million of which the leakage model contributes £24.5 million.<br><br>The final leakage Botex funding gap is £112.4 million.[4] Anglian is unable to maintain its current levels of leakage with the existing base allowance.[5] | Ofwat argues that to ensure the robustness of its modelling results, it made an additional allowance of £50.2 million to Anglian's Base allowance on the basis of alternative econometric model specifications. Ofwat claims that this adjustment "*should address any possible link between leakage levels and expenditure*" [15] | As noted by Anglian in its SOC, there are several issues with the application of Ofwat's alternative specification base models.[16] Whilst Anglian welcomes that Ofwat recognised a link between improving service and costs through the base adjustment models, the £24.5 million adjustment falls far short of the additional costs required to maintain leakage at current leading levels. As explained in Anglian's SOC, Ofwat reached this figure through an arbitrary dilution by other factors such as average pumping head and a growth factor.[17]<br><br>Ofwat explicitly accepted (in its seminar on econometrics for the CMA on 9 April) that the quality of each individual alternative specification model is "*not very strong* [...] *but that collectively they could be used for an adjustment*". It is not |

4 This figure represents the gap between Anglian's cost adjustment claim (£136.9 million) and the leakage-driven element of the base adjustment (£24.5 million), resulting in a £112.4 million gap.
5 Anglian's SOC, Chapter H: Leakage, Section 3.
6 Response to Anglian, paras. 1.34, 3.89, 3.91 and 3.92.
10 Ofwat accepted the basis of Anglian's cost adjustment claim at IAP, rejected it in full at DD and finally applied an adjustment of £50.2 million, which is only in part driven by leakage at FD. See Anglian's SOC, Chapter H: Leakage, section 3, para. 1038.
11 Anglian's SOC, Chapter H: Leakage, Section 3, Figure 78.
12 Anglian's SOC, Chapter H: Leakage, Section 3, Figure 78. Ofwat quotes this figure from Anglian's DD Leakage CAC (SOC173) plotting botex expenditure against the level of leakage. Anglian presented additional analysis comparing improvement in the base level of leakage against the cost per unit to reach that level. The strength of this relationship is 0.755.
13 Ofwat's Response on Overall Stretch, figures 7.1 and 7.2.
14 Part H: Reply on cost service disconnect (REP09).
15 Response to Anglian, paras. 1.36, 3.31 and 3.90.
16 Anglian's SOC, Chapter H: Leakage, Section 3, para. 1038 (iii).
17 *Ibid*.

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| | | | clear how the second part of this assertion follows from the first.[18] |
| | | Ofwat argues that Anglian failed to demonstrate why the specific costs it requested for maintaining leakage levels, based on historical expenditure, were efficient. In particular, Ofwat is concerned about the reliability of Anglian's leakage data and argues that (i) Anglian combines historical capex and opex costs but it is not clear if all of these costs are related to leakage activities; (ii) Anglian does not explain how the data from 2011 onwards has been recorded or assured.<br>Ofwat also argues that (i) Anglian presents its own data but it does not provide any supporting evidence to demonstrate the assertion that its historical costs represent efficient delivery of leakage management activities; (ii) Anglian fails to demonstrate the benefits of historical investment in leakage management improvements or that the proposed Enhancement activities for 2020-25 are accounted for in its derived cost.[19] | As noted in 1.1 above, Anglian has provided several sources of evidence highlighting the greater costs of maintaining leakage. The data from 2011 onwards has been taken from Anglian's historical records for costs assigned to leakage opex and capex codes.<br>Historical Enhancement costs are excluded from the cost data used to inform the cost adjustment claim. This ensures that the benefits of historic Enhancement expenditure are separated out from the costs of historical Base expenditure. Anglian is therefore confident that this base cost adjustment claim is a like-for-like reflection of historical Base expenditure. Reflecting Enhancement benefits on leakage in this cost adjustment claim would be double counting with leakage and smart metering Enhancement expenditure elsewhere in the Plan.<br>Moreover, Ofwat's challenge as to the efficiency of the claimed cost does not explain why Ofwat rejected Anglian's leakage cost adjustment claim in its entirety, rather than applying an efficiency challenge. |
| | | Ofwat points to Anglian's reference to smart meters in its SOC as a more expensive technology needed to reduce leakage further and argues that a separate allowance is made for smart metering and that smart metering costs should therefore not be included as driver for leakage Enhancement costs.[20] | Anglian notes that smart metering costs are not a driver in Anglian's leakage cost adjustment claim or its leakage Enhancement expenditure. The reference to smart metering in Anglian SOC in relation to the technology needed to reduce leakage further (including smart metering) is correct but incorrectly interpreted by Ofwat. Anglian was referring to the drivers of leakage reduction costs in general but not referring specifically to the drivers of its leakage cost adjustment claim or leakage Enhancement expenditure. |
| | | In relation to smart meters, Ofwat notes that these should assist companies in maintain and further reducing existing leakage levels and argues that Anglian failed to take into account the | Ofwat incorrectly conflates Base and Enhancement costs. Smart metering is Enhancement activity which will help Anglian to reduce leakage levels in AMP7. It accounts for 7Ml/d of the 30Ml/d leakage reduction that Anglian's Plan aims |

[18] Ofwat's Fourth CMA Teach In, 9 April 2020 (awaiting transcript).
[19] Response to Anglian, paras. 3.6, 3.91 and 3.92.
[20] Response to Anglian, para. 3.226.

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| | | influence of the Enhancement expenditure on its ability to maintain leakage levels.[21] | to deliver. The leakage benefit is therefore already captured in Anglian's Plan. Reflecting it in Base costs would (i) double-count the benefits offered by smart metering and (ii) inappropriately blend Enhancement and Base expenditure. |
| **2** | **Leakage – Enhancement** | | |
| **2.1** | Being the frontier company for leakage means that the marginal cost of further improvements is greater than that of the industry average or the industry median. This is because (i) the activity associated with reducing leakage changes at lower levels of leakage; and (ii) the costs associated with the different activity profile to achieve lower levels of leakage increase at those lower levels.<br>Ofwat's application of an efficiency challenge on the basis of unit costs being greater than the industry median, does not reflect the higher marginal costs of reducing leakage when leakage is already at a low level, i.e. that costs are significantly higher than the industry median unit cost for decreasing leakage beyond upper quartile level.[22] | Ofwat argues that (i) its approach takes Anglian's current leakage performance into account and recognises company specific costs[23]; and (ii) Anglian does not provide any justification for its increase in unit cost other than the statement that marginal costs will increase as leakage lowers.[24]<br>Ofwat applied a company-specific challenge where it considered insufficient evidence was provided and Anglian's unit cost was above an industry median.[25]<br>Ofwat argues that the supporting documentation in Anglian's WRMP does not provide for the verification of the efficiency of the presented unit costs.[26] | Ofwat partially takes Anglian's marginal costs into consideration. As set out in Anglian's SOC, Anglian disputes the rationale of the application of the company specific efficiency challenge based on Ofwat's flawed conclusions relating to Anglian's Base efficiency.[27] As set out in **Part G.4: Reply on Enhancement cost efficiency**,[28] the cost challenges and benchmarking applied in developing Anglian's Enhancement costs demonstrates that Anglian's costs are efficient. Anglian's WRMP sets out the costs included in the Enhancement case, and the comparison of different options (extended, extended plus, aspiration). How Anglian ensured these costs were efficient is covered elsewhere in **Part G.4: Reply on Enhancement cost efficiency**.[29] |
| | | Ofwat also notes that Anglian's unit costs are significantly higher than similar high performing companies (who propose leakage reductions beyond upper quartile benchmark) like South East Water and Bristol Water, with Bristol Water being lower than industry median.[30] | The accompanying **Part G.4: Reply on Enhancement cost efficiency**[31] highlights how Anglian developed its Enhancement costs, the cost challenges applied, and benchmarking used to validate its approach to Enhancement expenditure. It is incorrect to suggest that Anglian has not provided justification for the increases in costs of improving leakage performance. Anglian has provided a range of |

21 Response to Anglian, paras. 1.35 and 3.226.
22 Anglian's SOC, Chapter H: Leakage, Section 4.
23 Including marginal costs of reducing leakage. See Response to Anglian, para. 3.222.
24 Response to Anglian, paras. 3.224 and 3.227.
25 Response to Anglian, para. 3.223.
26 In particular the report for demand options which identifies the sources of data used to build up costs. See Response to Anglian, para. 3.225.
27 Anglian's SOC, Chapter E.3: Enhancement, paras. 802 to 804.
28 Part G: Reply to Ofwat's Response on Cost issues (REP08).
29 Part G: Reply to Ofwat's Response on Cost issues (REP08).
30 Response on Cost Efficiency, para. 5.25 (006).
31 Part G: Reply to Ofwat's Response on Cost issues (REP08).

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| | | | evidence throughout the price review process in its original Business Plan,[32] IAP[33] and DD Representation responses.[34]<br>Ofwat imply that the scale of the efficiency challenge applied means it should avoid scrutiny of its merits and rationale. Anglian disagree and invite the CMA to review the full range of evidence provided to it.<br>Comparing leakage unit costs to levels of leakage reveals a clear trend of increasing unit costs as leakage performance improves.[35] Despite being higher than Bristol and South East, Anglian's unit costs are broadly in line with the overall trend, given the leakage performance it proposes to achieve. |
| | | Ofwat concludes that the modest adjustment it made to Anglian's requested Enhancement allowance (£71.4 million of £77 million requested) is justified and notes that, on a unit cost basis, Anglian's allowance is larger than (i) PR19 allowance to most other companies; and (ii) Anglian's PR14 allowance. | Ofwat's challenge on leakage Enhancement expenditure represents **£5.3 million** and cannot be considered "*modest*" as combined with a large disallowance for Base (**£112.4 million**) and an ODI package, it significantly impacts Anglian's ability to continue to push the frontier of leakage reduction.<br>Ofwat has failed to engage with Anglian's arguments in its SOC as to why Ofwat's comparison with other companies' allowances and with Anglian's PR14 allowance is inappropriate. In particular, Anglian is proposing to reduce leakage further which comes at greater costs.[36] |
| **3** | **ODIs** | | |
| **3.1** | **Ofwat's interventions disconnected the leakage PCL with the required funding needed to achieve it**<br>Anglian set its PCL at a 15% reduction in the performance of the England and Wales upper quartile for leakage length of main (targeting 166 Ml/d) by the end of the AMP. In acceptability | Ofwat argues that *"Anglian Water's ODI package for leakage has been calibrated to ensure customers do not pay twice for the same service improvement and that Anglian Water is required to deliver a step-change in current performance before enhanced outperformance payments accrue."*[39]<br>According to Ofwat, "*[i]f the CMA were to make the company's performance commitment level less stretching, the accompanying* | Ofwat has mischaracterised Anglian's calibration of the ODI package.<br>The rejection of the cost adjustment claim means that Anglian's enhancement allowance will be required simply to try and maintain existing levels of leakage, rather than improving leakage further under the FD. Furthermore, due to the penalty |

[32] September 2018 Plan Water Data Tables Commentary, page 50 (SOC004).
[33] IAP response, Section 6.0.3 (SOC104).
[34] DD Representation, Section 12.3.2 (SOC168).
[35] Leakage Unit Cost Graph (REP19) based on Data from Ofwat FD SDB Enhancement Feeder Model, Leakage allowance tab (SOC376). Ofwat references that Thames and SES face particular challenges with regards to leakage so these two companies have been excluded from the analysis (Ofwat's Explanation of Anglian's FD, para. 2.48). There is some variation around the best fit line as would be expected due to local conditions driving factors such as the proportion of expenditure on mains replacement.
[36] Anglian's SOC, Chapter H: Leakage, Section 4, paras. 1042 to 1044.
[39] Response to Anglian, para. 4.5.

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| | testing of Anglian's Plan, 82% of household customers agreed that this was a stretching PC.[37]<br><br>Irrespective of the funding shortfall Anglian faces, Ofwat's calibration of the leakage ODI creates a scenario where Anglian could be pushing the frontier but incurring penalties for so doing.[38] | *enhancement funding would also need to be reduced to ensure customers will not be paying twice for a given level of performance."*[40] | rate applied, if Anglian were to maintain the current frontier level of leakage it would be subject to a financial penalty.<br><br>Ofwat's suggestion that Anglian is proposing to retain the enhancement funding even if the associated leakage reduction is not delivered, is not reflective of this holistic picture of leakage allowance in the FD. Under Anglian's Plan, if the Company falls below (industry leading) current performance, it will be subject to an underperformance payment which will be returned to customers. If Anglian maintains current industry leading performance or even pushes the frontier but without reaching its stretching PCL of 166Ml/d (a 15% improvement on the forecast industry upper quartile), it will receive neither a reward nor a penalty. It is only if Anglian stretches performance below this level, that it will be able to earn rewards. Conversely, under Ofwat's FD, Anglian will face penalties not only for falling below or even maintaining (industry leading) current performance but also for pushing the frontier performance and even reaching Anglian's stretching PCL (as illustrated in Anglian's SOC, Figure 80, page 264). This is because under Ofwat's FD, the PCL is set at a 16.4% reduction over AMP7, or circa 155.5Ml/d. Up to this level, Anglian will be in penalty. |
| **3.2** | **Ofwat's intervention on the proposed deadband was inappropriate**<br><br>Anglian proposed a deadband between its AMP6 outturn performance and Anglian's PCL in the view that it should not face a penalty for improving performance from its already industry leading level, and to provide protection against a situation of trying and failing to shift the leakage frontier.[41]<br><br>In its Final Methodology, Ofwat stated that: | Ofwat claims that:<br><br>• *"In [its] final determination [it] aligned the company's performance commitment level to the level of leakage reduction for which [Ofwat] had granted enhancement funding (i.e. a 16.4% reduction on 2019-20 levels by 2024-25). [Ofwat] removed the company's proposed underperformance deadband given the company did not provide evidence of customer support for it applying at the specific level".*[44] | Anglian set its PCL at a level which would present a step change in the industry frontier. By rejecting Anglian's proposed performance commitment level, Ofwat does not account for the evidence presented by Anglian which illustrates that benefits beyond this level would accrue to customers across the UK, not just Anglian's customers.[46] Anglian considers that its Plan aligns with Ofwat's guidance on enhanced ODIs as set out in its Final Methodology. |

[37] Anglian's SOC, Chapter H: Leakage, section 5, para 1049.
[38] Anglian's SOC, Chapter H: Leakage, para. 1054.
[40] Response to Anglian, para. 4.58.
[41] Anglian's SOC, Chapter H: Leakage, para. 10.52.
[44] Response to Anglian, para. 4.54.
[46] As set out in Anglian's SOC, Anglian actively shares best practice on how it delivers strong leakage performance and operates an open-door policy for bilateral sharing with other companies. For instance, the Company has hosted teams from various other water companies. Anglian is also actively involved in UKWIR projects. Anglian's future communication strategy for leakage includes a multi-channel approach, using established information sharing platforms in the industry, through to international conferences, speaker opportunities, bespoke reports, trade and consumer media coverage, social media and bespoke case study documents for specific audience groups (Anglian's SOC, Chapter H: Leakage, section 5, para. 1051).

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| | • the threshold for the enhanced outperformance payments should be set at *"the performance level of the current leading company, or preferably higher"*[42]; and<br>• enhanced outperformance payments will depend on how companies explain that they will share the knowledge behind their success with companies across the sector by end of the price review period.[43] | • *"In contrast in proposing a deadband, Anglian Water is apparently proposing to retain the enhancement funding it was granted even if it does not deliver the associated reduction in leakage."*[45] | |
| **3.3** | **Ofwat has largely set aside customers' stated preferences on acceptable levels of stretch**<br>Anglian highlighted that its PC and ODI package reflects the priority that customers place on leakage reduction and their willingness to pay for further reductions in leakage.[47]<br>Anglian's ODI reward rate was informed by what customers were willing to pay for. These values were derived from its robust and innovative societal valuation workstream and the application of the results to ODIs was challenged robustly by the CEF.[48] | Ofwat argues that "*[t]he company states that the acceptability testing of its plan demonstrated that 82% of household customers agreed that this was a stretching performance commitment level.*<br>• *it is not clear from the research report what sector comparative or historic performance information was presented to customers when the question was posed to them.*<br>• *it is not clear whether alternative performance commitment levels were offered to customers, or instead whether the proposed performance commitment level was presented to customers in the abstract*<br>• *customers were not aware in answering the question that Anglian Water had received a specific enhancement funding allowance to reduce leakage further below the level presented.*"[49]<br>Ofwat claims that *"[c]ustomers are not necessarily well-placed to assess what is a stretching performance commitment level as they generally will not have access to the detailed analysis of sector historic and comparative performance data that Ofwat has undertaken."*[50] | Ofwat's suggestion that customers are not "*necessarily well-placed*"[51] to access ODIs is at odds with its previous position. In Ofwat's aide-memoir document issued to companies' independent customer challenge groups ("**CCGs**"), Ofwat states:<br>• *"CCGs will challenge companies on their approaches to setting performance commitments including how well they reflect customers' views and how stretching they are. [Ofwat's] assessment will include focussing on the CCG report.*<br>• *"[Ofwat's] approach to setting stretching performance commitment levels for PR19 is that companies should engage with customers on their performance commitment levels; and challenge the level of stretch in their performance commitments with their customers, CCGs and other stakeholders.*<br>• *Companies will need to engage with their customers on the factors they take into account and will then need to explain how they have balanced these factors when setting their performance commitment levels using multiple data sources. The role of CCGs will be important in assuring* |

42 PR19 Final Methodology, page 62 (SOC314).
43 PR19 Final Methodology, pages 62 to 63 (SOC314).
45 Response to Anglian, para. 4.61.
47 Anglian's SOC, Chapter H: Leakage, section 5, para. 1055.
48 Anglian's SOC, Chapter H: Leakage, Section 5, para. 1050.
49 Response to Anglian, para. 4.56.
50 Response to Anglian, para. 4.57.
51 Response to Anglian, para. 4.57.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| | | | *how companies have engaged with their customers on this issue.*"[52]<br><br>Anglian's CEF has provided its views to the CMA on how the Company used this research in designing their ODI package.[53]<br><br>Anglian is unable to reconcile the position where Ofwat encouraged companies to engage with customers on how stretching the PCs were (which Anglian did and directed CCGs to scrutinise these efforts, which in the case of Anglian, Ofwat agreed previously to be robust and of high quality) only to retract their view of customers' capability.[54]<br><br>Anglian reiterates the robustness of the assessment it conducted to design and shape its ODIs package:<br><br>• Anglian provided comparative data to customers on Anglian's performance and the industry average when undertaking the acceptability research. Anglian's materials outlined that its proposed performance commitment level was intended to be set at a level that would continue to push the industry frontier forward.<br><br>• In the acceptability research Anglian sought to test 35 performance commitment levels with customers, in addition to key parts of its outline business plan.<br><br>• The acceptability research included an 'introduction to ODIs' section. This section introduced the concept of rewards for higher levels of service or penalties if levels of service are not delivered. For leakage specifically, it was highlighted that as the frontier is being pushed, the costs of leakage reduction are harder to predict.<br><br>• Anglian's **societal valuation research** did test customer willingness to pay for varying levels of leakage performance. |

[52] Ofwat, Aide Memoire for Customer Challenge Groups, page 11 (emphasis added), available at https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Aide-Memoire-for-Customer-Challenge-Groups.pdf.
[53] CEF response to DD (SOC187) and CEF Report (SOC409).
[54] Response to Anglian, para. 4.57.

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| | | | • The design of Anglian's acceptability research and interpretation of the results were **challenged by Anglian's Customer Engagement Forum.** |
| | | Ofwat argues that "*[it] also note[s] that while the company provides evidence of customer support for a deadband to apply to leakage as a general principal, it does not present evidence of customer support for applying the deadband to the specific performance interval. It is also not obvious that customers were aware, in responding to the research questions, that the company would be awarded a funding allowance specifically to reduce leakage beyond frontier levels and that a deadband would effectively allow it to not deliver the enhancement while retaining the funding.*"[55] | The Incling Outline Plan Consultation Report shows the information provided to customers regarding the leakage deadband, which emphasised that the deadband would be set at the level Anglian out turned for AMP6 (in fact the deadband was set based on Anglian's expected outturn in AMP6). For example, the material clearly stated *"[Anglian's] proposed PCL is 166Ml/d"* and that *"[Anglian] propose[s] a 'deadband' set at the level of leakage [Anglian] ha[s] in 2020".*[56] Consequently, these materials made it clear to customers that Anglian would be funded to deliver its targets. |
| | | Ofwat argues that "*[t]he customer research the company has presented in support of its proposed enhanced ODI package does not unequivocally support it earning enhanced payments for outperformance immediately better than its performance commitment levels. The company cites the results of its 'Be the Boss' research that 78% of customers supported a £4 annual bill increase for delivering frontier shifting performance as evidence that customers support its enhanced ODI package.*"[57]<br>Ofwat also claims that "*[t]he research is therefore not associated with a specific interval of performance over which the company should receive enhanced ODI payments. It was also derived without testing any intermediate trade-offs with customers with respect to leakage level and bill impacts.*"[58] | As with all customer engagement, triangulation of evidence sources is required.[59] Overall, Anglian is confident that customers supported its proposed enhanced incentives, which were based on customer valuations of service improvement and bounded by Anglian's proposed reward cap, which was informed by customer views on bill impacts derived from 'Be the boss'. 60% of 329 customers who participated in Anglian's ODI research supported enhanced rewards for leakage in principle, with only 9% disagreeing.[60] |
| | | Ofwat states that *"[f]urthermore, the company's own willingness to pay value for leakage does not support the premise that customers are willing to pay enhanced ODI rates for performance immediately beyond the industry frontier. The company's standard ODI outperformance rate of £0.219m/Mld is based on willingness* | The valuation used was for the first 44 Ml/d reduction in leakage. This represents a 23.66% reduction in leakage compared to performance of 186 Ml/d in 2016-17 (the latest data available at the time of the survey in late 2017). Anglian's research shows |

[55] Response to Anglian, para. 4.62.
[56] Incling Outline Plan Consultation Report, page 26 (SOC048).
[57] Response to Anglian, para. 4.66.
[58] Response to Anglian, para. 4.67.
[59] The documents SOC035 through to SOC046 set out Anglian's suite of customer valuation work which formed part of Ofwat's assessment of Anglian's A-rated customer engagement at IAP.
[60] ICS ODI research, Figure 3.19 (SOC044).

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| | | *to pay values elicited from customers by testing performance increments equivalent to a 60% reduction in leakage on base levels. The company's performance commitment level requires a reduction in leakage of only 16.4%. This research suggests that standard ODI rates remain valid for incremental leakage improvements around the company's performance commitment level and that when that faced with trade-offs around service quality and bill impacts, customers are not in fact willing to pay for enhanced rewards over the performance increment proposed by Anglian Water."*[61] | that customers value the initial 44Ml/d reduction to a greater extent than further reductions beyond that point.[62] |
| | | Ofwat also argues that *"[f]inally, the company's own ODI research also contradicts the level of enhanced outperformance payment the company is proposing to receive. For example in its ODI research results show that the most preferred enhanced ODI rate is two times the standard ODI rate and that the majority of customers support an enhanced ODI rate between 1.5-2 times the standard rate, whereas the company is proposing a rate over four times as large."*[63] According to Ofwat, *"[i]nstead, Anglian Water's approach to setting ODIs for leakage shows that it ignores its own customer research and favours its own financial interest in setting overgenerous rewards."*[64] | In this research, customers were asked about enhanced incentives in principle, not specifically about leakage. Anglian, with support from Frontier Economics, developed an economic rationale for a 4.29 multiplier based on the value of the benefits experienced by customers outside of Anglian Water's region taken by dividing total industry customer base by the company customer base.[65] This level was tested this with customers through 'Be the boss' survey by giving customers to option to choose to add an extra £4 to bills to push the frontier on leakage. 78% of customers responding to the survey chose to add the additional cost to their bill.<br>The points above demonstrate how customer engagement has driven how Anglian set the ODI on leakage, reflecting its frontier level of performance on leakage and providing incentives to push the industry frontier. |

[61] Response to Anglian, para. 4.68.
[62] ICS Valuation Completion Report, section 8.1 (SOC038).
[63] Response to Anglian, para. 4.69.
[64] Response to Anglian, para. 4.70.
[65] Section 6 of Frontier Economics Enhanced Incentives (SOC041).

# Anglian Water PR19

## Part F: Review of Risk and Return arguments

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# Part F.1: Review of WACC arguments

The table below provides a summary of Anglian's responses to the arguments that Ofwat has presented in its responses to Chapter I: Weighted Average Cost of Capital of Anglian's Statement of Case. Paragraph references are provided to aid the CMA in finding the appropriate sources, but these are not intended to be comprehensive.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| **1** | **Allowed return on equity: Total Market Return** | | |
| **1.1** | **The revised RPI-CPI wedge increases the TMR estimate under Ofwat's approach.**<br>This is not covered in Anglian's SOC. | Ofwat notes that the Office for Budget Responsibility has updated its estimate of the forward looking RPI-CPI wedge to 90 bp, rather than 100 bp.[1] | The forecast RPI-CPI wedge is smaller than previously thought. Under Ofwat's approach of deflating historical returns using CPI and then converting into an RPI-real TMR by subtracting the forward-looking RPI-CPI wedge, this change in the wedge increases the TMR in RPI-real terms by 10 bp. |
| **1.2** | **Incorporating the latest DMS data increases the TMR estimate.**<br>As Anglian has noted in its response to the *NATS (2020)* provisional findings, given that significant weight is placed on the DMS returns data in deriving the TMR, the ex post estimates should be updated for data contained in the DMS 2020 Yearbook publication.[2] | Ofwat makes no mention of the DMS 2020 Yearbook publication. | The DMS 2020 Yearbook was published in February 2020, before Ofwat's submission to the CMA, and therefore Ofwat should have reflected the new data on the analysis of historical ex post returns and included the 2019 returns reported in the DMS 2020 Yearbook.<br>As Anglian has submitted to the CMA in response to the *NATS (2020)* provisional findings, KPMG calculates that updating for the latest estimates leads to a 5bp to 15bp increase in the RPI-real TMR, depending on the averaging technique.[3]<br>**Combined with the OBR's updated position on the RPI-CPI wedge as set out above, this points to a cumulative increase in the RPI-real TMR of c.20bps (5.7%) even if the CMA were to adopt Ofwat's approach.** |
| **1.3** | **Historical returns should be deflated using RPI.**<br>Estimates of the CPIH-real TMR for PR19 should use the official RPI series to deflate historical data and then add an estimate of the forecast RPI-CPIH wedge.[4]<br>This is consistent with O'Donoghue et al (2004) who noted when discussing post 1947 inflation "*The decision is clear-cut. the retail prices index (RPI) is the* | Ofwat argues that the use of RPI to estimate total market return would overcompensate investors, due to the structurally higher formula effect present in latter-day RPI which did not exist historically. | Anglian's objections to the use of the back-cast CPI series are material for the following reasons:[7]<br>(i) The back-cast CPI series is by design a 'not unrealistic' scenario for historical CPI and is not intended for official uses.<br>(ii) This series is sensitive to modelling and input assumptions. The authors recognise that alternative back cast models may produce different results. |

1 Response on Risk and Return, para. 3114.
2 Anglian Cost of Equity NATS (2020) Submission, paras. 3.6.1-3.6.4 (SOC420).
3 KPMG Reply to CMA's approach to cost of equity in NATS PFs, paras. 3.6.2-3.6.3 (REP20).
4 Anglian's SOC, Chapter A: Executive Summary, para. 137 (ii).
7 Anglian's SOC, Chapter I: Weighted Average Cost of Capital, section 3.3.1.

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| | *preferred index over this period. it is of the correct index form; it is available monthly back to June 1947; and it is the most familiar measure of inflation in the UK*."[5] | This outweighs the "*relatively minor objections*" to using the historical CPI series.[6] | (iii) The modelled estimates for 1947 to 1987 are calculated based on data from 1988 to 1996 that has been found to be erroneous.<br>(iv) The most appropriate inflation series for deflating historical returns is the one that was the reported official statistic for the longest part of the historical period (i.e. RPI) as this is what was being reported and acted on by investors at the time.<br>There are alternative ways of addressing the issues with the RPI series: for example, by adjusting the historical RPI series for changes in methodology over time with a view to recreating a consistently-estimated RPI series. |
| | | Ofwat claims that Anglian's citation of O'Donoghue et al (2004) as an endorsement of RPI for the appropriate inflation series to use from 1947 onwards has the potential to be misleading. This is because it predates the 2013 exercise to back-cast CPI and the de-designation of RPI as a national statistic in 2013 should not be interpreted as a sign that the authors would continue to endorse the use of RPI over CPI in this period.[8] | Ofwat's dismissal of O'Donoghue et al (2004) overlooks the following facts:<br>(i) As recently as 2019 (i.e. after the back-cast was published in 2013), the ONS continued to caution against using the back-cast.[9]<br>(ii) The removal of RPI's national statistic status is relatively recent in the context of needing an inflation estimate back to 1900.<br>The CMA's recent analysis of the RPI-adjusted TMR that removes an estimate of the effect of the 2010 change in the RPI formulation still shows a material difference between the TMR estimated using the CED/CPI versus (adjusted) CED/RPI.[10] |
| **1.4** | **Office for National Statistics' unofficial historical CPI inflation data is unreliable.**<br>Ofwat's historical inflation assumptions rely on unofficial, back-cast CPI data for the period 1947-1988, resulting in a significant underestimate of historical returns.[11] | Ofwat acknowledges that there is no officially calculated CPI data to validate the modelled CPI from 1949 to 1988, but notes that "*the model-implied RPI-CPI wedge seems accurate for the 1989-2011 period where modelled and actual CPI and RPI values are available*".[12] | The CPI back-cast predicts the period 1989-2011 accurately because the relationships between RPI and CPI that are inputted into the model are based on data for this period. However, this does not validate its use for the period 1947-1988. As discussed below, the back-cast CPI is likely to be an upward biased estimate for this period as demonstrated by the small, implied RPI-CPI wedge. |

[5] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1113.
[6] Response to Anglian, para. 6.19.
[8] Response on Risk and Return, para. 3.22.
[9] ONS Developing CPIH and CPI historical estimates between 1947 and 1987 (2019) (SOC431).
[10] KPMG Reply to CMA's approach to cost of equity in the NATS PFs, page 31 (REP20).
[11] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, paras. 1102-6.
[12] Response on Risk and Return, para. 3.18.

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| **1.5** | **Ofwat's inflation series is flawed.** The unreliability of Ofwat's estimates of historical CPI is illustrated by the implied RPI-CPI wedge for its preferred inflation series over time. The wedge is:<br>(i) 24 bps for the period 1950-1988;<br>(ii) negative 123bp for the period 1915-1949; and<br>(iii) on average close to zero over the period 1900-2018.<br>This produces the counterintuitive result that the real TMR is the same whether deflated using the historical RPI or CPI series.[13] | Ofwat notes that Anglian's calculations of the historical RPI-CPI wedge compare (i) a composite RPI inflation series using the Cost of Living Index (COLI) for the period 1914-1947, with (ii) the Bank of England 'original' CPI composite series used in the Ofwat FDs.<br>It argues that these wedge calculations do not demonstrate the unreliability of the Bank of England's CPI series, but simply demonstrate the flaws of the COLI as a measure of historical inflation.[14] | Ofwat is correct regarding the wedge pre-1949. However, the wedge of 24 bps for the period 1950-1988 is based on a comparison of actual RPI data with the CPI back-cast data used by Ofwat. The back-cast CPI data gives a small wedge between RPI and CPI (of 24 bps) for the period 1950-1988, when compared to the actual wedge that has existed since CPI was first published as an official statistic in 1997 (84 basis points).[15]<br>The impact of the model imposing a very small RPI-CPI wedge for nearly 40 years of the historical period is that even when changes in RPI's compilation over time are adjusted for, the CPI deflated TMR is still distorted downwards, relative to the adjusted-RPI TMR.[16] |
| **1.6** | **Ofwat used a downward-biased estimate of the TMR due to incorrect averaging of historical equity market returns.** By primarily focusing on the JKM estimator, Ofwat has incorrectly averaged the historic equity market returns.[17] | Ofwat argues that various academic papers conclude that an investment horizon-weighted average of geometric and arithmetic averages maximises various desirable traits in the estimator (e.g. unbiased, efficiency).[18]<br>Ofwat focused on the JKM efficient estimator as "*the most accurate estimate in constructing [an] ex-post range*".[19]<br>Direct reliance on the arithmetic average may be distorted by exchange rate effects. Ofwat argues that the upward bias of the arithmetic average for holding periods of more than one year can be demonstrated with the UK real returns data for 1900-2018. Compounding the 1900 index value using the single-period arithmetic average return over the period 1900-2018 overstates the actual 2018 value by a factor of 7.6.[20] | Consistent with CMA's precedent, a range of averaging techniques should be used. Ofwat defines the TMR as the total return that investors require for investing in equities. The JKM estimator can be used to answer this question. However, the relevant question for setting a price control is 'what rate do investors use to discount future cash flows?'. Using the JKM and Blume estimators to answer this question results in estimates that are more biased than simply using the arithmetic average, because the JKM and Blume estimators adjust in the wrong direction (i.e. down).<br>Cooper (1996) demonstrated that the discount rate investors should use to give an unbiased estimate of the present value of future cash flows, will assume a TMR at least as high as the arithmetic average of historical returns.[21]<br>Consequently, for the purposes of setting the regulatory cost of capital, the arithmetic average is the most relevant data point for informing the estimate and should certainly not be excluded from the analysis. |

[13] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1107.
[14] Response on Risk and Return, para. 3.19.
[15] BoE: A millennium of macroeconomic data for UK, tab 'A47. Wages and prices' (REP21).
[16] KPMG Reply to CMA's approach to cost of equity in NATS PFs, page 6, Figure 1 (REP20).
[17] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, paras. 1118-22.
[18] Response on Risk and Return, para. 3.23.
[19] Response on Risk and Return, para. 3.25.
[20] Response on Risk and Return, paras. 3.25-3.27.
[21] Cooper (1996) (SOC436).

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| **1.7** | **Historical ex ante approaches do not support a reduction in TMR.** Ofwat has departed from precedent by removing the bias-adjustment.[22] | Ofwat argues that the original justification for the bias adjustment (volatility in capital growth being higher than income yield growth) does not apply to recent UK data, and using GDP as a dividend growth proxy captures the dynamics of capital growth. Ofwat also alleges that there are "*contradicting statements made on the necessity of the uplift*" in a previous paper by Professor Alan Gregory, a co-author of the KPMG report.[23] | The peer-reviewed version of Gregory (2011) referred to by Ofwat includes a complete discussion of the circumstances under which a bias adjustment is justified.[24]<br>The argument for the full bias adjustment is, in effect, a "Chicago School" assumption of efficient markets i.e. that prices are fully rational at all times. The counter view is the behavioural economics view of Shiller, which assumes that prices are irrationally volatile.[25] Where prices are irrationally volatile, it can be argued that at least some of the bias adjustment would be reflecting "noise".<br>By assuming there is no need for a bias adjustment, Ofwat's view is implicitly that market prices are irrationally volatile. At the same time, it takes contemporaneous values of dividend yield as its starting point, thereby assuming that (today's) prices are rational. This is internally inconsistent. |
| **1.8** | **Forward-looking evidence does not support a reduction in the TMR.** Dividend discount models applied consistently over time, do not indicate a reduction in the TMR over the last 10 years.<br>Ofwat's point estimate of the TMR (6.5% CPIH-real) is lower than the five-year average of the two dividend discount models produced by its own consultants that are based on growth in dividends and share buybacks.[26] | Ofwat states that the 'forward-looking' range is based on 5 year rolling averages of DDM outputs. Ofwat notes that "*Based on September 2019 data, this indicated a range from 6.1% to 6.9% in CPIH terms, which we consider continues to support our 6.5% point estimate*".[27] | Ofwat uses a model built by its consultants, Europe Economics, which is based on forecasts of UK GDP growth to widen the range given by dividend discount models. As set out in Chapter I: Weighted Average Cost of Capital of Anglian's Statement of Case, this model produces a downward biased estimate (6.1%, CPIH-real) of the total market return as share prices and dividend yields of FTSE-listed companies will be determined by forecasts of growth in dividends and share buybacks rather than UK GDP growth. Excluding this model, the PwC and Europe Economics models support a range of 6.6-6.9% CPIH-real).[28]<br>Covid-19 has engendered economic uncertainty which typically increases investors' expected return on equity. Evidence collated by the Bank of England confirms that investors have been "*demanding a higher risk premium to hold equities*".[29] While neither Anglian nor the CMA place weight on short term forward-looking models to estimate TMR for charge control purposes, the current increase in equity risk premia highlights the need for caution when reducing the TMR by 100 bps on the basis of poor evidence. |

[22] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1124.
[23] Response to Anglian, para. 6.21.
[24] Gregory (2011), pages 1-26 (SOC439).
[25] Shiller, R., Do stock prices move too much to be justified by subsequent changes in dividends?, The American Economic Review, pages 421-436 (1981).
[26] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, paras. 1129-30.
[27] Response on Risk and Return, para. 3.39.
[28] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1130.
[29] BoE Monetary Policy Report (2020), page 26 (REP22).

| 2 | Allowed Return on Equity: Risk free rate | | |
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| **2.1** | **The Risk free rate (RFR) estimate should reflect the volatility of yields.** Yields on inflation-linked gilts ("**ILGs**") have been highly volatile. There is no allowance for this volatility in Ofwat's RFR estimate.[30]<br>An uplift should be added to the current market expectations of the RFR to account for the volatility of yields and the possibility that rates could increase above the fixed allowance during the five-year price control period.[31] | Ofwat has not engaged with this point. | Ofwat's Response on Risk and Return does not explicitly discuss the volatility of ILGs, and instead focuses on the 'convergence' argument.<br>Anglian reiterates the view set out in Chapter I: Weighted Average Cost of Capital of its Statement of Case that:<br>(i) Yields on ILGs have been volatile over time.[32]<br>(ii) This volatility has been heightened by Brexit and COVID-19.[33]<br>(iii) In the period since the FD the yield on the 15-year inflation-linked gilt has varied within a range of 80 bp.[34]<br>(iv) Ofwat's approach to estimating the RFR does not adequately account for volatility.[35]<br>It is therefore appropriate, given Ofwat's financeability duty, to apply an additional uplift to the current market expectations of the RFR to account for the volatility of yields and the possibility that rates could increase. |
| **2.2** | **Current yields are below long run equilibrium levels.** Current yields on ILGs are significantly below the Bank of England's forward-looking equilibrium rate of 0.5% CPI-real. Ofwat should have regard to the longer-term forward-looking equilibrium estimates of the RFR.[36] | Ofwat is not convinced of the need to incorporate an assumption about the speed of convergence towards the 'equilibrium rate' in the RFR estimate.<br>It notes that "*the trend since publication of the equilibrium real rate has been for the 15 year RPI-linked gilts rate to diverge from the Bank of England's 0.5% (in CPI terms) figure*".<br>The analysis at the FD indicated a market-implied view that 15-year rates will stay negative in RPI-deflated terms as far out as 2029.[37] | The Bank of England's estimates of the equilibrium rate are computed on the principle that yields on long-term UK government bonds provide an estimate of expected RFR in the future. This equilibrium evidence suggests that the distribution for the outturn RFR is likely to be skewed towards higher values, which is a relevant consideration in setting a fixed RFR over a five-year period. KMPG has also analysed evidence from the US TIPS market, which supports this conclusion.[38] |
| **2.3** | **The fixed allowance for the RFR should be above spot rates.**<br>Given (i) the volatility of yields and (ii) the material difference between current ILG yields and the long-term | Ofwat notes that its RFR estimate "*contained a contribution from the market-implied view of the average rise in yields over the 2020-25 period, estimated using forward rates*".<br>It argues that an assumption of faster convergence towards a more positive figure not observed in market data would be to | Locking in current spot rates into a fixed cost of capital allowance requires a high level of confidence that current yields will persist over AMP7. |

30 Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1143.
31 Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1146.
32 Anglian's SOC, Chapter I: Weighted Average Cost of Capital, Figure 84; KPMG Reply to CMA's approach to cost of equity in NATS PFs, page 12, Figure 2 (REP20).
33 KPMG Cost of Capital Report, para. 4.5.18 (SOC422).
34 Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1143.
35 Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1144.
36 Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1142.
37 Response on Risk and Return, para. 3.43-3.44.
38 KPMG Reply to CMA's approach to cost of equity in NATS PFs, pages 41-44 (REP20).

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| | equilibrium, it would be appropriate to set the fixed allowance above the current spot yields.[39] | adopt a position that the market is forecasting incorrectly or not incorporating some information and "*such an assumption is contentious and would need careful justification, taking account of our regulatory duties*".[40] | The volatility of ILG yields and the fact these yields are currently substantially below equilibrium levels both point to adopting an RFR estimate above current spot rates.[41] |
| **2.4** | **Inconsistency with the new approach to the cost of new debt.**<br>An indexation approach has been introduced for the allowance for the cost of new debt. It is inconsistent to address the uncertainty of interest rates in one part of the allowed return calculation but not another.[42] | Ofwat merely points out that it "*consulted extensively with the sector*" while developing its approach to cost of capital. It noted that neither Anglian nor Northumbrian Water raised concerns that it is inconsistent to index the cost of new debt but not the RFR during the development of the PR19 methodology or in the process of setting determinations. Both companies stated broad agreement to the principal of indexing the cost of new debt in response to the PR19 methodology consultation.<br>Ofwat also acknowledged that Ofgem will index the RFR in its forthcoming RIIO-2 price controls, but that this has not previously been considered or consulted upon in the water sector.[43] | Ofwat simply points out that this was not raised by water companies during the PR19 consultation. However, this does not address Anglian's central point that Ofwat has indexed the cost of new debt on the basis that it is uncertain and should not be pegged to spot rates, but has not applied the same logic in its approach to the RFR.[44] |
| **3** | **Allowed Return on Equity: Beta** | | |
| **3.1** | **The appropriate beta estimation period is five years.**<br>A time horizon of five years should be used to provide the longest run of data since the most recent structural break (the PR14 price review).[45] | Ofwat argues that the appropriate length of estimation window is uncertain, principally because there is no authoritative research concerning the length of window which investors use to form their expectations of beta and that such a decision "*therefore inevitably require a degree of regulatory judgment*".[46] | The choice of time window is an empirical matter, when estimating the unconditional beta.<br>The structural break analysis set out in Gregory, Harris, Tharyan 2020 ("**GHT 2020**") demonstrates that structural breaks took place in 2014 and March 2020.[47] This supports the view that a five-year time horizon is appropriate.<br>Instead, there is no evidence of a structural break at a suitable point to justify the use of a two-year (or one-year) period. |
| **3.2** | **Monthly estimates should be given more weight.**<br>High frequency beta estimates are more likely to be | Ofwat cites statistical analysis by Europe Economics which has found no evidence of downwards bias in daily equity beta data, and said that it considers a point estimate drawing on two-year and five-year data to strike the right balance between data that | Europe Economics' analysis of two stocks is insufficient to test the theory of whether daily estimates are biased downwards. Detailed empirical |

[39] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1148; Anglian Cost of Equity NATS (2020) Submission, para. 1.3.14 (SOC420).
[40] Response on Risk and Return, para. 3.44.
[41] KPMG Reply to CMA's approach to cost of equity in NATS PFs, para. 1.3.14 (REP20).
[42] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1145.
[43] Response on Risk and Return, para. 3.45.
[44] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1145.
[45] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1156.
[46] Response on Risk and Return, para. 3.57.
[47] Gregory et al, Estimation of Beta for Regulatory Charge Control (REP23).

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| | biased downwards than low frequency estimates, such that most weight should be placed on monthly betas.[48] | is recent enough for a forward-looking estimate of beta, and an estimation window that is long enough to not be unduly influenced by transient events.[49] | evidence in Gregory (2018)[50] and Gilbert (2014)[51] with larger sample sizes, demonstrates that a downward bias exists.<br>The Europe Economics analysis applies an aggressive 1% significance level and only tests the impact of a one-day lag.<br>GHT 2020 undertake detailed empirical analysis of SVT and UU betas at various sampling frequencies and find that for the period to February 2020 betas across daily and monthly frequencies support a raw equity beta of 0.72.[52] |
| **3.3** | **Vasicek adjustment.**<br>Weight should have been placed on beta estimates that include a Vasicek adjustment.[53] | Ofwat argues that KPMG provides no evidence to support the assumption that water companies should have the same exposure to systematic risks as the market portfolio or average FTSE All Share constituent.[54]<br>The imprecision in 5-year monthly betas which requires a Vasicek adjustment to correct should be interpreted as a reason to focus on 2-year data.[55] | The Vasicek adjustment (which is also adopted by Ofwat's advisers, Europe Economics and PwC) is not strictly about mean reversion but is a way of dealing with uncertainty in beta estimation. It requires a 'mean prior' in order to be applied. The 'mean prior' should be calculated by reference to a portfolio of companies similar to the company of interest. The 'mean prior' has been empirically estimated using the mean beta across the reference index, which KPMG consider to be representative.[56] |
| **3.4** | **Ofwat's debt beta estimate of 0.125 is too high.** | Ofwat asserts that a beta estimate of 0.125 is a conservative reading of recent evidence from the decompositional approach, which could support a higher figure.[57]<br>Empirical estimates based on monthly data support figures towards the higher end of Europe Economics' 0.10-0.17 range.[58] | The decomposition approach is subject to considerable uncertainty as acknowledged by the CMA in its *NATS (2020)* provisional findings. The CMA has used a debt beta of 0.05, which is in line with econometric evidence, in that case.[59]<br>The empirical estimates relied upon by Ofwat exhibit a high degree of variability, ranging from -0.11 to 0.40 depending on the methodology and the sample size employed. This suggests there are underlying problems with the regressions relied on by Ofwat.<br>Nonetheless, KPMG's beta estimates incorporated a debt estimate of 0.10.[60] Additional empirical research on debt beta suggests that a debt beta of no more than 0.05 is appropriate for the water sector.[61] |

[48] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, paras. 1154-5.
[49] Response to Anglian, para. 6.24.
[50] Gregory, A., Hua, S. and Tharyan, R., In search of beta, The British Accounting Review, (2018), pages 425-441.
[51] Gilbert, T., Hrdlicka, C., Kalodimos, J. and Siegel, S., Daily data is bad for beta: opacity and frequency dependent betas, Review of Asset Pricing Studies, (2014), pages 78-117.
[52] Gregory et al, Estimation of Beta for Regulatory Charge Control (REP23).
[53] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1160.
[54] Response on Risk and Return, para. 3.70.
[55] Response to Anglian, para. 6.24.
[56] KPMG Cost of Capital Report, page 54, Table 6 (SOC422).
[57] Response on Risk and Return, para. 3.75.
[58] Response on Risk and Return, para. 3.76.
[59] Provisional Findings NATS (2020), para. 12.115 (SOC440).
[60] KPMG Cost of Capital Report, para. 6.3.5 (SOC422).
[61] Oxera Cost of equity for RIIO-2 Report (REP24).

| 4 | Cost of Embedded Debt | | |
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| **4.1** | **Ofwat's notional embedded debt cost is below the efficient cost of financing.**<br><br>Ofwat's PR19 allowance is 50 bp below the cost of debt efficiently incurred by Anglian, which directly contradicts Ofwat's duty to enable water companies to finance their functions.[62] | Ofwat rejects Anglian's argument on the basis that: "*Setting the cost of embedded debt allowance based on actual debt costs would greatly dilute incentives to issue debt efficiently. This is as there would effectively be no long-term financial reward to companies for doing so, and no penalty for failing to do so*".[63] | This mischaracterises Anglian's position. For clarity, Anglian is not arguing that there should be guaranteed pass-through of actual debt costs.<br><br>Rather, it is Anglian's position that the allowance for embedded debt should reflect efficient debt costs across the sector given the timing of debt issuance for companies with long-term financing needs. Companies should not be penalised for efficiently raising finance at a time when financing costs were higher. By excluding debt raised between 2000 and 2005 (which accounts for 20% of industry debt), Ofwat is arbitrarily penalising companies that efficiently issued long-term debt, and is inconsistent with its policy at the same time.<br><br>There is no evidence that Anglian's historical debt issuance has been inefficient;[64] yet, Ofwat's allowance for embedded debt is considerably below Anglian's actual cost of debt. This indicates that Ofwat's allowance underestimates the cost of embedded debt for an efficient company. |
| **4.2** | **Anglian's financial structure was ex ante efficient and has led to customer benefits.**<br><br>Anglian's actual cost of embedded debt is considerably above the Ofwat allowance for the cost of embedded debt, although efficiently procured. This is largely the result of the long-term financing strategy adopted by Anglian.[65]<br><br>In 2002, issuing long-term debt was considered to be particularly beneficial since the prevailing yield curve was flat or inverted such that long-term debt was no more expensive, and in some cases cheaper, than short-term debt.[66] | Ofwat has argued that debt raised in the period 2000-05 coincided with a step change in gearing and atypically high shareholder distributions and that the increase in gearing funded an intercompany loan to a holding company. It would therefore be particularly unjustified to raise customers' charges for this non-operational use of finance.[67] | **Anglian's cost of debt is a result of efficient long-term financing**<br><br>Ofwat does not dispute that Anglian's debt was efficiently raised. Ofwat also recognises that *long dated debt* raised in the late 1990s/early 2000s – consistent with 20% of sector debt raised more than 15 years ago – is the primary driver of Anglian's cost of debt.<br><br>Anglian's cost of embedded debt is high relative to current rates because: (i) it adopted prudent *long-term financing* (based on asset-liability matching and avoiding refinancing risk), and (ii) there have been *large market movements since 2002-2005*.<br><br>**Anglian's cost of debt is not a result of non-operational financing**<br><br>Anglian's cost of debt is not a result of 'wrong' decisions, financial restructuring, or increased gearing. Anglian's debt issuance in the late 1990s/early 2000s in fact *reduced* the cost of debt and resulted in a *lower* cost of debt than in the relevant counterfactual scenarios. Therefore, no adjustment is required for non-operational financing (in line with CMA precedent in *Bristol (2015)*)[68]. |

[62] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1206.
[63] Response on Risk and Return, para. 3.94.
[64] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, section 6.4.
[65] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1191.
[66] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1195.
[67] Response to Anglian, para. 3.94.
[68] *Bristol (2015)* (SOC275).

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| **4.3** | **The trailing average of 15 years excludes a large amount of efficiently financed debt.**<br><br>The 15-year trailing average used for the benchmark iBoxx index excludes 25% of Anglian's debt that had been efficiently raised at a time when market interest rates were higher than today.<br><br>A 20-year trailing average period would reflect the period over which water companies have raised long-dated debt.[69] Hence, it would better reflect Ofwat's financing duty.<br><br>Instead, the use of a 15-year trailing average results in an allowance that is below the cost of debt efficiently incurred by Anglian, which directly contradicts Ofwat's duty to enable the water companies to finance their functions.[70] | Ofwat asserts that an allowance based on the 15-year trailing average of the iBoxx A/BBB remains appropriate and that its notional approach to setting the cost of debt has been "*transparent and well-signalled over multiple price reviews*". Ofwat also claims that it has never set an allowance for embedded debt based on passing through actual debt costs, or allowed costs for particular debt instruments based on verifying their status as "*efficiently incurred*".[71] | **Ofwat's policy has not been consistent over time**<br><br>Ofwat suggests that its 15-year trailing average introduced at PR19 was well-signalled; however, this policy could only have been well-signalled in the late 1990s and this was not the case.<br><br>Ofwat supported long term financing in the past, in line with asset lives, and did not indicate that long-dated 20 years+ debt would not be remunerated.[72]<br><br>Regulatory policy should provide for recovery of efficient costs on a consistent basis over time to support the stability and predictability of the framework for cost recovery. Instead, Ofwat appears to have amended its policy opportunistically based on market movements that are outside of the company's control. By setting a 15-year trailing average period, Ofwat is extracting realised benefits ex post reflecting how markets have moved, while leaving companies that issued long-term 20 years+ debt exposed to losses due to falling rates. |
| | | Ofwat believes that the use of a 15-year trailing average is a conservative assumption, representing an increase on the 10-year trailing average used at the PR14 price review. Around 80% of the sector's outstanding listed bonds were issued in the period encompassed by this trailing average.[73] | **A longer trailing average would incentivise prudent financing policy and support an appropriate allocation of risk**<br><br>Ofwat's 15-year trailing average allocates too much risk of market movements to companies, which they cannot control, and incentivises companies to raise short tenor debt, which is unlikely to be a prudent financing strategy for a company with long-lived assets, and passes interest rate risk movements through to customers. Locking in long term financing reduces refinancing risk and protects against rising interest rates and risk of financial distress. Regulatory policy should incentivise rather than disincentivise this approach, regardless of market movements.<br><br>By Ofwat's own admissions, a 15-year period excludes 20% of the sector's outstanding listed bonds, which is a material proportion at a sector-wide level.<br><br>A 20 years+ investment horizon is also consistent with the tenor of iBoxx selected as a benchmark. Ofwat's solution based on a 15-year trailing average is too short – it is shorter than the average tenor of debt as part of the cost of debt index it uses (20 years+), and effectively implies that no debt should be issued with the tenor of more than 15 years. |

[69] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, paras. 1177-9.
[70] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1179.
[71] Response on Risk and Return, para. 3.94, first bullet.
[72] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, paras. 1197-8.
[73] Response on Risk and Return, para. 3.94.

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| | | | Anglian notes that in the Provisional Findings in *NATS (2020)*, the CMA has based the embedded debt allowance on the yield to maturity at issuance of a bond issued in 2003.[74] |
| | | Ofwat argues that the use of a trailing average longer than 15 years would increase the risk that an efficiently financed company might experience financial stress if new debt costs were to rise quickly. With a longer trailing average, these higher costs would feed through to the cost of embedded debt allowance more slowly.[75] | This concern is effectively alleviated by the indexation of the cost of new debt.<br>The converse of Ofwat's argument is that using a trailing average that does not reflect the whole period over which companies have outstanding debt issuances means that efficiently financed companies could experience financial distress because debt costs are now materially lower than in the pre-financial crisis years.<br>It is therefore necessary to calibrate the trailing average period to reflect the period over which the sector has issued debt (as recognised in CMA *British Gas (2015)*).[76] |
| | | Anglian and Bristol Water both issued long-dated debt and markedly increasing gearing in the period 2000-05. Therefore, the trailing average should not include this period. | Ofwat's calculations of the cost of embedded debt are based on a benchmark iBoxx index. At a sector level, 20% of debt was raised over the period 2000-05 and it is clear that not all of the debt raised over this period could be classified as non-operational finance.[77] Therefore, it is reasonable to factor benchmark bond yields over this period into an assessment of the embedded debt cost of a notionally efficient water company, which is the aim of Ofwat's exercise.<br>Using a 20-year trailing average is representative of the financing decisions made by the water sector as a whole, not just Anglian's own financing structure. |
| **4.4** | **The exclusion of certain financial instruments is not justified.**<br>The cost of swaps should be included in the calculation of the cost of embedded debt under the 'balance sheet approach'.<br>Excluding all swaps underestimates the allowance for the cost of embedded debt by 50 bp under the 'balance sheet approach' cross-check.[78] | Ofwat rejects including swaps in the calculation of embedded debt costs on the basis that:<br>(i) swaps are not directly comparable to the cost of raising finance via an ordinary debt instrument;<br>(ii) swaps can increase financial risks and therefore benefit companies rather than customers; and | Contrary to Ofwat's position, Anglian submits that swaps are an important component of companies' financing strategies and should therefore not be excluded from an assessment of the benchmark cost of embedded debt.[80]<br>**Swaps reflect actual costs.**<br>Ofwat's exclusion of swaps presents a misleading view of actual borrowing costs and under-states all-in costs. Ofwat's balance sheet excludes the costs of swaps necessary to secure fixed rate debt. As a result, it underestimates total 'all in' financing costs. The 'all-in' cost of 5.15% |

[74] Provisional Findings *NATS (2020)*, para. 12.154 (SOC440).
[75] Response on Risk and Return, para. 3.94, fifth bullet.
[76] *British Gas (2015)*, page 144 (SOC434).
[77] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, Figure 86.
[78] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1183.
[80] Anglian's SOC, Chapter A: Executive Summary, section 6.3.3.

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| | | (iii) swaps are often bespoke in nature and are often priced on a bilateral basis.[79] | implied by the balance sheet is materially higher than the FD allowance (4.47%).<br>**Swaps are used to secure fixed rate debt and mitigate rates.**<br>Anglian has used swaps in order to issue debt at an efficient cost and secure fixed rates, and as a means of hedging where the market for dbet instruments has been limited. Swaps are used to mitigate rather than to enhance financial risk, in line with prudent corporate financial management policy. Ofwat has in the past recognised the role of swaps to hedge macroeconomic risk. Swaps achieve the same outcome from a risk hedging perspective as issuing an inflation-linked bond (which Ofwat itself acknowledges when it discusses the implications for assessing financeability). Any departures from this approach can be readily identified, and it is straightforward to benchmark and test whether swaps have been efficiently incurred.<br>**Ofwat's treatment of swaps is selective and inconsistent.**<br>Ofwat is selective in its exclusion of swaps. Cross-currency swaps are included in its analysis of sector costs. Ofwat's adjustment is asymmetric and odes not exclude any instruments which reduce observed balance sheet costs. Exclusion of swaps means that the balance sheet approach applied by Ofwat does not reflect the efficient costs incurred by water companies.[81] |
| **5** | **Cost of Debt: Outperformance wedge** | | |
| **5.1** | **The application of the outperformance wedge is inappropriate in the circumstances.**<br>Ofwat deducts an outperformance wedge of 25 bps from the benchmark iBoxx index when estimating the cost of embedded debt. These outperformance effects only exist on the yields on shorter tenor bonds. No outperformance exists once the tenor and credit rating of water company bonds is controlled for and therefore this deduction is not required.[82]<br>The allowance for the cost of new debt should be indexed to the average of the iBoxx A and BBB non- | Ofwat stated that its analysis of nominal debt of at least 10 years to maturity at issuance indicates material and sustained outperformance over the period 2000-2018.<br>Ofwat's approach is to set an allowance which reflects efficient borrowing costs and making no adjustment would overcompensate companies.[84] | The adjustment applied by Ofwat is not warranted for the following reasons:<br>(i) Ofwat has misrepresented Anglian's bonds as trading at yields below the iBoxx benchmark. Ofwat has omitted to show Anglian's longer tenor bonds and has instead compared shorter tenor bonds (average maturity 7.5 years) to the iBoxx 10 years+ (current average maturity of 20.6 years). Anglian's bonds are actually trading at the benchmark when compared to the iBoxx for similar maturities (7-10 years).<br>(ii) Ofwat refers to a small sample of three bonds that have been issued during extreme market conditions to support the need for an outperformance wedge. The tenor at issuance of these bonds is |

[79] Response on Risk and Return, paras. 3.99-3.101.
[81] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1183.
[82] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, paras. 1172-83.
[84] Response to Anglian, para. 6.25; Response on Risk and Return, para. 3.111.

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| | financials 10 years+ indices without any deductions. This would result in an allowance for the cost of new debt that is consistent with the target credit rating of Baa1.[83] | | significantly lower than the weighted average tenor of the iBoxx. Since the publication of Ofwat's Response to Anglian, there have been two further issuances by Thames Water, which have tenors, credit profiles and yields that are in line with the iBoxx.<br>(iii) KPMG analysis of water company bonds over a 20-year period shows that bonds with tenor within five years of the weighted average tenor of the constituents of the relevant iBoxx index experience no outperformance on yields at the issuance date when compared with the iBoxx index of appropriate creditworthiness.[85]<br>Applying this adjustment leads to an allowance for the cost of new debt that is below that for a company with a target credit rating of Baa1. |
| **6** | **Aiming up** | | |
| **6.1** | **The consequences of underestimating the cost of capital are asymmetric.**<br>Ofwat should have been especially cautious in determining the WACC and should have selected a point towards the higher end of the range.[86] | Ofwat notes that uncertainty over prevailing financing conditions over 2020-25 has necessitated making judgments about allowed return parameters. In making these judgments, Ofwat claims to have been "*mindful of the risks of setting an allowance that is either too high or too low*".<br>For less observable parameters (total market return, equity beta) Ofwat claims to have reflected uncertainty and company views by considering a wide range of evidence and selecting from the middle of the plausible range.[87] | The Wright et al (2018) paper that has shaped Ofwat's WACC approach and evidence for PR19 sets out an explicit framework for considering the issue of "*aiming up*".[88] The authors argued that there is a clear case for "*aiming up*"' in principle and that regulators should attach explicit values to the "*informational wedge*" and the "*regulatory wedge*" in arriving at a point estimate.<br>Instead, Ofwat has chosen a mid-point estimate of its range, implying that the "*informational wedge*" entirely offsets the "*regulatory wedge*".<br>Anglian also notes the CMA's provisional finding in *NATS (2020)* which states that '*if there are positive externalities and longer-term benefits to consumers from identifying and investing in new capital projects, then we agree that there could be a case for a long-term premium on the cost of capital*.'[89] |

[83] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1214.
[85] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, Figure 85.
[86] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, para. 1218.
[87] Response on Risk and Return, paras. 1.18-9.
[88] Wright et al (2018), section 8.2 (SOC423).
[89] Provisional Findings NATS (2020), para. 12.289 (SOC440).

| 7 | Additional issues raised by Ofwat | |
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| 7.1 | **Market-to-asset ratios.**<br>Ofwat provides evidence on market-to-asset ratios for Severn Trent and United Utilities in the period immediately after FDs which shows that the premium of enterprise value to RCV in February 2020 was 28% and 20%, respectively - markedly higher than the 1993-2020 average premium for these two companies of 9%. Europe Economics' decompositional analysis of these cashflows indicated a residual market premium over RCV of 1.04 to 1.08 once outperformance from factors such as totex, debt finance and Outcome Delivery Incentives (ODIs) was reflected. The most plausible explanation for this residual premium is an allowed return on equity which is above market return requirements.[90] | **Market-to-asset ratios are not a reliable indicator of the cost of equity for regulated utilities.**<br>A wide range of factors influence the market value of regulated companies, and any analysis of premium to regulated equity has to appropriately account for these factors to be meaningful. Uncertainty over the sources of value premia makes it impossible to infer the cost of equity with a high degree of precision or certainty. This has been previously recognised by the CMA.[91]<br>The current traded premia of Severn Trent and United Utilities reflect a number of macroeconomic and political factors can be explained by factors other than the cost of equity, including the general election in 2019, company-specific outperformance expectations, the value of non-regulated business lines, accrued dividends, and takeover premium. |
| 7.2 | **Notional Gearing.**<br>Ofwat considered that a pragmatic solution to the financeability problem, reflecting the *NATS (2020)* Provisional Findings may be to adopt the gearing of the listed water companies United Utilities and Severn Trent (56%) as the notional gearing for the purposes of estimating the allowed return.[92] | **The notional gearing level should not be below 60%**<br>It is not appropriate to lower the gearing assumption of the notional company – this is the basis of Ofwat's test as to whether the financeability duty is met.<br>The notional gearing level is intended to be set on a net debt/RCV basis, whereas the Europe Economics estimate of 56% is based on market data. Furthermore, the 56% estimate is based on two companies and is not representative of the sector. Analysis of Ofwat's financial monitoring report 2018/19 shows that:[93]<br>(i) Severn Trent and United Utilities have both had net debt/RCV higher than 60% in every year from 2015/16 to 2018/19; and<br>(ii) The industry-wide simple average net debt/RCV ratio was 69% in 2018/19, with a median of 66%.<br>The CMA should disregard Ofwat's proposals. |
| 7.3 | **Inflation.** The latest inflation forecasts should be used in the CMA's determination.[94] | Anglian does not have an issue with this. As outlined above, the latest OBR estimate of the long-term RPI-CPI wedge is 0.9%. This mechanically increases the RPI-real TMR under Ofwat's approach by 10 bps. |
| | **Ofwat supports using market forecasts**. It argues that "*Given that we assumed a 15 year investment horizon in our final determinations allowed return (and that this was not contested by companies), we consider that the relevant inflation assumption is the average for the 15 year* | Ofwat's approach to using market forecasts is inconsistent. It advocates using market forecasts for RFR over 2020-25 but long-run targets for inflation. Consistency would require that either a long-run equilibrium view is taken across the WACC parameters or current market forecasts are used throughout. |

[90] Response on Risk and Return, para. 3.2.
[91] *Bristol (2015)*, para. 10.208 (SOC275).
[92] Response on Risk and Return, para. 3.82.
[93] Ofwat's Financial Monitoring Report 2018-19 (SOC480).
[94] Response on Risk and Return, para. 3.131.

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| | *outlook, rather than the average over the shorter (2020-25) period covered by the OBR's publication*."[95] | Anglian notes that the CMA used "*contemporary expectations for RPI inflation over RP3*" in its *NATS (2020)* Provisional Findings, resulting in an RPI deflator of 2.78%.[96] Further, Anglian submits that other regulators focus on inflation expectations over the duration of the regulatory control period. For example, Ofgem has looked at five-year inflation forecasts in the context of RIIO-2.[97] This is relevant to the calculation of the RPI- and CPIH-real cost of debt. |

[95] Response on Risk and Return, para. 3.131.
[96] Provisional Findings NATS (2020), para. 12.153 (SOC440).
[97] Ofgem RIIO-2 Methodology, page 7, paras. 1.9-1.11 (SOC426).

## Part F.2: Review of Financeability arguments

The table below provides a summary of Anglian's responses to the arguments that Ofwat has presented in its responses to Chapter J: Financeability of Anglian's Statement of Case. Paragraph references are provided to aid the CMA in finding the appropriate sources, but these are not intended to be comprehensive.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| | **A. Ofwat's finding in the FD are incompatible with its financeability duty** | | |
| **1** | **Ofwat's FD does not deliver the financial metrics required** | | |
| **1.1** | **Anglian's projected metrics fall significantly below the credit metrics needed to maintain a Baa1 (or equivalent) rating on the basis of the notional capital structure.**<br>Ofwat applied a number of adjustments and assumptions at the FD. Stripping out those adjustments and assumptions, Anglian falls well short of meeting the thresholds to maintain a Baa1 rating under the key credit metrics AICR and FFO/Net Debt on the basis of the notional capital structure.[98] | **The CMA should not strictly adhere to credit rating methodology.**<br>Ofwat says that the financing duty does not require it to use specific rating methodologies in its determination and in any case, "*variations in rating methodologies between rating agencies and variations in the credit ratings assigned by different credit rating agencies to individual companies would make this impractical to apply consistently across the sector*."[99]<br>Ofwat argues that "*strict adherence to credit rating agency methodology would result in the cost to customer being influenced by credit rating agencies"* and that the CMA may consider disregarding the increased thresholds for AICR and gearing.[100] It claims that the "*latest changes to Moody's methodology more than offset the claimed increase in risk of the stability and predictability of the regime that led it to increase its guidance for adjusted interest cover from 1.4x at PR14 to 1.5x at PR19*."[101] | Ofwat has not provided details of its assessment of changes in Moody's methodology. Ofwat should not disregard the actual thresholds set by rating agencies (even if it disagrees). Rating agencies play a significant role in shaping how markets and debt investors view the creditworthiness of companies, and their views and guidance should therefore inform the regulators' assessment of financeability. The CMA has previously noted that when "*assessing financeability, it is good regulatory practice to consider the views of the credit rating agencies, and by implication, the financial ratios they partially base their views on*".[102]<br>Both Fitch and Moody's disregard PAYG advancements when making their assessments. Ofwat has ignored their views and instead relied on such advancements to "solve" financeability.<br>Ofwat's departure from independent market tests such as rating agency credit assessments undermines the extent to which the financeability assessment acts as a meaningful cross-check on the effective discharge of its duties. |

[98] Anglian's SOC, Chapter J: Financeability, Section 1.
[99] Response on Risk and Return, para. 4.55.
[100] Response on Risk and Return, para. 4.64; Response to Anglian, para. 6.39.
[101] Response on Risk and Return, para. 4.62.
[102] *Bristol (2015)*, para. 11.24 (SOC275).

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| | | Ofwat argues that it is by no means clear that an AICR of 1.50x "*should be interpreted as a minimum requirement for a credit rating of Baa1*."[103] There is evidence that Moody's carries out its assessment "*in the round, with the assigned rating often departing from the grid-indicated rating*" and that there is inherent uncertainty in the determination process. Ofwat also cites *Firmus (2017)* to say that the CMA has recognised that rating agencies have regard to a range of factors beyond AICR.[104] | Anglian's argument is not that the notional company falls just short of the AICR threshold and it is therefore not financeable. Rather, it has demonstrated in its SOC that the company falls well short of the thresholds to maintain a Baa1 rating under both AICR and FFO/Net Debt on the basis of the notional capital structure. Further, the AICR is an important metric for both Moody's and Fitch. It often constrains achieved credit ratings in practice based on the application of rating agency methodologies. It is also the primary metric cited across the sector as likely to lead to a downgrade. Moody's cited a minimum AICR of 1.5x as a prerequisite for a Baa1 rating under its most recent methodology.[105] |
| | | **Satisfying a credit rating of Baa1 is not an empirical test of financeability.**<br>Ofwat says that the financing duty does not require it to target a specific target rating.[106] It doesn't agree that "*achieving a specific level for adjusted interest cover ratio or a specific credit rating of Baa1 from Moody's is an empirical test either of financeability or of whether we have satisfied our financing duty.*"[107] | Ofwat's statements are contrary to its actual approach in PR19. It conducted its financeability assessment on the basis that the notional company should have a credit rating of Baa1 (or equivalent) which was the target rating proposed by all companies. Through the PR19 process, Ofwat also criticised companies that targeted a lower rating for the notional company.[108]<br>Further, at the FD Ofwat considered that financeability constraints arose when companies had an AICR below 1.50x and proposed PAYG adjustments so that, by its estimate, each company would achieve an AICR of at least 1.50x.[109] A credit rating of Baa1 is also consistent with Ofwat's approach to the cost of new debt. |
| **1.2** | **The reaction of rating agencies after the FD confirms that it is not financeable.**[110] | **Companies with capital structures similar to the notional company have been able to maintain a Baa1 credit rating.**<br>Ofwat acknowledges that Moody's has downgraded seven of the 15 companies that it rates and that an additional four have been placed on negative outlook. Additionally, S&P has lowered the ratings of five companies following the final determinations.[111] | As set out in **Part I.2: Reply on Financeability**,[113] Ofwat has erred in concluding that companies with lower gearing fare better than those with higher gearing.<br>A number of companies with gearing close to the notional level have been downgraded below Baa1/BBB+ (see Table 4 in **Part I.2: Reply on Financeability**).[114]<br>Anglian's analysis indicates that it is the cost of embedded debt, rather than gearing, which is the primary driver for a company's rating. Companies whose |

[103] Response on Risk and Return, para. 4.63.
[104] Response on Risk and Return, para. 4.56.
[105] Moody's, Rating Methodology (SOC450).
[106] Response on Risk and Return, para. 4.55.
[107] Response on Risk and Return, para. 4.45.
[108] See for example, Ofwat's IAP, Aligning Risk and Return Appendix, pages 18-19 (REP25).
[109] Aligning Risk and Return Technical Appendix, Table 6.5 (SOC242).
[110] Anglian's SOC, Chapter J: Financeability, Section 5.2.
[111] Response on Risk and Return, para. 4.35.
[113] Part I: Reply to Ofwat's Response on Risk and Return (REP10).
[114] Part I: Reply to Ofwat's Response on Risk and Return (REP10).

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| | | Ofwat states that companies with capital structures that are similar to Ofwat's notional company have been able to maintain credit ratings two notches above investment grade.[112] It takes the view that companies fare badly if they are more highly geared than the notional company. | cost of embedded debt exceed Ofwat's allowance are likely to be downgraded. Further, the credit ratings of actual companies are impacted by the risk/reward imbalance, while the notional company is assumed not to outperform or underperform against regulatory assumptions.<br>In its most recent publication, Moody's states that irrespective of the financing arrangements, all companies are negatively affected by the cut in the allowed cost of equity, and that the unprecedented cut in returns increases the credit risk of the companies, with particular pressure on interest coverage. Moody's estimated the "*AICR for the 60%-geared notional company would be 1.24x, down from an already low 1.30x level in AMP6*".[115] This compares to Moody's guidance of 1.50x-1.70x to maintain a Baa1 rating. |
| | | Ofwat refers to recent rating opinions by Moody's and Fitch for Anglian and states that these "*suggest that favourable outcomes from the CMA may not be sufficient to maintain current ratings*".[116] | Ofwat has mischaracterised the rating agencies' views. The Moody's opinion notes that the "*eventual determination is likely to support credit metrics that are weakly positioned but consistent with Anglian Water's assigned ratings*" and that even if the appeal does not result in significant improvements, Moody's expects Anglian to modify its investment profile to limit the adverse impact on credit metrics. It further notes that the current ratings are supported by Anglian's record of strong operational performance, and the creditor protections incorporated in its financing structure.[117]The Fitch opinion remarks that the outcome of the CMA process is highly uncertain, but does not predict a further downgrade.<br>Ofwat appears to portray these opinions as endorsements of the FD and criticisms of the way Anglian is structured and managed. It is clear that the converse is true. The maintenance of the current rating is due to Anglian being a well performing company with a corporate structure that enhances creditworthiness and financial resilience. It is only the FD that has put negative pressure on the rating. |
| **2** | **Inappropriate use of PAYG adjustments to ensure financeability** | | |
| **2.1** | **The advancement of revenues from future price controls does not address the financeability issue.** | While Ofwat acknowledges the argument, it notes that "*Revenue advancement through pay as you go is the most appropriate approach to address a financeability constraint taking account of our duties. Cash flow profiling adjustments* | Ofwat has not engaged with Anglian's argument that rating agencies like Moody's and Fitch do not see PAYG advancements as credit-enhancing. Instead, it reiterates its position at the FD and argued that there is no |

[112] Response on Risk and Return, para. 4.28.
[115] Moody's Outlook remains negative as PR leads to unprecedented number of appeals, page 5 (REP26).
[116] Response on Risk and Return, para. 4.30.
[117] Moody's Confirms Ratings of Anglian Water with Negative Outlook and Downgrades Osprey (SOC462).

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| | Moody's and Fitch have publicly stated that they do not see PAYG advancement as credit-enhancing, and have stated that such adjustments would be excluded from their calculation of credit metrics while making rating decisions.[118] | *more fairly balance customer interests than permanent increases to customer costs through uplifting the allowed returns to equity*."[119]<br>Ofwat further argues that there are no fundamental differences between advancing revenue through the use of financial levers and the higher real returns achieved using CPIH as the inflationary index.[120] | fundamental difference between PAYG advancements and a transition to CPIH.<br>Ofwat's argument is irrelevant for this price control since rating agencies, not Ofwat, make the ultimate decision on a company's credit rating, which ultimately affects its cost of capital. Ofwat cannot ignore this issue and is wrong to disregard rating agency methodologies and approaches to analysis of credit quality. Rating agencies are a critical and independent market test that should be applied to the FD. Companies are required under licence to maintain a minimum investment grade rating based on rating agency methodologies applied in the market; it is not clear why Ofwat does not hold itself to the same standard in setting the FD.<br>The fundamental financeability concern with Ofwat's FD is that the allowed returns are too low relative to the costs of servicing the debt over a long period of time. Revenue advancements do not increase the cash flow available to service debt interest and principal repayment. Those adjustments simply move cash flows from the future to today, weakening the coverage of principal repayment in exchange for improving interest coverage.<br>Further, Anglian's position is not that the cost of capital should be increased so that it meets its ratios, but that the financeability assessment indicates a problem with the calibration of the cost of capital. |
| **2.2** | **The revenue advancement is a short-term solution to a long-term problem.**<br>Ofwat effectively applying a short-term solution for a long-term problem. It is incorrect that the financeability constraints related to WACC are temporary. The methodological changes introduced will entail a permanent reduction in return from real WACC. Companies will continue to have RPI-linked portion of RCV on their balance sheets.[121] | Ofwat does not engage with arguments around WACC in detail. It merely states that it sets price limits every five years and will "*reset the allowed return on capital based on evidence at the time*" and "*will also determine [its] approach to the basis of the inflationary index at the time*".[122] | As set out in Chapter J: Financeability of Anglian's SOC, Ofwat's PR19 cost of capital methodology if maintained beyond AMP7 will entail a permanent reduction in the return from real WACC, implying a higher share of the return coming through inflation of RCV rather than the real WACC.<br>While the move to CPIH from RPI may improve cash returns, this does not solve the issue of lower returns due to the lower real WACC. Further, companies will continue to have an RPI-linked portion of RCV on their balance sheets which means the ratio of cash return to inflationary return for that portion of the RCV is likely to continue to be low. |

[118] Anglian's SOC, Chapter J: Financeability, Sections 3.1.1 and 5.1.
[119] Response to Anglian, page 167.
[120] Response on Risk and Return, paras. 4.108-4.111.
[121] Anglian's SOC, Chapter J: Financeability, Section 3.1.1.
[122] Response on Risk and Return, para. 4.102.

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| | | Ofwat argues that it expects the balance of real return on equity to the nominal cost of debt to improve at future price reviews, thus improving the financeability ratios.[123] Analysis from PwC also suggests that credit ratios will improve significantly at PR24 as the embedded cost of debt will fall in relation to the new cost of debt and the cost of equity.[124] | PwC's analysis does not show that this is a temporary problem that will be resolved at PR24. It assumes that the cost of embedded debt for PR24 will equal the 15-year average of iBoxx. However, as shown elsewhere: the 15-year average is already today inconsistent with when water companies issued their debt, and a 20-year average is a closer match. In addition, the current tenor of iBoxx is c.20 years, hence a 20-year average would be a better assumption to use at PR24.<br>Adjusting to a 20-year average iBoxx implies using a higher cost of embedded debt in the PwC financeability analysis for PR24. |
| | | The PwC analysis also finds that revenue advanced in the FD is considerably less than the underlying long-term rise in financial ratios.[125] | Neither Ofwat nor PwC consider that the advancement of revenue will incentivise companies to reduce their issuance of debt during AMP7. This would further increase the gap between the cost of embedded debt at PR24 used by PwC in its financeability analysis relative to the companies' actual cost of debt.<br>Even in the unlikely scenario that the financial ratios do evolve according to the PwC analysis, this is of no practical relevance. Credit rating agencies make rating decisions based on the financial metrics forecast for the current price control. |
| **2.3** | The use of PAYG advancements is contrary to customers' expressed preference to maintain the natural rate.[126] | Ofwat disagrees that PAYG advancement affects intergenerational fairness:<br>"*The acceleration of revenue at PR19 increases real bills (excluding the effect of inflation) for the current price review period but will reduce bills for future price reviews. This more closely aligns to the bills that customers would face had the methodology allowed for full transition to CPIH, and is net present value neutral for all customers over the long term. We consider the solution is in the best interests of customers as an increase to the allowed return on capital would result in current customers paying more without a subsequent reduction in future bills*."[127] | Ofwat's PR19 Methodology requires companies to explain clearly any potential departure from natural rates, how they have accounted for customer views and the work on the likely path of bills beyond 2025.[128] However, it did not follow its own approach at the FD where it made PAYG adjustments for companies against the expressed wish of the customers.<br>Further, Anglian has not asked that the allowed return on capital be increased so that the company is financeable. Rather, that the financeability test indicates a problem with the calibration of the cost of capital. |

[123] Response on Risk and Return, paras. 4.102-4.103; Response to Anglian, para. 6.43.
[124] Response on Risk and Return, para. 4.104.
[125] Response on Risk and Return, para. 4.104.
[126] Anglian's SOC, Chapter J: Financeability, Section 3.1.1.
[127] Response to Anglian, para. 6.51.
[128] PR19 Final Methodology, page 187 (SOC314).

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| **3** | **Opex/capex misallocation** | | |
| **3.1** | Ofwat's approach at the FD has resulted in a significant misallocation of opex as capex. Ofwat has not accounted for this misallocation in assessing financeability.[129] | Ofwat has not engaged with the impact of the misallocation on financeability. | For further details please see **Part G.7: Reply on Opex/Capex Misallocation**.[130] |
| **4** | **Miscalculation of costs of embedded debt** | | |
| **4.1** | Ofwat has calculated the AICR based on the allowance for the cost of debt at the FD (which underestimates the true cost of embedded debt).[131] | For details on Ofwat's arguments around cost of embedded debt, please see **Part I.1: Reply on WACC**.[132] | For further details on the cost of embedded debt, please see **Part I.1: Reply on WACC**.[133] |
| **5** | **In-built risk/reward skew and other findings in the FD will affect the credit rating of Anglian's notional company** | | |
| **5.1** | **No headroom for key credit metrics.**<br>Anglian has no headroom to allow for any degree of underperformance while maintaining the credit metrics needed for a Baa1 rating. Even by Ofwat's calculations, Anglian would have an AICR at the very bottom of what is permitted to retain a Baa1 rating.[134] | Ofwat states that it has found Anglian to have headroom against any downside sensitivity, and notes that there is "*no guidance from any credit rating agency on the minimum required financial ratios to maintain an investment grade credit rating".*[135] | Anglian has not asked that Ofwat target a higher ratio than that required for a Baa1 (or equivalent) rating, but that it aims for the middle of the range required for a Baa1 rating. Even by Ofwat's own calculations (which overstate the ratios), the notional company would have an AICR at the bottom of what is permitted. Moody's have calculated that AICR of the notional company will be around 1.24x, which is well below their guidance of between 1.50x-1.70x.[136] |
| | | Ofwat also notes that it is not appropriate to target higher ratios to increase headroom because: (i) it may disincentivise companies to deliver for their customers; (ii) even in a downside scenario a company has scope to focus on minimising underperformance; and (iii) a one-off unforeseen shock is unlikely to lead to a rating downgrade if management can show it has plans to mitigate the issue.[137] | As set out in **Part I.2: Reply on Financeability**,[138] Ofwat has introduced more risk at PR19 than at previous price reviews. Under plausible downside scenarios consistent with those that the Anglian Board considered when providing assurance that its business plan was financeable, the company would face financial difficulty and/or financial distress with the notional financial structure given the lack of financial headroom provided by the FD. |

[129] Anglian's SOC, Chapter J: Financeability, Section 3.1.2.
[130] Part G: Reply to Ofwat's Response on Cost issues (REP08).
[131] Anglian's SOC, Chapter J: Financeability, Section 3.1.3.
[132] Part I: Reply to Ofwat's Response on Risk and Return (REP10).
[133] Part I: Reply to Ofwat's Response on Risk and Return (REP10).
[134] Anglian's SOC, Chapter J: Financeability, Section 3.2.1.
[135] Response on Risk and Return, paras. 4.86, 4.88.
[136] Moody's Outlook remains negative as PR leads to unprecedented number of appeals, page 5 (REP26).
[137] Response to Anglian, para. 6.56.
[138] Part I: Reply to Ofwat's Response on Risk and Return (REP10).

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| **5.2** | **Negative skew in performance commitments.** The regulatory incentives create a situation where average performance, where there is scope for *significantly* lower returns even if the company improves performance. The level of returns is unprecedently low even in the scenario where the company meets all the targets in the FD.[139] | Ofwat argues that companies are responsible for maintaining financial resilience, and is not appropriate to consider downside scenarios in the assessment of the notional structure. Ofwat argues that companies will be strongly motivated to outperform the FD and "*in a totex regime, companies have significant scope to mitigate this downside risk by determining the most efficient mix of expenditure and taking steps to control costs and focus management".*<br>Ofwat also acknowledges that this could result in a downgrade: "*The actions the company takes could impact on its own credit rating, but this is consistent with the approach we anticipated in our PR19 methodology to increase company focus on issues that matter for customers*."[140] | Ofwat has failed to account for the fact that the industry as a whole faces a negatively skewed outcome on ODIs, with Anglian having the fifth most skewed package. Ofwat itself acknowledges that the risk ranges for some companies "*extend below a return on regulatory equity of zero*" in relation to the potential effects of the regulatory incentives.[141]<br>The funding allowed by Ofwat in the FD does not enable companies to stretch themselves and focus on the issues that matter for customers. Given this significant risk of underperformance, it is not credible for Ofwat to assume the notional company will meet its cost allowances and performance commitments. |
| **B. A lower credit rating would *de facto* create a higher cost of capital than Ofwat has allowed for and would have other negative consequences** | | | |
| **6** | **Higher cost of capital** | | |
| **6.1** | Ofwat has estimated the WACC based on iBoxx indices that target the upper end of a Baa1 rating. For Ofwat's assessment to be internally consistent, the metrics of the notional company should be at the upper end of the range required to achieve a Baa1 rating (e.g. its AICR should at the upper end of the 1.50x-1.70x range).[142] | Ofwat refers to the WACC section which sets out "*why company arguments that the credit rating of the iBoxx A/BBB should be the same as the notional company are simplistic and misleading*."[143]<br>Further, Ofwat argues that its financeability assessment was guided by the target credit rating of companies and that an efficient company with gearing close to the notional structure can maintain a Baa1 rating.[144] | Ofwat doesn't consider that the weak financial metrics of the notional company are likely to lead to a downgrade. And yet, if the credit ratio thresholds are not met 'in the round', as Anglian shows is likely if the FD were confirmed, then a downgrade will happen, which in turn will increase the cost of raising debt. For example, if the notional company has a rating below Baa1, the cost of raising debt is higher by 41-54bp than for the notional company with a Baa1 rating, and could be as high as 79-168bp in times of significant uncertainty in capital markets.[145] Access to finance can be much more challenging at lower ratings further affecting company financeability.<br>Further, as set out above, Ofwat is incorrect in arguing that companies would be financeable if they had close to notional levels of gearing. The inconsistency arises because, contrary to Ofwat's assertions, its FD will not result in the company meeting its target rating. |

[139] Anglian's SOC, Chapter J: Financeability, Section 3.2.2.
[140] Response on Risk and Return, paras. 4.82, 4.90.
[141] Aligning Risk and Return Technical Appendix, page 36 (SOC242).
[142] Anglian's SOC, Chapter J: Financeability, Section 6.1.
[143] Response on Risk and Return, paras. 4.49-4.50.
[144] Response on Risk and Return, para. 4.51
[145] NERA Recovery of Debt Costs Report, page 2 (SOC463).

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| **7** | **Other negative consequences** | | |
| **7.1** | A lower credit rating would have other negative consequences, including on the liquidity and attractiveness of the sector to potential investors.[146] | Ofwat notes that it has "*not seen any evidence of unwillingness of investors to invest in the water sector before or after the publication of the final determinations*" and that "*listed companies were trading at premia to RCV that were close to historic highs in the aftermath of our determination*."[147] | As explained in **Part I.2: Reply on Financeability**,[148] the RCV premium is not a reliable guide for the cost of equity in general and therefore not a useful benchmark to explain investors' appetite or return. Investors' expectations are based on credit rating: a company's downgrade will increase the cost of raising debt, which will feed into future determinations, increasing bills for consumers in the long term.<br><br>The Global Infrastructure Investor Association has stated: "*it is GIIA's belief that Ofwat has not found the correct balance in its 2019 price determinations, placing too great an emphasis on short term affordability to the detriment of longer-term sustainable investment objectives whilst undermining the ability of water companies to deliver the performance improvements and investments their customers have signalled they wish to see.*"[149] |
| | **C. Ofwat's other suggested options for addressing financeability would not be effective** | | |
| **8** | **Faster transition to CPIH** | | |
| **8.1** | Ofwat argues that there are no fundamental differences between advancing revenue through the use of financial levers and the higher real returns achieved using CPIH as the inflationary index.[150] | A faster CPIH transition does not address the underlying problem, which arises from the inadequacy of returns on equity, however creates new significant issues in relation to RPI-linked liabilities which will not expire for over 30 years.[151]<br><br>The CAA has considered a transition to CPIH and rejected a move on similar grounds that it will create new hedging risks for airports. Like water companies, Heathrow airport holds significant amount of RPI linked debt on the balance sheet. CAA said:<br><br>*"[…] indexing the RAB and calculating the real WACC by using CPI would introduce an additional financing risk for HAL to manage […] the absence of CPI based financial instruments compounds this financing risk*."[152]<br><br>Notwithstanding that, many of the same issues of adjusting PAYG rates also apply to a faster CPIH transition. The rating agencies have indicated that they would disregard accelerated transition where it is not applied on a sector-wide basis. For example, Moody's notes that United Utilities argued for a full transition to CPIH; Ofwat sought to accommodate this by increasing RCV run off rates as a proxy for a faster transition to CPIH. Moody's commented that "*while a higher run-off rate will increase the company's cash flow from operations compared to other companies, improving liquidity, we do not view the change as fundamentally improving credit quality because RCV growth, and therefore future returns and cash flow, will be reduced. To maintain comparability with other water companies during AMP7, we will continue to deduct the full amount of the RCV run-off when calculating our AICR.*"[153] It is likely that rating agencies will look through adjustments to the rate of transition to CPIH where it reduces comparability of projected cash flows and metrics across the sector. |

[146] Anglian's SOC, Chapter J: Financeability, Section 6.2.
[147] Response on Risk and Return, para. 4.121.
[148] Part I: Reply to Ofwat's Response on Risk and Return (REP10).
[149] GIIA CMA Ofwat Price Determinations Case Submission (2020), page 1 (REP27).
[150] Response to Anglian, para. 6.45.
[151] Moody's Transition to CPI creates risks for water and energy networks (2016) (REP28).
[152] CAA Economic regulation of capacity expansion at Heathrow, para. 3.30 (REP29).
[153] Moody's United Utilities Water PR19 FD Update (2020), pages 6-7 (REP30).

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| | | In addition, this would impose additional costs on companies managing a mismatch between assets and liabilities as the rate of increase in RPI-linked debt obligations will be faster than the CPIH-indexation of the RCV.<br><br>Ofwat's position is inconsistent with its previous statements on the subject. Ofwat consulted extensively on the rate of CPIH transition and considered a number of options, including ones with a faster transition. having taken account of its industry discussions, it decided against a faster transition on the basis that this risked undermining investor confidence. This was clearly captured in its contemporaneous documents. It is not clear what has changed and why Ofwat now considers that this could remedy financeability constraints for the notional company driven by the allowed return.<br><br>"*We have reconsidered options for a faster transition... [These options] would deliver a faster transition than our preferred option, however they would also have greater transitional impact on customer bills and could risk increasing the perception of regulatory risk among investors."*[154]<br><br>*"We recognise that we must balance the potential for increased perceptions of regulatory risk and the potential bill impacts against the need to transition the RCV to CPI/H as soon as is practicable."*[155]<br><br>*"Consistent with our strategy of trust and confidence, we recognised that maintaining investor confidence required us to allow for an unwinding of the embedded RPI-based debt over time and to ensure customer impacts could be maintained."*[156]<br><br>Ofwat's analysis does not consider Fitch's nominal PMICR which is relevant when there is a mismatch between RCV and debt indexation, which can happen when a company's RCV transitions from RPI to CPIH indexation. Fitch introduced the new ratio to complement the PMICR:<br><br>*"The PMICR Fitch has so far referred to in its publications is a cash flow-based measure. It measures how well real returns generated by a company cover its net cash interest payable. We calculate it as EBITDA less nominal regulatory depreciation, cash tax and cash pension deficit repair, divided by cash interest. We are now introducing nominal PMICR alongside the cash flow-based one: the numerator of this ratio includes annual RAV indexation, while the denominator factors in the deferred interest expense. Nominal PMICR reflects how well a network's nominal return covers its total debt service cost."* [157]<br><br>Fitch has quoted a lower PMICR threshold for BBB+ of 1.8x. It has downgraded companies with a nominal PMICR that has fallen below this level (e.g. Wessex Water).[158] |
| **9** | **Reducing the notional gearing level** | |
| **9.1** | Ofwat notes that an alternative solution is to lower the notional gearing to adopt the levels of the listed water companies United Utilities and Severn Trent (c.56%) to estimate the allowed return.[159] | It is not appropriate to lower the notional gearing assumption. As discussed in **Part I.2: Reply on Financeability**,[160] the notional gearing level should be set at a level that reflects net debt/RCV levels across the industry. The Europe Economics estimate (of 56%) is based on market data. This is well below the gearing levels of: (i) SVT and UU on a net debt/RCV basis, and (ii) the average gearing of the industry as a whole.<br><br>The approach is not consistent with the methodology adopted by Ofwat in previous price controls. When setting the notional gearing assumptions Ofwat has mirrored movements in actual leverage in the sector. |

[154] Ofwat's regulatory approach (2016), page 75 (REP31).
[155] Ofwat's regulatory approach (2016), page 76 (REP31).
[156] Aligning Risk and Return Technical Appendix, page 95 (SOC242).
[157] Fitch PMICR Report (2019), page 1 (SOC455).
[158] Fitch Downgrades Wessex Water to 'BBB' (2020) (REP32); Oxera Financeability Report (SOC448).
[159] Response on Risk and Return, paras. 3.82, 6.45.
[160] Part I: Reply to Ofwat's Response on Risk and Return (REP10).

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| | | The financeability test must use evidence-based assumptions and the notional company has to bear some resemblance to financial structures actually adopted by companies. The purpose of the financeability test would be fundamentally undermined if the modelling assumptions could be changed, after Ofwat's price review process has been completed, to get a result that may work on paper but not in the real world.<br>Finally, the adoption of a lower gearing ratio is not beneficial for the credit metrics. Initial modelling indicates that the AICR will increase by only 0.02x and that this would not result in a material improvement in credit. |
| **10** | **Dividend restrictions and equity injections** | |
| **10.1** | Dividend restrictions and equity injections will improve financial metrics for the notional structure. Ofwat argues that contrary to the companies' arguments, there is "*no evidence of unwillingness of investors to invest in the water sector*" and that after the FD listed companies were trading at premia to RCV that were close to historic highs.[161] | Ofwat fails to consider that these measures will not improve the key credit metrics of AICR or FFO / Net Debt and would therefore have little impact on improving the company's rating.<br>As explained in Chapter J: Financeability of Anglian's Statement of Case, the changes introduced in AMP7 deteriorate the predictability and stability of the regulatory environment and, combined with lower returns, adversely impact investor appetite to inject additional equity into the business. Hence, dividend restrictions and equity injections are an unsuitable tool to enhance credit metrics.[162]<br>Finally, as explained above, the RCV premium is not a reliable guide for the cost of equity in general and therefore not a useful benchmark to explain investors' appetite or return. In the case of Anglian in particular, the SOC outlines multiple areas where – in contrast to other companies – Anglian has been under-funded relative to efficient costs, and faces a negatively skewed distribution of returns. |

[161] Response on Risk and Return, paras. 4.119-4.121.
[162] Anglian's SOC, Chapter J: Financeability, para. 1399.

## Part F.3: Review of Gearing arguments

The table below provides a summary of Anglian's responses to the arguments that Ofwat has presented in its responses to Chapter K: Gearing outperformance sharing mechanism of Anglian's Statement of Case. Paragraph references are provided to aid the CMA in finding the appropriate sources, but these are not intended to be comprehensive.

Ofwat's Response on Risk and Return is largely a reiteration of the arguments put forth in the FD and the Back in Balance Position Statement published in July 2018. It has failed to engage with Anglian's key arguments from Chapter K: Gearing outperformance sharing mechanism of its Statement of Case. Ofwat's current views are diametrically opposed to the position it held in its PR19 Cost of Debt Consultation. Not only has Ofwat changed its views on the merit of the Mechanism, but the underlying facts, including the impact of securitised structures on equity holders and customers also seem to have shifted significantly, despite the absence of major developments in the water industry in recent years to justify this.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
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| **1** | **Rationale for the Mechanism** | | |
| **1.1** | The Mechanism was introduced after publication of the PR19 Final Methodology in a highly politicised environment. The consultation on the Mechanism followed a public exchange of letters between Defra and Ofwat on the need to target water and sewerage companies with business models which, as they allege, have led to public mistrust in the industry.[163] Jonson Cox set out Ofwat's plans to improve the water sector, which involved amongst other measures, the adoption of measures that would "*lead to a progressive reduction of the highly leveraged balance sheets*' and likely render securitisation structures '*redundant*'. He also said that Ofwat will take action to '*reduce what companies can reap from high gearing and to require them to share benefits in the form of lower bill*'".[164] | Ofwat notes that the Back in Balance Position Statement was published "*reflecting public concern about the behaviour of some companies*" and set out Ofwat's "*aim to improve trust and confidence in the sector including encouraging companies:*<br>(i) *to act in a manner consistent with their responsibilities as providers of essential public services;*<br>(ii) *to be transparent and accountable to customers and wider society; and*<br>(iii) *to have appropriate alignment of the interests of company management and investors to the interests of current and future customers."*[165] | There is little evidence of "*widespread public concern*", save for the exchange of letters between Defra and Ofwat.<br>On the contrary, as set out in Anglian's Back in Balance Response, recent analysis from Britain Thinks suggests that **water companies enjoy a relatively high level of trust, with 74% of those surveyed saying that they trust their water company**.[166]<br>The Mechanism was not required to align interests of various stakeholders – arguably the Aligned Debt Programmes ("**ADPs**") do exactly that by aligning the interests of lenders and customers.<br>Anglian has shown a strong operational performance, whilst being highly geared – evidence that there isn't public concern in its region. While some highly geared companies have not performed well, this is a consequence of poor management and should not be attributed to their gearing levels. |

[163] See Defra Letter to Ofwat (January 2017) (SOC474); Ofwat Letter to Defra (January 2018) (SOC475); Ofwat Letter to Defra (April 2018) (SOC274); Defra Letter to Ofwat (April 2018) (SOC476).
[164] Ofwat Letter to Defra (April 2018) (SOC274).
[165] Response on Risk and Return, para. 5.2.
[166] Anglian Back in Balance Response, page 15 (SOC468).

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| | | Ofwat asserts that the Mechanism "*aims to address* ***a long-held concern that companies and their investors enjoy all the benefits*** *of adopting financial structures where gearing levels are well in excess of the notional level,* ***with little evidence of benefits to customers****."*[167] | While Ofwat claims the Mechanism is a result of "long-held" concern, it has not raised these concerns until after publication of the Final Methodology.<br>As recently as 2016, Ofwat has taken the contrary view. Ofwat rejected the need for a similar sharing mechanism in its **PR19 Cost of Debt Consultation** on the grounds that:<br>(i) a sharing mechanism runs against the principle that shareholders should bear the costs associated with the securitised arrangements and, hence, might "*confuse the responsibility for bearing [such] costs*";<br>(ii) a sharing mechanism renders the customer benefits dependent on the specific capital structures of the water companies; and<br>(iii) a sharing mechanism creates unnecessary confusion while at the same time introduces "*additional complexity into setting the cost of capital*".[168]<br>In the same consultation Ofwat recognised that customers do benefit from the lower tax costs from highly geared companies, and indirectly benefit from investors in highly geared structures putting company management under increased scrutiny.[169] |
| **2** | **Relatively higher levels of gearing do not necessarily mean increased risk for the company or the customers and/or taxpayers** | | |
| **2.1** | **A policy driven by gearing in isolation is misguided as it ignores other key factors that determine a company's financial resilience.** Financial risk is driven by a far wider range of factors than gearing – gearing per se is not determinative of a company's creditworthiness.[170] | No Ofwat engagement with Anglian's position, though Ofwat does acknowledge, in principle, that ADP covenants are protective.[171] | N/A |
| **2.2** | **Ofwat's analysis does not take into account the financial resilience and regulatory aligned features of ADPs.** | No Ofwat engagement with Anglian's arguments. Ofwat merely restates its earlier position that "*Companies with high levels of gearing have* ***potentially lower levels of*** | The operative word here is "potentially". Ofwat has not provided any evidence that this statement holds true generally, or more specifically in the context of Aligned Companies. In any case, |

[167] Response on Risk and Return, para. 5.4.
[168] PR19 Cost of Debt Consultation, page 20 (SOC473).
[169] PR19 Cost of Debt Consultation, page 19 (SOC473).
[170] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.2.
[171] Response on Risk and Return, para. 5.24.

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| | | ***financial resilience**, as the impact of cost shocks or poor performance is magnified on a smaller equity base*."[172] | "potential" risk cannot be a sufficiently robust regulatory threshold for intervention, particularly given that the Mechanism would overturn a longstanding regulatory principle.<br>Not long ago, Ofwat had taken the position that "*in terms of risks to customers from securitised structures, previous work from PWC for Ofwat in 2013 found evidence that securitised structures were viable and sustainable over the long term and did not necessarily present a higher risk for customers.*"[173] Indeed, Ofwat had added at the time: "*Should there be any evidence that securitised companies were less resilient than more traditionally geared companies then we would be able to use the powers available to us to intervene to protect customers.*" So far, no such evidence has been forthcoming. |
| **2.2.1** | **ADPs help de-risk companies from an operational, regulatory, financial and administrative purpose**, through: (i) additional ring-fencing measures; (ii) de-risking covenants; (iii) monitoring and protection; and (iv) contractual dividend restrictions<br>Moody's has recognised the benefits of the ring-fencing and credit-enhancing features and noted that companies like Anglian and Yorkshire Water have *'consistently been among the strongest performers in the sector.'*[174] | No Ofwat engagement. Ofwat merely states that "*the covenants are not perfect*".[175] | The statement that ADPs covenants are not perfect does not address Anglian's point that these de-risking features have strong impact.<br>In contrast to Ofwat's failure to provide any meaningful evidence in support of its position, Anglian notes that these de-risking features have been recognised by rating agencies like Moody's.[176] |
| **2.2.2** | **Aligned Companies can better deal with financial distress.** ADPs are structured to facilitate and allow Ofwat and the company to better deal with any financial distress, without having to also deal with defaulted or accelerated debt. There needs to be consensus among creditors before any enforcement or legal action is taken. A contractual standstill is built into the package to prevent an insolvency event and a | Ofwat has failed to engage with this argument. | N/A |

[172] Response on Risk and Return, para. 5.10.
[173] PR19 Cost of Debt Consultation, page 19 (SOC473).
[174] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.1 (i).
[175] Response on Risk and Return, para. 5.19.
[176] Moody's Report Covenanted Financing Structures Help Mitigate Growing Risks (SOC137).

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| | special administration; and an 18-month debt service liquidity available to be used in the event of a payment default.[177] | | |
| **2.2.3** | **Aligned Companies offer significantly higher levels of customer protections.**<br>The protections outlined above mean that customers of Aligned Companies are better protected that companies with similar levels of gearing, but without the same protections.[178] | Ofwat has failed to engage with this argument. | N/A |
| **2.3** | **Ofwat's assumption that gearing above 70% gives rise to unacceptable levels of risk for customers is arbitrary and not supported by the evidence.**<br>Ofwat fails to put forth a case on why gearing above 70%, or indeed, 80% gives rise to unacceptable levels of risk, while a gearing below 65% does not merit an intervention.[179] | Ofwat has acknowledged that companies stated that Ofwat was applying "*arbitrary level of gearing that is not grounded in evidence*".[180] | Ofwat has failed to address the crucial question what makes gearing of 60% "good" but 80% "bad". Rather it has simply reiterated its position that levels of gearing materially above the notional level give rise to unacceptable levels of risk for customers. |
| **2.4** | **Highly geared water companies operate in an environment with sufficient regulatory safeguards.**<br>The regulatory regime already considers a range of safeguards that seek to incentivise water companies while protecting the interests of customers.[181] | Ofwat has noted that *"[r]egulatory mechanisms including the regulatory ring fence, and special administration recognise that we should also help protect customers from the risk transfer*." However, according to Ofwat "*these features are not perfect and some risks can remain with customers*."[182] | Ofwat's response lacks faith in its own regulatory mechanisms. Moreover, the absence of perfection (i.e. zero risk) is not relevant nor an appropriate benchmark for regulatory policy-making.<br>Even if customers were bearing *some* risk, it does not follow that this increases with higher levels of gearing. Indeed, Ofwat has noted that it has not sought to prevent securitised structures, but rather "*sought to modify the licences of those companies… **to enable us to regulate companies within larger groups effectively. It has also enabled us to provide reassurance that the companies remain able to finance their regulated activities***."[183] |
| | | Ofwat notes that: "*Experience indicates that where risks are passed to customers, these costs can be large and **special administration is not a costless process** as* | Ofwat's response again reflects a lack of engagement with Anglian's arguments. As set out in 2.2, Anglian has demonstrated |

[177] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.1 (ii).
[178] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.1 (iii).
[179] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.2.
[180] Response on Risk and Return, para. 5.7.
[181] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.3.
[182] Response on Risk and Return, para. 5.20.
[183] Ofwat Financeability and financing the asset base, para. 117 (SOC447).

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| | | *longer term planning and investment can be disrupted during the transition of a special administration process.*"<br><br>In support it cites that the overall cost of the government's decision to put Railtrack into administration was £11-14 billion; and that the failure and entry into administration of Metronet in 2007 led to a direct loss to the taxpayer of £170-410 million.[184] | that the de-risking features of the ADPs structures actually reduce the risk of special administration.<br><br>Ofwat also seems to construe the concept of "risk transfer". The Railtrack and Metronet cases selected are, in fact, good examples of cases where shareholders bore costs associated with default: the NAO estimates that investors lost £540 million in the collapse of Metronet while shareholders famously challenged nationalisation of Railtrack.[185] Put simply, the mere fact that customers and suppliers stand to lose out in the event of default does not "transfer risk" from shareholders to customers. |
| | | In relation to regulatory safeguards, Ofwat notes that its plans to strengthen the regulatory ringfence are still ongoing. It further says that the required licence amendments can be made "*only with the agreement of the company, or where the company disagrees, after reference to the CMA*."[186] | Ofwat published its conclusions on strengthening the regulatory ring-fencing framework in July 2019.[187] However, it has not yet started its section 13 consultation to make the relevant modifications to the companies' licences. The delay in introduction is not because the companies have withheld their consent.<br><br>Anglian has noted that it is supportive of the direction of travel, and the changes proposed: it already has some of these enhanced protections in its licence and securitisation documents.[188] Further, the procedure for introducing licence modifications is not that onerous – Ofwat has made several modifications under section 13 WIA91 without resistance from companies, including the 2007 amendment to strengthen cash lock-up conditions. |
| **2.5** | **Evidence indicates that higher gearing does not necessarily result in increased risk aversion.**<br><br>Oxera's analysis showed that highly geared companies have a risk range similar or even wider (e.g. Affinity Water and Yorkshire Water) to the one of companies with lower gearing. | Ofwat failed to engage with Anglian's arguments or Oxera's analysis around risk aversion. | N/A |

[184] Response on Risk and Return, para. 5.21, footnote 336.
[185] NAO, The Failure of Metronet, page 41 available at https://www.nao.org.uk/wp-content/uploads/2009/06/0809512.pdf; See https://researchbriefings.files.parliament.uk/documents/SN01076/SN01076.pdf Railtrack had about 256,000 shareholders holding c.520 million shares. Shareholders claimed that they were due 360p per share but the final package after special administration saw them receive c.260p per share. This was subject to an unsuccessful appeal.
[186] Response on Risk and Return, para. 5.20.
[187] Ofwat, Consultation on strengthening the regulatory ring-fencing framework (November 2018).
[188] Anglian Strengthening the Regulatory Framework Response (SOC490).

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| | This demonstrates – in principle – that higher gearing does not necessarily result in increased risk aversion.[189] | | |
| **2.6** | **Higher gearing does not necessarily impair water companies' ability to adjust to regulatory change.** | | |
| **2.6.1** | There is no basis for Ofwat's assertion that highly geared companies have an impaired ability to response to regulatory change.[190] | Ofwat has merely repeated its assertion from the Back in Balance consultation that "*Companies with high gearing may also have reduced ability to adapt to changes to regulatory arrangements that are required in customer interests*."[191] | Ofwat has failed to provide any evidence to support this assertion. |
| **2.6.2** | Aligned Companies actually enjoy greater flexibility in their dividend policy than listed companies. For example, both Severn Trent and United Utilities, following Ofwat's FD, committed to increasing dividends by CPIH annually over AMP7 (2020-2025).[192] | Ofwat has not acknowledged Anglian's argument that Aligned Companies enjoy greater flexibility in their dividend policies. | N/A |
| **2.6.3** | Further, ADPs include amendment mechanisms that allow an Aligned Company to respond to any regulatory changes. This is in contrast to ordinary corporate debt that would require consent from every debt provider to make similar changes.[193] | Ofwat has not engaged with Anglian's argument that the amendment of an ADP is easier than of ordinary corporate debt. | N/A |
| **3** | **Highly geared Aligned Companies provide significant benefits which are shared with customers** | | |
| **3.1** | **Aligned Companies share tax benefits with customers.**<br>Companies usually realise some benefits from higher leverage since interest is a tax deductible expense and as such creates a tax saving benefit, i.e. the debt tax shield. However, Ofwat's policy approach to tax ensures that customers also benefit from the tax allowances resulting from higher gearing.[194] | Ofwat does not dispute that customers share in the tax benefits. Its response merely notes that "*tax is a small component of allowed revenues given the availability of capital allowances*"[195] | Ofwat's table limits its review of tax advantages to the amount of tax relative to the companies' total allowed revenues. It does not consider the tax component of customer bills.<br>As explained in detail in Chapter K: Gearing outperformance sharing mechanism of Anglian's Statement of Case, the interest charge of the business that is deducted from profits to reduce the tax exposure is undeniably the most important factor that affects the cash tax component of an average customer bill. Accordingly, |

[189] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.4.
[190] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.5.
[191] Response on Risk and Return, para. 5.10.
[192] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.5.
[193] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.1.5.
[194] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.2.2.
[195] Response on Risk and Return, para 5.23 and Table 5.1.

<table>
<tr><th>No.</th><th>Anglian's SOC</th><th>Ofwat's Response</th><th>Reply to Ofwat</th></tr>
<tr><td></td><td></td><td>PR19 Tax as a percentage of allowed revenue
<table>
<tr><th></th><th>Allowed revenue (£m)</th><th>Tax (£m)</th><th>Percentage</th></tr>
<tr><td>Industry</td><td>52,208</td><td>575</td><td>1.1%</td></tr>
<tr><td>Anglian</td><td>5,408</td><td>0</td><td>0.0%</td></tr>
<tr><td>Bristol</td><td>488</td><td>11</td><td>2.2%</td></tr>
<tr><td>Northumbrian</td><td>2,955</td><td>66</td><td>2.2%</td></tr>
<tr><td>Yorkshire</td><td>4,731</td><td>12</td><td>0.2%</td></tr>
</table></td><td>customers served by Aligned Companies pay much lower towards the tax component of their bills compared to customers served by other companies. Even if this tax advantage is small, this does not negate the fact that it still constitutes a benefit offered to customers of Aligned Companies.<br><br>Ofwat's current view is diametrically opposed to the view it expressed in the PR19 Cost of Debt Consultation where it noted that "there is a direct financial benefit to customers from highly geared arrangements. This is because we currently set tax allowances on the basis of a company's actual level of gearing, so customers do benefit from the lower tax costs from highly geared companies."[196]</td></tr>
<tr><td></td><td></td><td>Ofwat further cites the Green Book to note that "consistent with advice in the Green Book, tax should be excluded from a monetised assessment of policy value because it is a transfer payment where costs are set off exactly by benefits."[197]</td><td>Ofwat has erred in its characterisation of the benefit that accrues to customers from the tax sharing mechanism.<br><br>Customers do not benefit from the tax itself. Rather, they benefit from the mechanism that shares the tax shield benefits of higher levels of gearing with customers. As such, it does not constitute a “tax”, which would be an exempt transfer pursuant to the Green Book, but rather an appreciable benefit to customers which should be taken into account.<br><br>As set out above, Ofwat has endorsed the view that customers benefit from the lower tax costs of highly geared companies, and it seems to have taken those tax benefits into account in its overall assessment at the time.[198]</td></tr>
<tr><td>3.2</td><td>Aligned Companies' protective features provide benefits to customers</td><td></td><td></td></tr>
<tr><td>3.2.1</td><td>Stronger Protective Mechanisms of the ADPs</td><td>Ofwat has acknowledged that, in principle, the ADPs covenants are protective – but does not consider them because they are not perfect:</td><td>The absence of perfection cannot be an appropriate regulatory threshold for policy making, in particular for such a significant regulatory change. Chapter K: Gearing outperformance sharing</td></tr>
</table>

[196] PR19 Cost of Debt Consultation, page 19 (SOC473).
[197] Response on Risk and Return, para. 5.23.
[198] PR19 Cost of Debt Consultation, page 19 (SOC473).

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| | The Aligned Debt Programme Paper more fully sets out the key protective features and credit enhancement measures that benefit customers. The most significant benefits are:<br>(i) Enhancement of Aligned Companies' credit/financial resilience and ring-fence measures.<br>(ii) Aligned Companies' ability to: (a) raise longer dated debt and Class B subordinated debt; and (b) access a wider universe of debt holders.<br>(iii) Aligned Companies' obligation to project their financial ratios on a 12-month look-forward basis coupled with the continuous monitoring of their financial resilience by the Security Trustee.<br>(iv) Protection against secondary taxes through tax covenants in the single debt platform and the Tax Deed of Covenant.<br>(v) Prohibition of dividend distribution upon the occurrence of certain trigger events.[199] | *"In theory, the covenants that are associated with such structures should help protect customers from the risk transfer of such structures, but the covenants are not perfect...."*[200] | mechanism of Anglian's Statement of Case and the Aligned Debt Programme Paper deal with this question in detail. They show that that even if the covenants of an ADP are not perfect, Aligned Companies with higher gearing may offer more or at least the same protection than lower geared companies with unsecured debt.<br>In the **PR19 Cost of Debt Consultation** Ofwat did not find this point particularly controversial. It accepted that "*[t]he existence of the common terms and security package means that a company with a securitised structure can support a higher level of gearing with limited impact on interest costs compared to a non-securitised company while maintaining a similar investment credit rating.*" |
| | | Ofwat appears to reject the efficacy of the covenants because they "*remain under the control of companies and their investors.*" It also adds that the covenants are "*designed to protect lenders, suggesting bond holders perceive risks associated with these structures*."<br>Ofwat also argues that it has had to strengthen the regulatory ring-fence over time *"precisely because some companies could choose more risky structures (including high levels of debt and associated interest payments which reduce the ability of the company to manage the effect of cost shocks)"*[201] | Ofwat's Response on Risk and Return ignores the fact that lenders and customers have aligned interests in several ways – the most important being that the company does not default. As set out in more detail in **Part I.3: Reply on Gearing Sharing**,[202] the risk of default is a risk for customers, bondholders and shareholders. The fact that it increases or decreases is does not inherently change the allocation of such risk.<br>Again, Ofwat contradicts its own position earlier in PR19 where it acknowledged that customers benefit from the oversight of investors. In the **PR19 Cost of Debt Consultation** Ofwat noted that "*[t]here may also be indirect benefits to customers from investors in highly geared structures putting company management under increased scrutiny, promoting more efficient delivery of services by companies and so resulting in lower customer bills.*"[203] |

[199] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.2.1.
[200] Response on Risk and Return, para 5.19.
[201] Response on Risk and Return, paras. 5.19, 5.24.
[202] Part I: Reply to Ofwat's Response on Risk and Return (REP10).
[203] PR19 Cost of Debt Consultation, page 19 (SOC473).

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| **3.2.2** | **ADPs transfer risk from debt holders and customers to shareholders.** Hence, shareholders do not enjoy additional benefits that can be shared with customers. Instead, customers share in the benefits through the extensive protective and credit enhancement measures.[204] | Ofwat has explicitly acknowledged such risk transfer: *"where regulated monopolies increase gearing levels materially above the notional level, they may transfer some risk to equity investors"* but then claims that such risk transfer is also made to "*customers or taxpayers*"[205]<br>Ofwat acknowledges that ADP mechanism build in extra protection mechanism albeit that such mechanisms are not "*perfect*".[206] | Ofwat provides no evidence why the risk transfer is not fully equivalent to the cost difference, or why there will inevitably be a transfer to customers or taxpayers.<br>Mechanisms don't have to be perfect; it is sufficient that they reduce the risk sufficiently materially such that customers do not bear an "unacceptable" level of risk. |
| **3.3** | **ADPs offer regulatory innovation (good protection mechanisms have found their way into the regulatory system).**<br>Aligned Companies' enhanced alignment with the regulatory framework - many of the ring-fencing licence modifications that have been introduced since 2001 have been based on the provisions of the ADPs.[207] | Ofwat has rejected this argument, without engaging in the examples of regulatory innovation that Anglian has put forth.<br>"*We disagree also with the benefit claimed by Anglian Water that highly covenanted structures have brought benefits that have been mirrored in the ringfencing licence conditions for water companies*."[208] | Ofwat ignores the examples of regulatory innovation put forward by Anglian, in an attempt to maintain that lenders and customers have divergent interests. For example, in 2007 Ofwat introduced a new Condition F (including cash lock up provisions) into the licences of Anglian, Thames and Surrey and East Sutton. The licence modifications were in line with clauses of the companies' underlying documents.[209] |
| **4** | **Relatively higher gearing does not generate a 'financial benefit' for the shareholders** | | |
| **4.1** | As a general proposition, the overall cost of capital is invariant to gearing levels i.e. there is no benefit to shareholders that can be shared with customers from higher levels of gearing.[210] | Ofwat disagrees with the proposition that cost of capital is invariant to gearing levels where gearing levels are materially above the notional level.<br>It cites in support, certain paragraphs of a 2004 report from the Department of Trade and Industry ("**DTI Report**"):<br>"*Managers can mitigate the consequences of unfavourable regulation by gearing up as higher debt ratios are associated with greater levels of financial distress. **It can be argued that where this occurs, regulators hands become tied – i.e. they are unable to enforce a tough regulatory settlement while still acting in line with the*** | First, Ofwat has acted on the issues raised by the DTI Report. In particular, Ofwat, as confirmed by the CMA's decision in *Bristol (2010)*,[213] focuses on a notional capital structure to prevent the gaming issues highlighted by the DTI Report.<br>(i) Ofwat, in its Back in Balance Position Paper notes that it does not consider the actual financial structure of a company: "*We set our price determinations on the basis of a notional financial structure for a company that is efficient. Our aim is to encourage companies and their investors to consider the effect their actions may* |

[204] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.2.1.
[205] Response on Risk and Return, para. 5.22.
[206] Response on Risk and Return, para. 5.19.
[207] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.2.3.
[208] Response on Risk and Return, para. 5.24.
[209] Anglian Licence Modification (2007) (SOC448); Thames Licence Modification (2007) (SOC487); SES Licence Modification (SOC486).
[210] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.3.1.
[213] *Bristol (2010)* (SOC345).

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| | | ***duty to ensure companies are able to finance their functions. This reduces the likelihood of a tough price cap, reducing the risk facing the firm and hence its costs of capital.****"*<br><br>"*In the context of utilities, risk reduction can be achieved through risk transfer to customers (through greater potential volatility in bills) or to taxpayers (if there is special administration).* ***A lower cost of capital may be possible even if there is only a perception that Government will ultimately bail out a utility business in financial distress.*** *Shareholders funds act as a buffer in the equity model, absorbing shocks to costs and demand."*[211]<br><br>Ofwat also relies on an accompanying report from Europe Economics which similarly argues that: *"…some potential benefits to firms (albeit not all) might accrue from the ways high gearing creates pressure upon regulators to agree to allow higher prices in revenue controls. That could be because higher gearing undermines the general financeability of firms. It could be because higher gearing leaves firms more exposed to certain large cost shocks that could create pressure on regulators to re-open price controls."*[212] | *have on customers when adopting capital structures that are materially above the notional level."*[214]<br><br>(ii) In its PR19 Cost of Debt Consultation, Ofwat outlined the benefits of using a notional capital structure. It noted that "*this approach is central to allowing companies to make their own choices about financing while at the same time ensuring that customers pay no more than the efficient financing cost*."[215]<br><br>(iii) It voiced a similar view in 2006: "*Given that the financial modelling is driven by an assumed level of gearing, a company's actual level of gearing will not place a direct constraint on the outcome of a price control review either in terms of investment required or how efficient the companies need to be. Nor do regulators consider that it needs to do so in the future*."[216]<br><br>Second, neither the DTI Report nor the Europe Economics Report account for the features of ADPs.<br><br>Finally, the Europe Economics' response does not meet the balance of probabilities test. It argues that "*potential*" benefits "*might accrue*" from pressure on regulators and "*could*" be because higher gearing leaves firms more exposed to "*certain*" large shocks. |
| | | Ofwat also relies on an accompanying report from Europe Economics which notes that: "*If a water-sector firm considers that its optimal gearing lies markedly above the notional level of gearing – indeed more above the notional level than Ofwat's tolerance band allows for – then it must consider that there are benefits (either genuine or of a gaming nature) for it in doing so*."[217] | The Europe Economics argument that there must be benefits to shareholders is not credible. Surely, if that were the case, all companies in the sector would have geared up.<br><br>The DTI Report that Ofwat has brought to the attention of the CMA provides an alternate explanation. The paper notes that PR99 was tougher on companies than expected and "*downgraded equity market perceptions of the attractiveness or the UK water business and increased the market perception of* |

[211] Response on Risk and Return, para. 5.11
[212] Europe Economics Report, page 9, submitted by Ofwat as Annex R033 to the Response on Risk and Return.
[214] Back in Balance Position Statement, page 49 (SOC465).
[215] PR19 Cost of Debt Consultation, page 16 (SOC473).
[216] Ofwat Financing Networks Paper (SOC477).
[217] Europe Economics Report, page 9, submitted by Ofwat as Annex R033 to the Response on Risk and Return.

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| | | | *regulatory risk*".[218] Securitised structures, and higher gearing, were a result of the flight of equity, and the increased availability and attractiveness of debt finance. |
| **4.2** | Ofwat's conclusions are at odds with academic work – in particular, the Modigliani-Miller theorem which says that overall cost of capital is invariant to gearing levels. Ofwat has simply set out arguments for why in the abstract the Miller-Modigliani theorem may not always be applicable across the board and offers no evidence on why it is not applicable to the water sector.[219] | Ofwat reiterated the arguments from its Back in Balance Position statement to assert that the conditions that make the Modigliani-Miller theorem apply, do not hold in the water sector.<br>"*The applicability of the theorem is underpinned by a set of highly restrictive assumptions which do not hold true of the water sector. Specifically, it assumes there are no taxes, no costs associated with financial distress, no asymmetry of information or agency costs and capital market operation is perfect.* ***In other words, the correct inference to draw from the theorem when considering the water sector is that capital structure does matter – precisely because the conditions which would make the Modigliani-Miller theorem hold true do not apply***."[220] | Ofwat has essentially reiterated its arguments from the Back in Balance Statement. It does not respond to Anglian's arguments or adequately demonstrate that there is a benefit to be shared. |
| | | Ofwat has noted that it has *"adopted a policy of remunerating tax on the basis of the actual capital structure of each company"* and acknowledges that "*in the water sector, companies are not able to outperform the tax allowance by gearing up at the level of the regulated company*."[221] | Ofwat admits that the issue of taxes has been addressed. This should therefore not affect the application of the Modigliani-Miller theorem. |
| | | Ofwat notes that under Modigliani-Miller *"one way a company can reduce its cost of capital is to transfer risk to another party."*<br>It argues that there is a transfer of risk from shareholders to customers: "*In water, increasing gearing materially above the notional level reduces financial headroom. This may* ***increase the probability of default****, increasing risk to consumers of service interruption and/or increase* | Ofwat adduces no evidence that there is any such risk transfer. These are statements without any empirical basis and largely repeat Ofwat's previous unsubstantiated claims, ducking the key question of whether there is any actual, observable, benefit<br>Further, the statement does not hold in and of itself – there is no risk transfer from the elements cited by Ofwat, these are only potential risks to shareholders, bondholders and customers. |

[218] DTI Report, page 18.
[219] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.3.1.
[220] Response on Risk and Return, para. 5.14.
[221] Response on Risk and Return, para. 5.15.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | | *pressure from bondholders to restrict future cash outlays creating pressures which may limit future investment. It may also increase the perceived likelihood of companies triggering re-opening mechanisms to increase funding where a firm is in financial distress*."[222] | |
| **4.3** | Anglian cited a 2002 Oxera report on the capital structure of various companies. The report covered several theories that attempt to explain how companies make their financing choices, and to predict, based on a company's characteristics, which financing structure it will adopt. Overall, the theories suggest that many parameters drive managers' financing decisions and thus a company's financial structure depends on managerial choices rather than on a theoretical optimum that could be determined *ex ante*.[223] | The Response on Risk and Return has not engaged with the Oxera analysis.<br>The Europe Economics Report does, however note that "*We do not need to choose which of those theories, if any, is correct for us to conclude that there may well be benefits to certain firms in choosing a particular level or range of gearing*".[224] | Neither Ofwat nor Europe Economics engage with Oxera's analysis of various theories that suggest that the parameters driving financial structure are not dependent on a theoretical optimum.<br>The CMA's recent preliminary findings for the NATS price control recognises that there is a potential U-relationship where cost of capital actually increases above the optimum level.[225] Companies with more highly geared structures may thus have *higher* costs of capital than would otherwise be the case. Given the weight of evidence against Ofwat's approach, Europe Economics' position that Ofwat need not choose which of the theories is correct is not credible. |
| **4.4** | Ofwat seemingly acknowledges the absence of any benefit for the shareholders. At the FD, Ofwat recognised that equity investors benefit from higher equity returns that are associated with their increased risk.[226] | Ofwat has not engaged with this point. It, however notes that "*[w]here regulated* ***monopolies increase gearing to levels materially above the notional level, they may transfer some risk to equity investors****, but also to customers or taxpayers at their potential expense*."[227] | Ofwat seems to acknowledge at least the absence of the full benefit to shareholders.<br>Ofwat adduces no evidence to support its position that there is some risk transfer to customers or taxpayers. |
| **4.5** | **'Real world' evidence points towards absence of correlation between cost of capital and level of gearing.**<br>Oxera analysis shows how an overperformance or underperformance, which is equivalent to a 3% RoRE at the notional gearing of 60%, translates into a higher range of | Ofwat has not engaged with this argument. | N/A |

[222] Response on Risk and Return, para. 5.16.
[223] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.3.2.
[224] Europe Economics Report, page 13, submitted by Ofwat as Annex R033 to the Response on Risk and Return.
[225] Provisional Findings *NATS (2020)*, Appendix 4 (SOC440).
[226] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.3.4.
[227] Response on Risk and Return, para. 5.22.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | potential RoRE at higher levels of gearing (because it is divided over a smaller equity base).[228] | | |
| **5** | **The mechanism is not justifiable for Anglian's financial structure** | | |
| **5.1** | **Anglian has significant headroom in terms of gearing** | | |
| **5.1.1** | Anglian's ADP includes covenants on its level of gearing. These covenants provide an indication of the level at which the market – and debt holders – considers that debt levels may pose concerns. The triggering gearing level in Anglian's ADP is, however, 85% whereas Anglian's current gearing is 78%.[229] | Ofwat has not engaged with this point. | N/A |
| **5.1.2** | Anglian's credit rating has consistently been at investment grade since privatisation. Indeed, its credit rating has remained at Baa1, notwithstanding that its gearing level is in the upper quartile of gearing levels. The market does not, therefore, consider that Anglian's gearing level exposes debt holders to greater levels of risk.[230] | Ofwat has not acknowledged Anglian's strong credit rating since privatisation. | N/A |
| **5.2** | Anglian has consistently demonstrated the financial resilience of its capital structure, including during the financial crisis.[231] | Ofwat has not engaged with evidence of Anglian's financial resilience. Rather, it has merely relied on a general, hypothetical statement: *"While companies that have adopted these structures have been resilient to the credit crunch (in some cases injection of equity was required to maintain financial ratios within covenanted levels in the period of deflation in 2009), concerns arise where companies adopt risky structures that they can maintain resilience over the long term, particularly in circumstances where there is downward pressure on the allowed return."*[232] | N/A |
| **5.3** | **Anglian has amended its intercreditor agreement when required.** Anglian's intercreditor agreement can be amended by the majority of creditors in response to regulatory change. | Ofwat has not engaged with this point. | N/A |

[228] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.3.3.
[229] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 4.1.
[230] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 4.1.
[231] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 4.1.
[232] Response on Risk and Return, page 141.

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | Anglian has proposed a total of 13 amendments since the ADP was established and each of these have been passed.[233] | | |
| **5.4** | **Anglian has a proven track record of delivering services to a high standard.** Several performance indicators of Anglian are better than those of companies with lower gearing – evidence that there is no link between the level of gearing and the performance of a company as water and wastewater service provider.[234] | Ofwat has not engaged with this point. | N/A |
| **6** | **The introduction of the mechanism goes against the principles of best regulatory practice** | | |
| **6.1** | **The introduction of the mechanism marks a sharp divergence from regulatory practice and goes against the principle of regulatory consistency.** Ofwat and the CMA have repeatedly held that companies are free to select their own financial structure, under the RPI-x framework.[235] | Ofwat has acknowledged that "*the introduction of the gearing outperformance sharing mechanism represents a change from the established set of regulatory incentives affecting company gearing decisions*."<br>It justifies this on the grounds that the introduction "*stemmed from a challenge to the legitimacy of the regulatory regime that was linked, in part, to concerns raised about companies paying high dividends and adopting complicated and potentially risky financial structures*."[236] | Ofwat has not demonstrated whether there was, in fact, a challenge to the legitimacy of the regulatory regime. And even if there was, whether gearing was at the root of any legitimacy challenge. Furthermore, this is entirely unevidenced in relation to the perceived legitimacy of Anglian.<br>Further, according to Ofwat the paying of (allegedly high) dividends is not a recent issue. Equally, the financial structures have been in place for a while with little evidence of its risks. |
| **6.2** | In particular, Ofwat's introduction **is contrary to the following principles of best regulatory practice:**<br>(i) Departures from regulatory precedent should be targeted only when action is needed.<br>(ii) Regulation should be transparent and any proposed changes should be forward-looking, properly signalled and subject to fair consultation. The Mechanism has a *de facto* retrospective effect since it impacts historic financing decisions. | Ofwat has argued that even if it has made significant changes to its approach, it does not follow that it is a breach of regulatory best practice. It cites in support the BIS Principles for Economic Regulation which state "*the framework of economic regulation needs capacity to evolve to respond to changing circumstances and continue to be relevant and effective over time*."[238]<br>Ofwat further states that the changes in approach is a reflection of its evolving understanding of the sector: | Ofwat has merely stated that it is free to change its approach. It has not specifically engaged with the arguments that the Mechanism is not: (i) targeted; (ii) forward-looking, properly signalled and subject to fair consultation; (iii) proportionate and accountable; or (iv) proportionate and well-reasoned. |

[233] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 4.3.
[234] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 4.4.
[235] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 5.2.
[236] Response on Risk and Return, para. 5.9.
[238] BIS Principles for Economic Regulation (SOC351).

| No. | Anglian's SOC | Ofwat's Response | Reply to Ofwat |
|---|---|---|---|
| | (iii) Regulatory activities should be proportionate and accountable. In particular, all major credit rating agencies give strong weight to the nature of the regulatory environment when assessing the credit rating of a regulated company.<br>(iv) Regulation should be proportionate and well-reasoned. Ofwat has ignored the disproportionate costs associated with the Mechanism. A significant de-gearing requires either repayment of debt from cashflow or a significant equity injection.[237] | "*We consider that, far from being a breach of regulatory best practice, the fact that we have developed our approach and thinking to reflect the lessons learned from PR14, our consultations through PR19 and the evolving issues for the sector is plainly a strength of our decision-making, and a reflection of our experience and specialist understanding of the sector. For Anglian Water to suggest otherwise is wholly without merit. Regulatory certainty does not require matters to be fixed for all time, and whilst there is a balance to be struck between certainty and flexibility, Ofwat is right to learn from experience and adapt accordingly*."[239] | |
| **6.3** | Ofwat did introduced a **glidepath** to smooth the mechanism over PR19. Yet, this does not accurately reflect the impracticality and costs of reducing gearing in a short period of time. Anglian is a good example of the glidepath's failure to ensure a smooth transition. In particular, if it chooses to prepay its debt to adjust its gearing below the 'trigger point', Anglian incurs break costs (i.e. a 'make whole' payment for fixed rate bonds or debt, and a 'make to market' costs for swaps), which are exorbitant in the current low interest rate environment.[240] | Ofwat refers to the glidepath where the trigger for the Mechanism starts at 74% in the first year and reduces to 70%. Ofwat notes that these triggers are well above the notional gearing levels, and that "*The glidepath, introduced in our final determination, provides companies significant time to respond to the mechanism to mitigate the risk of any sharing payments*."[241] | Ofwat has not addressed concerns that the Mechanism should have been introduced more gradually. It has merely cited its glidepath to say that companies have "*significant time to respond*".<br>As such, Ofwat has failed to ensure that the introduction of the Mechanism is proportionate for Anglian given that Anglian would have to incur an immediate upfront cost to even satisfy the requirements of the glidepath in Year 1 of AMP7. |

[237] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 5.2.
[239] Response on Overall Stretch, para. 3.21.
[240] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 5.2.
[241] Response on Risk and Return, para. 5.25.

# Anglian Water PR19

# Part G: Reply to Ofwat's Response on Cost issues

(re-issue 4 June 2020)

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| Amendment | Date |
|---|---|
| Para 15 replaced £157m with £86M<br>Para 71 addition of text to end of sentence.<br>Table 6 – restated table to reflect IFRS changes introduced from 2015/16. | 4 June 2020<br>4 June 2020 |

# Part G.1: Reply on Uplift in totex from AMP6 to AMP7 and previous outperformance

## 1 Expenditure uplift[1]

| | |
|---|---|
| (i) | Ofwat has misrepresented the variance between Anglian's Botex expenditure in AMP6 and AMP7 by reinstating the error it made at IAP and subsequently corrected at DD, of including enhancement opex in base costs. |
| (ii) | Anglian previously noted a 1.9% uplift on base costs for its plan versus AMP6. However, adopting Ofwat's treatment of the costs of transferred sewers and pumping stations, Anglian's plan for Botex in fact shows no material uplift from its expenditure in AMP6. Botex for AMP7 is essentially the same as Botex for AMP6. |
| (iii) | The uplift in Anglian's expenditure proposals compared to AMP6 is almost entirely in its enhancement programme and results from the materially increased scope of that programme relative to AMP6. Ofwat has consistently failed to acknowledge this when presenting totex comparisons. |

(1) Ofwat repeatedly states that Anglian requested a larger increase in its totex allowances, relative to PR14 levels than any other company.[2] Anglian does not dispute this.[3] Ofwat also says that any company should be able to provide convincing evidence to support the claims it is making.[4] Anglian does not dispute this either. Ofwat's implicit suggestion is that this increase in totex means Anglian's costs are inefficient and that the Company is therefore subject to a high evidential bar to justify any of its expenditure needs.[5] And the suggestion of inefficiency is something Anglian does dispute.

(2) In order to understand the increase in Anglian's proposed expenditure compared to AMP6 two things are necessary. Firstly, it is necessary to decompose the overall expenditure plan into smaller parts. The variance from past expenditure will differ from one area of the programme to another, and the explanations for those variances are also area-specific. Totex-level comparisons are not informative without this context, and an understanding of what is being offered for the expenditure proposed. Secondly, it is necessary for those variances to be assessed on a truly like-for-like basis to enable a meaningful comparison.

(3) Throughout the PR19 process Ofwat has resisted Anglian's attempts to explain its Plan through decomposition and comparability. It has preferred to engage in simplistic, high-level terms, implicitly inviting stakeholders to form the view that a large uplift must equate to gaming and inefficiency. This is both misleading and a weak and inadequate response to the shortcomings which Anglian and others have highlighted in Ofwat's models. It certainly does not support the output of Ofwat's flawed models.

(4) Where Ofwat has decomposed the variance, it has done so in a highly misleading way, and repeats this in its Response to Anglian's SOC. Regrettably, other stakeholders have then relied on Ofwat's flawed

[1] Note – all analysis in this paper makes use of the forecast expenditure for 2019-20 that Anglian submitted in its DD Representation (SOC168) in August 2019. The audited outturn figure for 2019-20 expenditure will become available during the course of the re-determination, which will allow Anglian to update its analysis. Anglian does not expect the difference between its August 2019 forecast and audited outturn figure to make a material difference to the key messages of this paper.

[2] See for example Response to Anglian, para. 1.15.

[3] Para. 1.7.

[4] *Ibidem*.

[5] *Ibidem.*

presentation to shape their views.[6] This Reply provides the correct presentation, which the CMA is invited to consider in its redetermination.

(5) Anglian decomposed the uplift in its plan for AMP7 between enhancement costs and base costs, and explained this in its SOC.[7] For this purpose, Anglian defined "base costs" in the normal sense of the term (that is, opex plus capital maintenance, or "Botex") rather than the new concept of "Botex Plus" which Ofwat switched to during the PR19 process. "Botex Plus" incorporates components of expenditure which Ofwat (and companies) have always in previous price controls regarded as enhancement expenditure. These components mainly relate to growth, but also include low pressure, sewer flooding and transferred sewers.

(6) Anglian stripped out these added components in its Botex uplift analysis to allow for a like-for-like comparison between AMP6 Botex expenditure (where these elements were previously treated as enhancement) and its planned AMP7 Botex expenditure.

(7) The reason these elements were previously treated as enhancement expenditure is because growth is subject to cyclical variation, relating primarily to economic forces, and the scale of expenditure on sewer flooding and low pressure depends on the views of a company's customers about the extent to which it should prioritise these service improvements. In other words, the scope of a company's enhancement programme (and hence its cost) can vary significantly from one period to another according to the obligations it is required to deliver. In its SOC, Anglian explained how its AMP7 enhancement programme differed from its AMP6 enhancement programme because of, for example, significant increases in the size of its WINEP programme and the scale of its WRMP.[8]

(8) **Because of this inter-period variance in the scope and drivers of enhancement programmes, it is highly misleading to draw conclusions about a company's overall efficiency on the basis of the relative scale of expenditure between periods**. For the same reason, one company's enhancement programme can be very different from another's in the same period and so inter-company comparisons are equally misleading. To illustrate this, in its SoC Anglian explained how its AMP7 WINEP programme included 19% of the total national obligations and more than any other company.[9]

(9) Similarly, historical expenditure on Botex (representing the combined base opex and capital maintenance required to maintain the asset base to the historical service standards achieved) provides only one component of any benchmark for assessing the efficiency of any future Botex costs. Account also needs to be taken of the general upward pressures on capital maintenance that result from an ageing and growing asset base and additional service obligations, as well as any efficiency challenges applied by the company to offset these increasing costs.

(10) Anglian showed in Table 1 of its SOC[10] 95% of its variance between AMP6 and AMP7 related to enhancement expenditure. Below is a summary of Table 2 to illustrate this:

[6] For example, CCW's submission to the CMA about Anglian's SOC, para. 6.3, available at: https://assets.publishing.service.gov.uk/media/5ebebe3986650c27955a89bb/The_Consumer_Council_for_Water__Anglian__submission_redacted_.pdf.

[7] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 2.1, paras. 292 to 304.

[8] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 4, paras. 320 to 353.

[9] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 5.2, para. 339.

[10] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, para. 303 and Table 3.3.

**Table 1 Anglian's AMP7 expenditure plan compared to AMP6 (2017/18 prices)**

| | Anglian's actual spend for 2015-2020 (AMP6) (£m) | | | Anglian's planned expenditure in 2020-2025 (AMP7) (£m) | | |
|---|---|---|---|---|---|---|
| | **Botex** | **Enhancement** | **Totex** | **Botex** | **Enhancement** | **Totex** |
| **Total wholesale (£m)** | 3,509 | 942 | 4,451 | 3,574 | 2,306 | 5,880 |
| **Variance (£m)** | | | | 65 | 1,364 | 1,429 |
| **Variance (%)** | | | | 1.9% | 144.7% | 32.1% |

Source: Anglian

(11) Anglian is disappointed that Ofwat has, in its Reponse to Anglian, chosen again to restate erroneously Anglian's Botex uplift by reinstating an error that it accepted and corrected during the PR19 process. In paragraph 3.3 and Table 3.3 of Ofwat's Response to Anglian's Statement of Case, Ofwat purports to replicate Anglian's analysis and quotes a figure of 4.1% for the uplift between AMP6 and AMP7, rather than the 1.9% Anglian showed in its SOC and replicated in Table 1 above.[11]

(12) Ofwat generates this higher figure by including enhancement opex within base. In doing so, it reverts to the method for comparing previous and future periods which it used in its IAP. At the time Anglian, as well as other stakeholders, pointed out Ofwat's error in the treatment of enhancement opex both for the purpose of this comparison and for cost modelling.[12] Ofwat corrected this for the remainder of the PR19 process and subsequent presentations of AMP6 to AMP7 comparisons rightly placed enhancement opex within enhancement. The treatment of enhancement opex in cost modelling was also corrected, with enhancement opex being determined within enhancement models from the DD onwards. It is disappointing and disingenuous now for Ofwat to return to presenting this misleading analysis.

(13) Ofwat's footnote to Table 3.3 explains that its inclusion of enhancement within Botex was a practical consideration rather than based on a principled view that this is the correct treatment.[13] Ofwat correctly states that enhancement opex was not separately reported for AMP6 so there are no company submissions for these years from which to source the data. During AMP6 enhancement opex was reported as part of base opex. However, Ofwat omits to note that it requested data from companies about their AMP6 enhancement opex via a formal query as it tried to resolve the problem. The data which Anglian and the five other companies provided on AMP6 enhancement opex were used by Ofwat to set enhancement opex implicit allowances for the whole of the industry. It is highly disingenuous for Ofwat now to imply that it lacks reliable data for Anglian to enable a true Botex comparison when it relied on those exact same data in making deductions of £163 million from companies' base cost allowances at FD.

(14) One aspect of Ofwat's presentation in its Response with which Anglian agrees is to move transferred sewer expenditure to the AMP6 baseline. Anglian explained in its SOC that transferred sewer expenditure was recorded under enhancement in AMP6 but would be treated as base in AMP7.[14] Anglian cited this as one of the reasons why Botex would increase between the two periods. Ofwat's approach is to move transferred sewer expenditure to Botex as if it had always been recorded here. This allows for easier like-for-like comparisons to be made, and in Table 2 below Anglian restates Table 1 above on this same basis. The upshot of this is that 99.4% of the total uplift between Anglian's actual Botex spend for AMP6 versus its planned expenditure in AMP7 is attributable to enhancement. **The**

[11] Response to Anglian, para. 3.3, Table 3.3.

[12] IAP Response, section 5.2.5, page 32 (SOC104).

[13] Response to Anglian, page 38.

[14] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 3.2 and 3.3, paras. 313 to 316.

**variance on Botex between the two periods is just £8 million, or 0.2%. This is even lower than the 1.9% uplift Anglian set out in its SOC. Stated differently, the variance between Anglian's AMP6 and AMP7 Botex expenditure is effectively nil.**

**Table 2 Anglian's actual AMP6 spend compared to planned spend in AMP7, split by Botex and Enhancement**

| | Anglian's actual spend for 2015-2020 (AMP6) (£m) | | | Anglian's planned expenditure in 2020-2025 (AMP7) (£m) | | |
|---|---|---|---|---|---|---|
| | **Botex** | **Enhancement** | **Totex** | **Botex** | **Enhancement** | **Totex** |
| **Total wholesale (£m)** | 3,566 | 885 | 4,451 | 3,574 | 2,306 | 5,880 |
| **Variance (£m)** | | | | 8 | 1,421 | 1,429 |
| **Variance (%)** | | | | 0.2% | 160.6% | 32.1% |

Source: Anglian

(15) Anglian anticipates a steady increase in Botex needs in the next AMP as a result of (i) the increased cost of maintaining and securing the long-term resilience of an ageing asset base, (ii) the growth in the number of assets (built with previous AMPs' enhancement expenditure) which need to be maintained (this alone equates to some £86 million in AMP7), (iii) input price inflation, and (iv) the increase in service obligations. However, it proposes to meet these needs essentially without an increase in Botex, through the efficiency challenge which it applied to its own costs in its Plan. Anglian explained this repeatedly through the PR19 process and in its SOC **Chapter B.3: Anglian's Plan and how it was built**.

(16) It follows from the above analysis that Ofwat's suggestion that Anglian is subject to a particularly high evidential bar with respect to its cost adjustment claims is also unfounded. At paragraph 3.263 of its Response to Anglian, Ofwat states "*Due to the asymmetry of information and to protect the interests of customers we expect companies to make a compelling case for any adjustment. This is particularly so when in making that adjustment the company would receive an allowance significantly higher than historical cost, as is the case for Anglian Water*".[15]

## 2 Outperformance

**Summary**

(i) The comparison of companies' historical business plan proposals and their outturn expenditure is not meaningful as it fails to reflect the significant modifications to the agreed scope of the business plan which evolves during the price review process and other factors.

(ii) Anglian agrees with Ofwat's observation that it has a successful track record of delivering efficiencies against its expenditure allowances.

(iii) Anglian shows that nearly all its outperformance has been achieved in the enhancement programme while it has essentially spent all of its Botex allowances over the last 20 years. Its outperformance has been delivered whilst delivering excellent service to customers and delivering its regulatory contract.

(iv) Lack of outperformance in Botex is due to the restricted opportunities of introducing innovation into an established asset base, the continuous upward demand for capital maintenance which absorbs efficiencies achieved and Ofwat's backward-looking approach to setting future Botex allowances.

[15] Response to Anglian, para. 3.263.

(v) One of the objectives of RPI – x regulation is to incentivise companies to outperform the regulatory settlement by becoming more efficient. Totex sharing incentivises companies to attempt innovative solutions to deliver enhancement outcomes, while retaining the risk should those innovations fail.

(vi) Customers share in the benefit of this outperformance through totex sharing and the use of lower costs in the models used to set future allowances for all companies. That is, not only do Anglian's customers benefit from Anglian's outperformance but also all customers in England and Wales benefit, particularly if Anglian is one of the companies to provide a benchmark for other companies (as Oxera shows to be the case in its Report on cost assessment issues,[16] if appropriate models are used).

(vii) In its Response and presentation to the CMA of 20 May, Ofwat has sought to characterise the rewards linked to Anglian's previous strong performance as somehow being evidence of bidding behaviour and gaming of the regulatory system. Anglian refutes this portrayal.

(viii) Anglian's outperformance in AMP6 was one of the criteria informing Ofwat's 2019 assessment of Anglian as a better performing company. Anglian's customers' bills over AMP7 will be, on average, £31 less than they would otherwise have been in the absence of the company's outperformance achieved in AMP6.

(17) In its response to the CMA, Ofwat has drawn attention to the variance between Anglian's expenditure proposals at past price reviews and its outturn expenditure. It has said that company business plans have consistently proved to be poor guides to outturn expenditure relative to Ofwat's final determination. It set out its view of the data for Anglian over the past four price control periods in Figure 2.2 of its Response on Cost Efficiency.[17]

### 2.1 Companies' planned and outturn expenditures are not equivalent

(18) Anglian starts by examining the gap between the blue and the brown columns in this chart – that is, the difference between companies' plans and Ofwat's allowances. These differences are made up of two components, scope and efficiency. Anglian fully accepts that customers' bills should reflect only efficient costs and at previous price reviews has accepted expenditure challenges on the basis of Ofwat's efficiency analysis.

(19) Scope challenges always account for a substantial proportion of the difference between companies' plans and Ofwat's allowances. Ofwat frequently rules that components of companies' investment plans are not necessary and should not be funded by customers. Once Ofwat has ruled these out of companies' allowances, companies typically drop them from their plans (that is, both the costs of these investment plans and their benefits or outcomes are dropped).

(20) Furthermore, companies reduce their plans in response to the information they receive through the price review process which allows them to further benchmark their costs against other companies. Ofwat itself notes that reductions in companies' requested costs during the PR19 process "*may be a response to information revealed to the companies during the PR19 process, for example information on other companies' costs and Ofwat's benchmarking assessment, which allowed them to better understand their*

[16] Oxera's Report on cost assessment issues (REP13).

[17] Response on Cost Efficiency (006), pages 9-10.

*efficient costs*".[18] Anglian has revised aspects of its own plan during PR19 in response to, for example, new benchmarking evidence (particularly in relation to forecast costs), new input price forecasts, the change in the law on metaldehyde and newer information relating to anticipated levels of new connection and population growth. These changes are natural evolutions of a Plan through a price review process. They should *not* be used as evidence of "bidding" behaviour.

(21) **It is therefore highly misleading to present companies' planned and outturn expenditures as equivalent because the scope, and thus outcomes, of the two are invariably very different**. Once a company accepts its final determination, the expenditure allowance within it become its new benchmark. The company's challenge becomes one of delivering the outcomes of its determination within its funding allowance.

(22) To give an illustration of the de-scoping which occurs during a price control process, Anglian reviewed its PR09 programme.

(23) Anglian's PR09 final determination document listed the components of its plan which had been excluded on scope grounds. At this price review Ofwat specifically identified them as "two-sided" adjustments "*where a challenge or exclusion reflects new guidance on regulatory expectations or outputs or a correction of minor errors*".[19] Two-sided adjustments totalled £92.2 million (in 2007/08 prices) across Anglian's capital plan.

(24) In the wastewater quality programme, for example, they included –

(i) An advanced digestion sludge treatment plant at Pyewipe WRC – "*this project is being excluded on the grounds that it excessively increases headroom and is therefore unnecessary*";

(ii) Security at waste water pumping stations – "*costs associated with upgrades to pumping stations categorised as either Basic or Basic Plus have been excluded in line with Ofwat policy that such improvements be deferred to later price review periods.*";

(iii) Beck Row WTW groundwater investigation – "*the project being funded under the water service programme for relocation of the groundwater source negated the need for this investigation*";

(iv) Corran Way PS, Stifford – "*we have been notified by the Environment Agency that it is being removed from the NEP*"; and

(v) 14 NEP schemes with a WFD driver (phosphorus or ammonia removal) – "*these schemes either fail the Environment Agency's technical assessment or may fail the disproportionate cost assessment on the grounds of a significantly poor benefit/cost ratio*."

(25) Anglian also analysed in detail the total challenge Ofwat made to its PR19 enhancement programme at the FD. As it showed in its SOC, about one third of Ofwat's challenge was on scope and need.[20]

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[18] Response to Bristol, pages 38-39. As an aside, Anglian notes that Ofwat's benchmarking overcomes the so called asymmetry of information advantage to such an extent that, until companies' business plan data is published, companies are unable to benchmark their forecast costs, which can be a particular issue for enhancement expenditure where many elements have not previously been undertaken (as evident in Ofwat's focus on benchmarking forecast costs in many cases for enhancement expenditure). Indeed, Ofwat highlighted this issue in its PR19 Final Methodology, page 146 (SOC314). As such, Anglian considers that Ofwat overplays the "asymmetry of information" issue.

[19] PR09 FD, page 68 (SOC394).

[20] Anglian's SOC, Chapter E.3: Enhancement, Section 3.1, para. 752.

## 2.2 The majority of Anglian's historical outperformance is derived from enhancement

(26) Anglian now turns to the gap between the brown and the gold columns in Ofwat's Figure 2.2 - the difference between Ofwat's allowances and Anglian's outturn expenditure, referred to as outperformance.

(27) Anglian maintains its own record of expenditure outperformance. There are differences between Anglian's figures and Ofwat's as set out in Table 3 below. Anglian has not seen the calculations underlying Ofwat's conclusions and considers there to be various reasons why these numbers may differ but does not challenge Ofwat's overall observation that it has a successful track record of delivering efficiencies against its expenditure allowances. It does, however, challenge Ofwat's assertion that the fact of strong performance in the past (which was the company responding well to effective regulatory incentives), justifies the dramatic shortfall in its PR19 cost allowances.

**Table 3 Anglian's assessment of past outperformance versus Ofwat's presentation in its Response**

| | 2000-05 | 2005-10 | 2010-15 | 2015-20 | Average |
|---|---|---|---|---|---|
| Ofwat view | 3.5% | 1.7% | 8.3% | 9.2% | 5.7% |
| Anglian view | 6.7% | 0.5% | 11.1% | 8.0% | 6.6% |

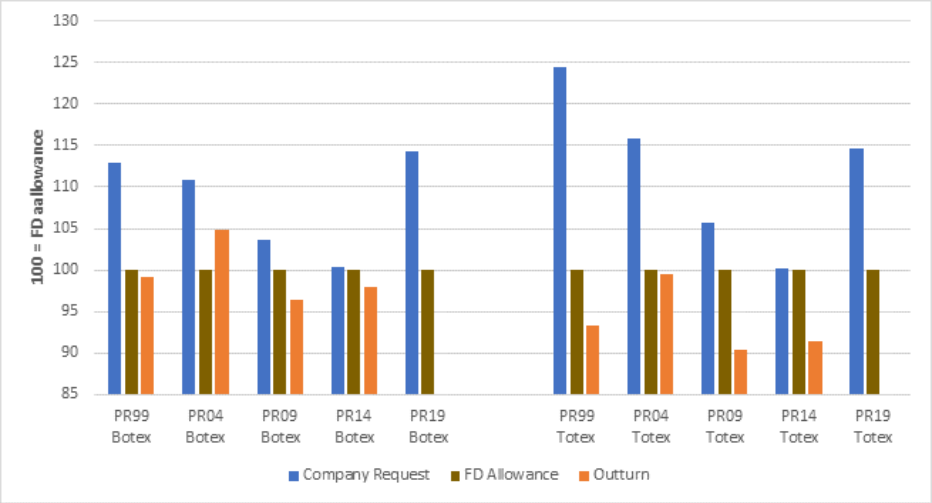
Source: Anglian

Note: Ofwat's analysis covers 2015-19 for the last period whereas Anglian has taken into account its forecast expenditure for year 5.

(28) In order to provide meaningful commentary against this observation of historical outperformance it is again helpful to decompose the outperformance between base and enhancement expenditure. Once again, Anglian defines base costs as base opex plus capital maintenance, or "Botex", rather than the new "Botex Plus" version which Ofwat switched to mid-way through the PR19 process.

(29) Figure 1 below replicates Figure 2.2 from Ofwat's Response on Cost Efficiency[21] without the misleading scaling which Anglian presumes was designed to grossly magnify the perceived variances. The right-hand set of columns shows totex outperformance (Anglian's figures rather than Ofwat's) while the left-hand set relates to Botex only.

**Figure 1 Anglian historical comparisons of company expenditure request, FD allowance and outturn**




Note: For AMP6 (PR14), Anglian received a totex allowance rather than separate allowances for Botex and enhancement. Anglian has imputed disaggregated allowances by pro rating Ofwat's PR14 totex allowance against the relative proportions of Botex and enhancement in its PR14 business plan.

[21] Response on Cost Efficiency (006), page 10.

(30) The chart shows that **the majority of Anglian's historical outperformance is derived from the enhancement programme rather than the Botex programme. On Botex, Anglian has spent essentially all of the allowances it has been given over the last twenty years.**

(31) There are three factors which explain the lack of outperformance on Botex.

(32) The first is that the opportunities to introduce innovation into the operation and maintenance of an established asset base are more limited. Many of the assets in the asset base are old and, while it may be desirable to replace them with newer, more efficient equivalents, options for doing so may be ruled out by the whole life costs of doing so or technical barriers which impede the interface between newer and older assets.

(33) Typically, the refurbishment or replacement of assets on live operational plants and networks is more expensive than the original installation costs due to the need to maintain service to customers, meet quality standards and ensure a safe working environment. The repair of a sewer, for example, must be accompanied by works to compensate for the temporary loss of the damaged section (by over-pumping or tankering away) if sewage collection is to be maintained.

(34) Where assets are refurbished on a "fix on fail" basis (as is the case with much network maintenance) there is little opportunity to apply efficiencies that come with good planning. When a water main fails at 3 a.m. repair must commence immediately with the attendant out-of-hours costs.

(35) The uncertainty of the timing of failure also has a geographical dimension, particularly for a company serving a dispersed population with scattered assets. A significant proportion of the time to complete jobs is made up of travel between them. The replacement of domestic water meters is an exception to this, where planning allows all the assets in a geographical area to be replaced with minimal travel time between jobs.

(36) The second reason is that the demands for capital maintenance are always sufficient to absorb any Botex efficiencies which might be made. Anglian shows in **Part G.2: Reply on Capital Maintenance**[22] that capital maintenance expenditure is on a permanent, upward-rising trend because of the continuous expansion of an ageing asset base, with associated increasing risks. In describing its approach to asset management, Anglian has explained that there is always a lengthy list of capital maintenance needs. Having prioritised the items on the list on the basis of risk to service from asset failure, Anglian draws a line through it according to customers' appetite for bill increases. Should Anglian deliver the chosen schemes within the allowed funding it returns to the list to find the next best candidates for expenditure. **Any efficiencies achieved are therefore translated into customer benefit as the risk of service failures is reduced from the completion of additional capital maintenance schemes**.

(37) The third reason relates to Ofwat's approach to making allowances for future costs. In all price reviews Ofwat has used historical expenditure on Botex to some degree as a guide to future allowances. After PR99, when its backward-looking approach on capital maintenance was criticised as "*intellectual[ly] neglect[ful]*"[23] by the Environmental Audit Committee, it adopted more intelligent, forward-looking approaches for determining capital maintenance allowances. However, since PR14 it has reverted to its previous position of giving no thought to the changing needs of the future in setting its Botex allowances. Should a company find that Ofwat's Botex models allow it less expenditure than its own assessments of future needs suggest, any previous outperformance on Botex appears to be used by Ofwat as proof that its past needs were clearly overstated and its future needs must also be lower.

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[22] Part G.2 : Reply on Capital Maintenance (REP08).

[23] House of Commons (2000), Environmental Audit Committee, Seventh Report, para. 208, available at https://publications.parliament.uk/pa/cm199900/cmselect/cmenvaud/597/59703.htm.

(38) Outperformance is achieved in the enhancement programme primarily because the constraints of working with an existing, established asset base are loosened. The challenge is to deliver the outcomes of the enhancement programme with fewer limitations about how to do so. Companies challenge themselves to deliver solutions differently from how they have in the past or to implement different solutions altogether. Creating new assets rather than refurbishing old ones provides the opportunity to make use of those newer, more efficient and higher performing technologies which are so often unavailable in Botex.

(39) Many of Anglian's innovations have been achieved in its pursuit of its ambitious carbon-reduction goals. Anglian has been recognised by the recent Government Green Construction Board Infrastructure Working Group in its initiative to save 24 million tonnes of carbon and thus £14.6 billion a year by 2050. Anglian has used carbon reduction as a means of driving efficient investment.

(40) As measures of its carbon-reduction achievements, in AMP6, Anglian:

(i) achieved a 61% reduction in capital carbon in AMP5 compared to 2010 (against a goal of 60%);

(ii) achieved a 34% reduction in operational carbon (against a 2015 baseline).

(41) In pursuit of outperformance, companies will attempt innovative solutions and the incentives available for outperformance are important drivers of innovation. Innovation is held up as a desired outcome of the regulatory regime because successful innovations become widely adopted, delivering benefits to customers in terms of improved services and lower bills.

> An excellent example of innovation leading to financial efficiencies is the Grafham Resilience project.
>
> Grafham WTW serves over 800,000 customers, including the major towns of Northampton, Huntingdon and Bedford. Risk assessment revealed that approximately three-quarters of these customers would be affected by a major outage at Grafham WTW. As part of Anglian Water's AMP5 Final Business Plan programme, the Grafham WTW Resilience scheme was identified to mitigate the effect of a major outage to the works.
>
> The solution set out in Anglian's PR09 business plan was to construct a new 37km long 1,100mm diameter pipeline from Hannington Water Reservoir (WR) to Grafham WTW. Like all long-distance pipelines, however, the project would have faced significant logistical challenges including river crossings and urbanised environments, and would therefore have been expensive in both financial and carbon terms.
>
> An alternative solution was identified whereby the project could utilise the existing pipeline constructed in 1967 to convey water from Grafham to Hannington. Following a large scale flow reversal network trial in 2012, it was proved that the existing pipeline could be used to transport water in the opposite direction. Instead of building a new pipeline, the desired outcome was therefore achieved by building ancillary assets to the existing pipeline, such as reverse-flow pumping stations and a new service reservoir at Grafham WTW.
>
> Adopting this solution saved approximately £20 million in Capex and drove a 50% reduction of embodied carbon from the original final business plan solution. Furthermore, it established reverse-flow as a viable technology to be considered for use by the whole industry in similar projects. In this way the efficiencies realised by Anglian through this project deliver benefits for all customers.

(42) Innovation has its risks and sometimes innovations fail. When this happens, companies, rather than customers, bear the cost of remedying failed innovations. Particularly in the enhancement programme, the risk of delivery failure remains squarely with the company. Should a company have failed to deliver

against an enhancement obligation it will be required to make good for the failure at its own expense. It is the reward that is available to the company for achieving outperformance that encourages it to take the risk of trying innovative technologies, systems and practices.

Here are some examples of innovations that were made in pursuit of efficiency but failed:

High Density Polyethylene (HDPE) is used extensively across the industry for pipes up to 600mm diameter. Lengths are butt-welded together using a thermo-bonding process. Other materials, such as steel and ductile iron, are normally used for larger diameter pipes. Anglian attempted to use HDPE using an innovative mechanical jointing process for a length of 900mm diameter pipeline at Old Stoney Stratford in Buckinghamshire. However, the new mechanical joints consistently failed pressure testing, requiring the joints to be re-excavated and repaired.

Keeping Anglian's large stock of ageing water towers water-tight is a challenge. Anglian identified Hylam Bags as an innovative way of lining tanks. These bags offered flexibility, accommodating movement in the towers. However, it found that after a short period these bags failed as the movement was too great. The bags had to be taken out and the towers sealed by more traditional means to prevent water quality failures.

MOPVC Molecore is a new lightweight PVC pipe product, that first attracted Anglian because of its low capital carbon content. However, during extensive trials, the fittings from the new product onto existing infrastructure proved difficult to create a pressure seal. After many attempts, the pipes were abandoned for ductile iron.

## 2.3 Outperformance needs to be considered together with service delivery

(43) Outperformance can only be regarded as such if it is accompanied by service delivery. A company that has spent less than its allowance but also failed to meet its service delivery targets cannot be said to have outperformed. On the contrary, it has taken a reward at the expense of its customers. Table 4 below shows the relative service delivery record of the five companies awarded a "dark green" approval rating for wholesale outperformance in Ofwat's 2018 -19 service delivery report.[24] It shows that Anglian was the only company to achieve over 90% of its performance commitments and the only one (not just of the five but of the whole industry) to achieve a SIM score of 90. **As well as having an excellent record on service delivery, Anglian has an impeccable record on the delivery of its enhancement obligations. Outperformance has been delivered without any shortfall in the benefits delivered to its customers.**

**Table 4 Performance commitments achieved of the five companies awarded a "dark green" approval**

| | % performance commitments achieved (%) | SIM score |
|---|---|---|
| Anglian | 93 | 90.0 |
| Wessex | 77 | 87.2 |
| South West | 71 | 87.6 |
| Southern | 64 | 80.1 |
| Northumbrian | 59 | 85.9 |

Source: Ofwat's 2018 - 19 Service Delivery Report (SOC265).

[24] Ofwat's 2018 - 19 Service Delivery Report (SOC265).

## 2.4 Outperformance is a desirable outcome for customers

(44) Customers benefit from outperformance in two ways. Firstly, the customers of the individual company receive a direct share of the financial savings their company has achieved in the form of reductions to the company's required revenue in the following price control period. **Anglian's customers' bills over AMP7 will be, on average, £31 less than they would otherwise have been in the absence of the company's outperformance.**

(45) Secondly, all customers of England and Wales water companies benefit because the lower costs which companies incurred to deliver their outperformance help determine the efficient cost allowances in the following period. In the absence of this 'regulatory ratchet' companies would earn outperformance multiple times for repeatedly implementing the same solutions. It is evident that Ofwat's methods at PR19 for determining cost allowances have relied on records of historical expenditure. Ofwat's models seek to establish relationships between costs and cost drivers from the past and then to use those relationships to forecast future costs. As a crude rule of thumb, Anglian's costs represent 10% of industry totex. If Anglian outperforms on totex by 10% then overall industry totex will be lower by around 1%, which, when used in Ofwat's models, will result in lower totex allowances across the whole industry. This benefit will be orders of magnitude larger if Anglian helps to form the benchmark for the rest of the industry.

(46) Because of the long-term benefits to customers, outperformance is a desired outcome from the regulatory system. Its place as a core feature of the RPI-x regime stems from the fact that it replicates the dynamics of competitive markets: the profit motive incentivises business owners to pursue efficiencies and their success at doing so rewards all customers by demanding improvements of all market participants. Outperformance was one of the dimensions of performance used by Ofwat to assess companies in its Service Delivery report 2018-19, under the heading of wholesale expenditure. Anglian was one of five companies to be awarded a dark green assessment by Ofwat in this category, which contributed to Ofwat placing Anglian as one of only three companies in the top "Better performance" class.[25]

(47) To conclude, the comparisons which Ofwat draws on above, to support its position that (i) Anglian is inefficient: and (ii) has a history of over-bidding its expenditure needs to achieve outperformance are oversimplified, misleading and unfounded. Both alone and in combination with Ofwat's cost assessment approach, they form weak evidence which falls far short of the standard required to justify regulatory interventions on the scale of Ofwat's cost challenges for Anglian in PR19. **Rather than using such high level and inappropriate comparisons to inform Anglian's relative efficiency, an assessment of Anglian's efficient cost level should be based on detailed assessment of bottom up evidence, in conjunction with robust top-down benchmarking, where appropriate**.

[25] Ofwat's 2018-19 Service Delivery Report, page 5 (SOC265).

# Part G.2: Reply on Capital Maintenance

## 1 Overview

(i) In this document Anglian provides supplementary evidence to support its future Capital Maintenance requirements. In **Part A.1: Review of Botex and Capital Maintenance arguments**[26] Anglian provides feedback to Ofwat's Response to Anglian's SOC in tabular form.

The key points are:

(ii) Anglian has provided various submissions and evidence as to how it built its AMP7 capital maintenance requirements. Anglian, supported by the views of Bush and Earwaker,[27] has repeatedly made the case that capital maintenance allowances should be set using a range of separate forward-looking, bottom-up, risk-based, asset-led analyses rather than derived solely on the basis of a suite of inaccurate econometric models that do not include any cost drivers that capture upward pressures (such as asset condition or asset risk measures). This is an issue Anglian has engaged on for many years, including through Ofwat's 'Market Place for Ideas' in order that a better approach could be taken for PR19.[28] Ofwat has not engaged effectively with these arguments, nor with the Asset Summaries Anglian provided as part of its SOC.

(iii) In stark contrast, based on Ofwat's published documents for PR19, Ofwat has not established a framework comparable to that it used at PR99 to monitor companies' serviceability. Such an omission is a **retrograde position even relative to the low point of PR99, which the EAC considered "*intellectual neglect*",**[29] and seems to be at odds with Ofwat's own guidance on serviceability in MD161.[30] This is also at a time where, relative to PR99, the challenges of climate change are both better known, and better modelled through robust asset management approaches such as those undertaken by Anglian. Anglian published and discussed a thought leadership paper on the Water UK website Market Place for Ideas to demonstrate the divergence of approaches and to remind Ofwat of the significant improvements the sector has made in the area of investment planning.[31] The aim was to ensure this could be taken forward as part of the approach to PR19. This has not happened. This is a matter of extreme concern and Anglian encourages the CMA to explore this critical issue. Ofwat has itself begun to discuss the potential for an improved approach for PR24, but this cannot remedy the problems created by the paucity of its approach to this issue in PR19.

(iv) There are useful parallels for the CMA to consider in the approach recently developed by the Water Industry Commissioner for Scotland (WICS). The proactive and collaborative approach that WICS has taken seeks to set the right framework to enable Scottish Water to tackle challenges that are similar to those facing the sector in England and Wales. Anglian would recommend the CMA seeks to discuss these important issues with WICS. Anglian

[26] Part A: Review of Botex and capital maintenance arguments (REP02).

[27] Bush & Earwaker Capital Maintenance Report (May 2019) (SOC153) and Bush & Earwaker Capital Maintenance Report (August 2019) (SOC191).

[28] UKWIR Capital Maintenance Planning (SOC328).

[29] House of Commons (2000), Environmental Audit Committee, Seventh Report, para. 208, available at https://publications.parliament.uk/pa/cm199900/cmselect/cmenvaud/597/59703.htm.

[30] Ofwat MD161: Maintaining Serviceability to Customers, April 2000.

[31] Capital Maintenance Planning (July 2015) (REP33).

recommends the CMA reviews the Water Industry Commissioner for Scotland (WICS) 2019 Decision Paper on Asset Replacement.[32]

(v) Ofwat has drawn incorrect conclusions from comparisons between Anglian's AMP6 and AMP7 capital maintenance expenditure. This is driven by a failure to capture different accounting treatment and the shift to totex expenditure for core maintenance activities. Ofwat itself notes that "*this reducing trend can be partially attributed to efficiency and changes in accounting rules which changed the treatment of former capital costs to operating costs*".[33] Correcting for this misrepresentation demonstrates Anglian's proposed base maintenance requirements for AMP7 are increasing. This is consistent with the maintenance requirements driven by previous enhancement investments as evidenced in this Reply.

(vi) Ofwat's assertion that companies' Capital Maintenance is not "lumpy" is unfounded and contradicts its support for capital maintenance smoothing in *Bristol (2015)*.[34] This demonstrates a fundamental lack of engineering rationale and understanding of the basic asset management and economic principles. The general deterioration of inherited older (pre-privatisation) infrastructure assets means that maintenance requirements will naturally increase over time. This is a function of how the condition of these assets and the risk of failure changes over time. In addition, companies' asset bases grow over time as a result of Enhancement expenditure incurred to meet tightening statutory requirements for water quality and environmental improvements and to accommodate an increase in connected properties and overall population served. Again, like older assets, their condition and the risk of asset failure changes over time. This gives rise to the requirement to regularly repair, refurbish and, in the long-term, replace them to maintain their capability. This drives future Capital Maintenance requirements. In the previous 6 AMP periods, Anglian has invested £4 billion in new above ground (non-infrastructure) assets which have increased both operational and ongoing maintenance costs.

(vii) Ofwat has made a number of statements that create a misleading impression of the dialogue held between Anglian and Ofwat during the PR19 process relating to capital maintenance and the corresponding cost adjustment claim which Ofwat invited Anglian to submit in its meeting of 7 October.[35] Ofwat has misrepresented the additional evidence Anglian provided supporting its AMP7 Capital Maintenance expenditure levels during the Price Review process, including in the form of the Cost Adjustment Claim. This evidence was provided following constructive meetings between Anglian and Ofwat exploring the material differences between Anglian and Ofwat's view.

(viii) Ofwat's Response to Anglian's SOC fails to engage with the previous evidence provided by Anglian on the derivation of its future maintenance requirements. For example, there is not a single reference in Ofwat's Response to Anglian's updated Resilience in the Round assessment[36] as part of which rigorous asset management approaches are shown to be central to achieving operational resilience.[37]

[32] WICS Strategic Review of Charges – Asset Replacement (July 2019), available at https://www.watercommission.co.uk/UserFiles/Documents/2019%20Asset%20Replacement_Final.pdf.

[33] Response to Anglian, para. 3.86.

[34] Oxera's Report on cost assessment issues (REP13).

[35] Capital Maintenance CAC, page 2 (SOC213).

[36] Arup Resilience Assessment (2020) (SOC285).

[37] See also Asset Management Plan Summaries / Dashboards (SOC364).

(ix) Anglian would welcome the opportunity to demonstrate to the CMA these tools and how they were used to derive Anglian's Plan and the values demonstrated in the case studies.

(48) Ofwat makes a number of statements in its Response to Anglian's SOC regarding capital maintenance. Anglian responds to these statements in **Part A.1: Review of Botex and Capital Maintenance arguments**.[38] This document provides further detail to support Anglian's reply to Ofwat's Response.

## 2 Ofwat has no established framework to monitor companies' serviceability

### 2.1 Background

(49) Ofwat has no established framework comparable to that Ofwat used in the past to monitor companies' serviceability. Anglian does not know whether the serviceability of companies used as benchmarks in PR19 has been examined by Ofwat. Ofwat has reverted to the same reliance on a backward-looking approach that caused such concern at PR99 and which the EAC regarded as *"intellectual[ly] neglect[ful]"*[39] and seems to be at odds with Ofwat's own guidance on serviceability in MD161.[40]

(50) What alarmed the Parliamentary Environmental Audit Committee (EAC) in 2000 was the approach taken by Ofwat at PR99 to determine companies' future capital maintenance requirements: "*In the 1999 Periodic review Ofwat took the view that if there was no evidence of a deteriorating trend in serviceability … over the most recent 5 year period, the Director would assume that the average level of expenditure in that period would be sufficient, on a company wide basis, to avoid deterioration in the period covered by PR99. In other words, Ofwat presumes that what has been satisfactory in the past will be satisfactory in the future*".[41]

(51) The Committee highlighted some of the problems with this approach:

(i) the criteria used to determine serviceability can be distorted by other factors, such as weather;

(ii) the method takes no account of the future condition of the asset stock;

(iii) there is no provision for the fact that as assets get older, they may need more maintenance, nor acknowledge that some new assets may have a shorter life than those that they replace.

(52) The Committee concluded that "*this backward-looking approach appeared completely illogical to a number of witnesses who felt that a more forward-looking approach was required*".[42]

(53) Such an omission, combined with Ofwat's sole focus on econometric models, would **clearly be a retrograde position even relative to PR99.** This is at a time where, relative to PR99, the challenges of climate change are both better known, and better modelled through robust asset management approaches such as those undertaken by Anglian. This is a matter of extreme concern for this and future price controls and contrasts with the regulatory approach being taken in Scotland when faced with similar long-term challenges.

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[38] Part A.1: Review of Botex and Capital Maintenance arguments (REP02).

[39] House of Commons (2000), Environmental Audit Committee, Seventh Report, para. 208, available at https://publications.parliament.uk/pa/cm199900/cmselect/cmenvaud/597/59703.htm.

[40] Ofwat MD161: Maintaining Serviceability to Customers, April 2000.

[41] House of Commons (2000), Environmental Audit Committee, Seventh Report, para. 191, available at https://publications.parliament.uk/pa/cm199900/cmselect/cmenvaud/597/59703.htm.

[42] House of Commons (2000), Environmental Audit Committee, Seventh Report, para. 197, available at https://publications.parliament.uk/pa/cm199900/cmselect/cmenvaud/597/59703.htm.

(54) Anglian's whole approach to investment planning, which generated its capital maintenance plan, is founded on the principles underlying the Capital Maintenance Planning Common Framework, as is clear from the description Anglian provided to Ofwat in its Business Plan.[43]

(55) Anglian, supported by the views of Bush and Earwaker,[44] has repeatedly made the case that capital maintenance allowances should be set not solely on the basis of econometric models, but triangulated with separate analyses of need, based on bottom-up assessments. Such assessments would consider, among other things, historical investment, asset age and condition, depreciation profiles, customers' views on future service and future risks.

(56) Anglian raised the issue via a paper on the Water UK Market Place for Ideas, "Capital Maintenance Planning - From an Historical and Future Perspective", in July 2015 and presented the findings and the 2000 EAC report to Ofwat during the PR19 process. It did this as it saw Ofwat again basing allowances solely on the outputs of models fed by historical expenditure, a point that concerned Bush and Earwaker. The authors updated their report[45] in light of the DD as they saw no evidence that Ofwat had undertaken any forward-looking assessment of capital maintenance need and recommended it should do so before reaching its conclusions for FD.

### 2.2 WICS approach

(57) As stated in Anglian's SOC, Ofwat's approach to assessing future capital maintenance requirements is at odds with other regulators who have explicitly sought to reflect future requirements against the backdrop of future challenges, including targeting net-zero carbon emissions.

(58) Anglian recommends that the CMA reviews the Water Industry Commissioner for Scotland (WICS) 2019 Decision Paper on Asset Replacement.[46] The Decision Paper sets out the proactive approach that WICS has taken to meet the future challenges which can equally be applied to those regulated by Ofwat.

*"The Commission's previous Decision Papers have highlighted:*

(i) *the significant impact that levels of investment have on prices;*

(ii) ***the likelihood that investment levels will need to rise in the future;***

(iii) ***the importance of ensuring Scottish Water is adequately funded to meet the asset replacement challenge effectively and efficiently;***

(iv) *the need to continue to invest in improvements to water quality, environmental compliance and to meet the challenge of climate change, including the transition to net zero carbon emissions by 2045.*

*The Commission recognises that Scottish Water manages a complex portfolio of assets which are diverse in type, age, lifespan, condition and criticality. As such, effective and efficient asset management (and, in particular, managing asset replacement) is a core function.*"[47]

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[43] September 2018 Plan, Chapter 10.10 (SOC001) and DD Data Tables (SOC176), as reference in Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, section 7, para. 384.

[44] Bush & Earwaker Capital Maintenance Report (May 2019) (SOC153) and Bush & Earwaker Capital Maintenance Report (August 2019) (SOC191).

[45] Bush & Earwaker Capital Maintenance Report (August 2019), Executive Summary (SOC191).

[46] WICS Strategic Review of Charges – Asset Replacement (July 2019) https://www.watercommission.co.uk/UserFiles/Documents/2019%20Asset%20Replacement_Final.pdf.

[47] WICS Strategic Review of Charges – Asset Replacement (July 2019), Executive Summary, page 3 https://www.watercommission.co.uk/UserFiles/Documents/2019%20Asset%20Replacement_Final.pdf.

(59) As previously highlighted, Anglian would recommend that the CMA actively engages with WICS on its approach and findings as part of the redetermination process.

### 2.3 Ofwat's future Asset Health Project

(60) Ofwat has recently commenced a project to improve its understanding of future asset health and operational resilience. It hopes that the project will bring benefits for customers and the environment, for Ofwat, and for companies.

(61) Anglian welcomes this work and is engaging constructively with Ofwat on it. But it is of course happening too late to resolve the fundamental problems that the paucity of its analysis of capital maintenance needs in PR19 has created.

## 3 Anglian is forecasting higher capital expenditure than historical levels[48]

(62) Ofwat's Response to Anglian's SOC states that Anglian justifies its Botex increase of 1.9% compared to its Botex expenditure from AMP6 on the basis of higher capital maintenance requirements, yet Anglian's business plan appears to show a reduction in planned capital maintenance expenditure.[49] This conclusion is incorrect and is driven by changes to the accounting treatment for major areas of capital maintenance activities between the two periods.

(63) Once these accounting changes are adjusted for, to create a like-for-like comparison, Anglian is in fact proposing higher capital maintenance expenditure in AMP7 based on its forward-looking asset needs. Its plan is therefore consistent with the expected trend in capital maintenance expenditure as described in Section 2 of this document.

(64) Anglian assumes that Ofwat's conclusion is drawn from simple analysis of the combination of data reported in tables WS1 and WWS1 from the PR19 business plan[50] (which covered the years from 2018/19 to 2024/25), identically formatted tables included in the 2017 Information request for 2015/16 and 2016/17, and its Annual Performance Reports for 2017/18 and 2018/19. Across these various submissions Ofwat has the full dataset covering all years of AMP6 and AMP7 in comparable format. Indexation to year-average CPI-H converts them to the same price base.

(65) There are two lines within these tables relating to capital maintenance expenditure (capex) requirements. These are:

(i) Line 12: Maintaining the long-term capability of the assets – infrastructure

(ii) Line 13: Maintaining the long-term capability of the assets – non-infrastructure

(66) Table 5 below compares the figures on these two lines which appear to show a reduction between AMP6 and AMP7 as suggested by Ofwat:

**Table 5 Apparent reduction in capital maintenance expenditure between AMP6 and AMP7 (£m 2017-18 prices CPIH basis)**

| Capital Maintenance | AMP6 | AMP7 | Variance |
|---|---|---|---|
| Water | 426 | 407 | -18 |
| Wastewater | 660 | 646 | -14 |
| **Total wholesale** | **1,086** | **1,053** | **-32** |

[48] Response to Anglian, para. 1.31.

[49] Response to Anglian, paras. 1.31 and 3.86.

[50] DD Data Tables (SOC176).

Source: Anglian analysis

(67) This comparison fails to capture that two major areas of capital maintenance activity will be accounted for differently in AMP7 compared to AMP6. Failure to take these changes into account will incorrectly capture the movement in maintenance requirements, as Ofwat has done in its SOC Response.

(68) The first change between AMP6 and AMP7 is that in its Business Plan, Anglian anticipated making more use of "totex solutions", i.e. using opex solutions rather than traditional capex solutions, if these incur lower whole-life costs. Anglian's package of totex decision solutions included the option of raising the de minimis threshold for capitalising maintenance jobs, which has remained largely unchanged since privatisation. This proposed change led to the transfer of reported expenditure in its data tables from capital maintenance lines set out above to opex lines. This category therefore comprises a mixture of accounting changes (where the same activity is now reported as a different cost type) and activity changes (where the activity undertaken is different). However, in all cases the outcome of the activity is the same – the maintenance of the asset base - and the expenditure should be recognised as such.

(69) The second change relates to the maintenance of Information Technology (IT) assets. Historically, the financial reporting of these costs has always been included within capital maintenance as "Management and General" costs. Traditionally, IT maintenance has involved the replacement of hardware, including servers which have stored extensive data, PCs, terminals, laptops, telemetry hardware and data centres. These assets were purchased by Anglian, owned by Anglian and accordingly accounted for as capitalised assets.

(70) Consistent with the wider changes in digital technology seen across the economy, in AMP7 Anglian is moving to "cloud computing". This means Anglian will increasingly purchase data management and storage as services from third parties and own fewer assets itself. Anglian's reporting of these proposed costs throughout PR19 was based on accounting for these costs as opex, in line with accounting requirements. The business plan tables followed this same approach, meaning that in AMP7, opex is higher, and capital maintenance lower, than in AMP6. However, the purpose of the activity remains exactly the same as in previous years.

(71) The combination of these two factors is significant. Table 6 below restates Table 5 above on a consistent basis (i.e. recording the costs of capital maintenance activities irrespective of how they are accounted for) and shows the expected *increase* in capital maintenance for Anglian from AMP6 to AMP7. In this table infrastructure maintenance activities expensed under IFRS have also been included. This accounting change came in from 2015/16 and affects figures in both AMP6 and AMP7

**Table 6 Actual change in capital maintenance activity expenditure between AMP6 and AMP7 (£m 2017-18 prices CPIH basis)**

| Real Change | AMP6 | AMP7 | Variance |
|---|---|---|---|
| Water | 573 | 579 | +5 |
| Wastewater | 778 | 859 | +81 |
| **Total wholesale** | **1,351** | **1,437** | **+86** |

Source: Anglian analysis

# 4 Ofwat incorrectly assumes that companies' long-term capital maintenance requirements are constant over time

## 4.1 Overview

(72) Ofwat's Response states that "*Companies with a large, diverse asset base should be able to balance peaks and troughs and atypical lumps in particular cohorts of assets within a long-term allowance*".[51] The implications of this statement are significant.

(73) Firstly, Ofwat expects companies' capital maintenance expenditure should remain constant over time, after smoothing for normal annual variances and natural cyclical variations. Anglian disputes this. The evidence below shows that one should expect capital maintenance expenditure to follow a rising trend given the circumstances of the England and Wales water sector, based on the age, asset condition and likely risk of failure of the asset base inherited at privatisation, further assets transferred post-privatisation and notably the significant number of assets created by the substantial investment to meet statutory quality improvements and increase in customers served relative to the position at privatisation.[52]

(74) Anglian has been proactive in this area but its efforts have been hampered by Ofwat's narrow approach for the PR19 submission. Ofwat has provided limited opportunities for companies to engage with it on these issues. Companies have prepared robust asset management plans but Ofwat's process has not allowed for meaningful assessment and discussion of their work. This is the polar opposite of the WICS approach.

(75) Ofwat's Botex Plus models, whilst capturing scale drivers, **do not address in any form the age, asset condition or risk of failure which are core drivers of maintenance expenditure requirements.**

(76) A significant limitation with Ofwat's approach to capital maintenance arises from its primary focus on scale increases as a driver of costs (properties, length of network, load). Other critical drivers, such as age, asset health and conditions of assets, service quality, which all point to a significant increase in capital maintenance needs in the long run, are ignored.

(77) This rising trend of future requirements is something that the recent analysis[53] by WICS in Scotland also demonstrates. This evidence is supplemented by evidence from Anglian-specific data which links historical growth of its asset base to future maintenance needs and evidences the increase in Anglian's proposed capital maintenance. Failure to recognise this basic facet of future maintenance requirements exposes the stark position faced by Anglian as a result of the FD. As set out in Anglian's SOC, to live within the constraint of the FD would constrain maintenance investment and result in an increase in asset failures and increased risk to the services provided to customers.[54] Alternatively, should Anglian continue to manage its assets as supported by the evidence of its underlying asset management processes, it is exposed to significant costs for which it is not remunerated.

(78) The evidence below demonstrates the increase in the underlying asset base requiring maintenance in future. Simply put, as a result of previous investment, there are more assets that need maintaining. A significant driver of this is growth in the number of customers served by Anglian's water supply and sewerage networks. This creates the need for the extension of local distribution and collection networks, the development of trunk mains and sewers, the creation of new network storage tanks and pumping stations and the development of additional capacity at water and wastewater treatment centres.

(79) A second main driver is the need to meet higher quality standards for this growing population. This mainly drives investment in additional capability at treatment works to treat water, wastewater and

[51] Response to Anglian, para. 3.76.

[52] See Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, section 7.1 which sets out in detail Anglian's approach to Asset Lifecycle planning. Consistent with the principles of the Common Framework, risk-based planning and the assessment of asset risk, performance and cost are central to the derivation of the level of maintenance requirements.

[53] WICS Strategic Review of Charges – Asset Replacement (July 2019) https://www.watercommission.co.uk/UserFiles/Documents/2019%20Asset%20Replacement_Final.pdf.

[54] See Anglian's SOC, Chapter E.1: Botex, Section 5.2.

bioresources to higher statutory standards. Apart from the tight consents variable in some of its waste water models, Ofwat does not include variables for these factors. Anglian notes that Ofwat similarly does not include quality of service in its Botex Plus models so fails to pick up such drivers of future spend.

(80) Thirdly, companies have invested to expand their asset bases, recognising the need to improve the resilience of the service, allow sustainable abstraction and address the future challenges of climate change and increased risk of drought and flood through permanent measures including raising equipment above the flood level and installing flood barriers and anti-flood measures to buildings.

(81) Finally, as well as the long-term upward pressures on capital maintenance, there is also a cyclical pattern to capital maintenance. By modelling annual capital maintenance, Ofwat's approach risks setting cost benchmarks based on companies who happen to be in a cost trough in the period Ofwat chose to form the benchmark. Ofwat is satisfied that the 8-year period used in their econometrics satisfactorily deals with this.[55] Anglian believes this, and the general approach to econometrics, is a poor substitute for a bottom up assessment of future needs, and the failure to use smoothing to avoid some of the issues identified with trying to use econometric models in the area of capital maintenance merely compounds the problem.

(82) Ofwat's position appears to be a complete change from the views it presented during the Bristol Water case in 2015. Ofwat, in its discussion of the reasons for differences in base cost allowances in Bristol Water's appeal of PR14, stated "*Underlying capital expenditure is lumpy and projects may span a number of years. Therefore, the impact of the explanatory drivers on capital expenditure is not likely to be visible in the year of expenditure*".[56]

(83) Absent any appropriate reflection of the relevant drivers of capital maintenance, Ofwat's models simply cannot derive efficient maintenance requirements. As demonstrated in its Report on cost assessment issues, Oxera shows that failure to reflect smoothing of capital maintenance over the period Ofwat considers reduces the accuracy of the modelling and risks setting inappropriate benchmarks based on companies in a cost trough, with potentially very negative outcomes for customers and the environment.[57]

(84) Aside from the technical shortcomings in Ofwat's approach, it is difficult to understand why Ofwat would not seek information about forward-looking capital maintenance needs, informed by asset health and service, in the setting of its cost allowances. Indeed, this may be seen as an essential step to take in ensuring it can properly discharge its resilience duty. Anglian provided evidence of the way in which asset age and health informs its investment decisions and its plan via its risk-based approach to asset management. It did so in its Business Plan, at DD and again in the SOC. At all points, Ofwat has failed to engage with the evidence Anglian has provided.[58]

(85) Anglian welcomes that Ofwat has now begun to consult on the development of more robust approaches to better assessment of asset health and future asset needs for PR24. However, this work comes too late to rectify the significant shortcomings of its PR19 approach.

### 4.2 Illustrating future asset maintenance requirements – Enhancement investment

[55] Response to Anglian, para. 3.80.

[56] Ofwat response to CMA provisional findings, page 14 (2015) available at: https://assets.publishing.service.gov.uk/media/55bb7ae640f0b61551000006/Ofwat.pdf.

[57] Oxera's Report on cost assessment issues (REP13).

[58] See, for example, Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built and Chapter E.1: Botex, Section 5.2 and the Asset Management Plan Summaries / Dashboards (SOC364).

(86) As set out above, post-privatisation enhancement expenditure has increased future asset maintenance requirements. Anglian provides a summary of the historical enhancement drivers and the associated types of assets that were created in Appendix 1 to this document.

(87) The total enhancement capital expenditure made by the England and Wales water companies between 1999-2000 and 2018-19 was £48.2 billion (in 2017-18 prices). This consisted of £20.2 billion on water and £28.0 billion on wastewater.[59] For context, capital expenditure over the same period in maintaining the existing asset base was £50.0 billion.

(88) Another means of scaling this enhancement investment is to observe changes in the total value of the industry regulatory capital value (RCV). The RCV is adjusted annually to add the additional capital investment made by companies and subtract the charges companies have recovered from customers to reflect asset depreciation. For an asset base in steady state, investment and depreciation would offset each other and the RCV would remain constant. However, this is not what is seen. Between 2008-09 and 2018-19, for example, the industry RCV grew from £63.1 billion to £75.2 billion, an increase of £12.1 billion.[60]

(89) It is reasonably expected that a growing asset base generates a rising future maintenance need. By suggesting such demands are flat over time Ofwat negates to accept the need of additional maintenance arising from this previous investment.

(90) The charts below show the total sector-level capital maintenance expenditure for water and water recycling for the water and sewerage companies between 1999-2000 and 2018-19. While the profile is subject to annual variation (mainly predicated around price control periods and the delivery of statutory enhancement schemes, which do not follow an even distribution within AMP periods), the trend of the chart is, as expected, clearly upwards.[61] This is based on published information and Anglian are unable identify how companies have assigned costs as a result of changes in accounting standards which is discussed later. However, the trend shows an increase in Capital Maintenance expenditure.[62]

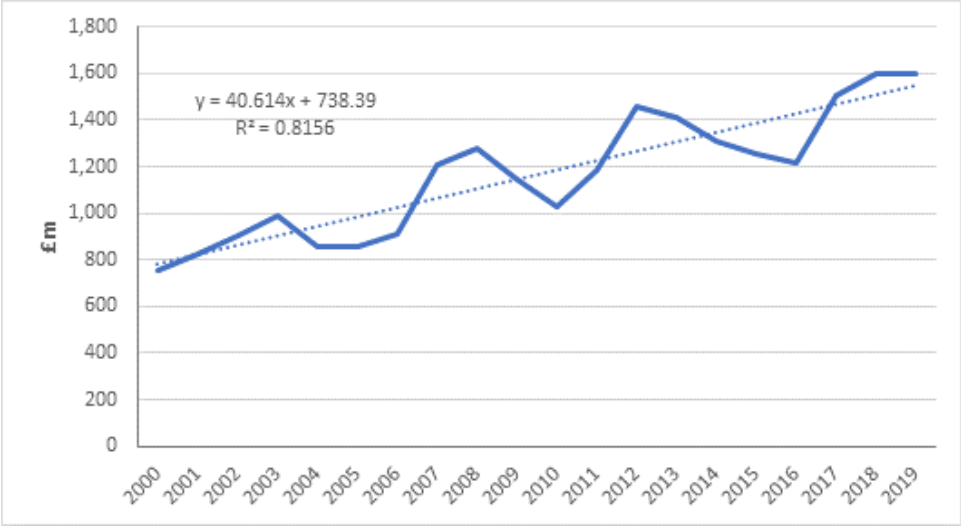
[59] Source: AW file 'Botex-totex since the millenium.xls'.

[60] Source: Ofwat regulatory Capital Value updates. The closing RCV figure for 2008-9 of £47.8 billion has been indexed to 2018-19 prices using the financial year average RPI values on that page.

[61] Source: AW file 'Botex-totex since the millenium.xls'. Figures have not been adjusted to capture capital maintenance activities which were accounted as opex since the introduction of IFRS in 2014-15. Expenditure since this date is therefore understated.

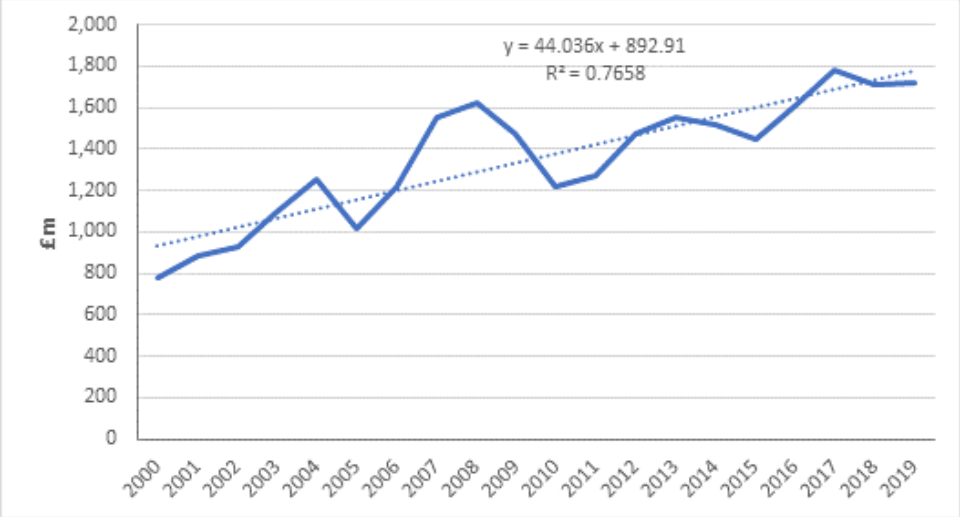
[62] Anglian acknowledges that Ofwat's Botex Plus models attempt to account for the impact of growth through their use of scale drivers. It notes that even when normalised on a per property basis, the industry trend on Capital Maintenance is upward.

**Figure 2 All WaSC Water CM including expensed renewals 2017/18 PB, using CPIH**




Source: Anglian

**Figure 3 All WaSC Water Recycling CM including expensed renewals 2017/18 PB, using CPIH**




Source: Anglian

(91) Capital maintenance requirements are a function not just of the scale of assets created but also the lives of those assets: how long they are expected to function and how soon they will require refurbishment and replacement? Sophisticated treatment to meet higher water quality and environmental standards has increased the reliance on short and medium life assets. For example, during AMP1, for the removal of pesticides from drinking water, Anglian installed Granular Activated Carbon (GAC) absorption units which required the construction of large concrete tanks to retain the material. By contrast, to meet future water quality requirements, Anglian has recently installed at Heigham WTW in Norwich the largest compact Ultrafiltration Membrane system for water treatment in Europe. The membrane system is capable of achieving significantly better water quality performance relative to the GAC solution. The membrane plant, however, requires more frequent maintenance relative to the GAC solution given the significantly greater mechanical and electrical demands of operation.

**Figure 4 Grafham WTW – Conventional**

Source: Anglian

**Figure 5 Heigham WTW – Ultrafiltration**

Source: Anglian

(92) The case is similar for wastewater. The use of very short, short and medium lived assets has increased over time, mainly as a result of required improvements in the quality of environmental discharges and treated sludge which conventional treatment units would not achieve. Over time, as these assets make up a growing proportion of total assets, so the level of expenditure required for capital maintenance increases.

(93) The transition over the AMPs from long lived concrete structures to shorter lived higher technological solutions which have a high percentage of mechanical and electrical items is evidenced from analysis of Anglian's capital investment since 1990 and illustrated in the following charts. The asset categories in this analysis are as follows:

(i) Very Short – Asset having a life up to 5 years, e.g. vehicles and Information Technology (IT) equipment

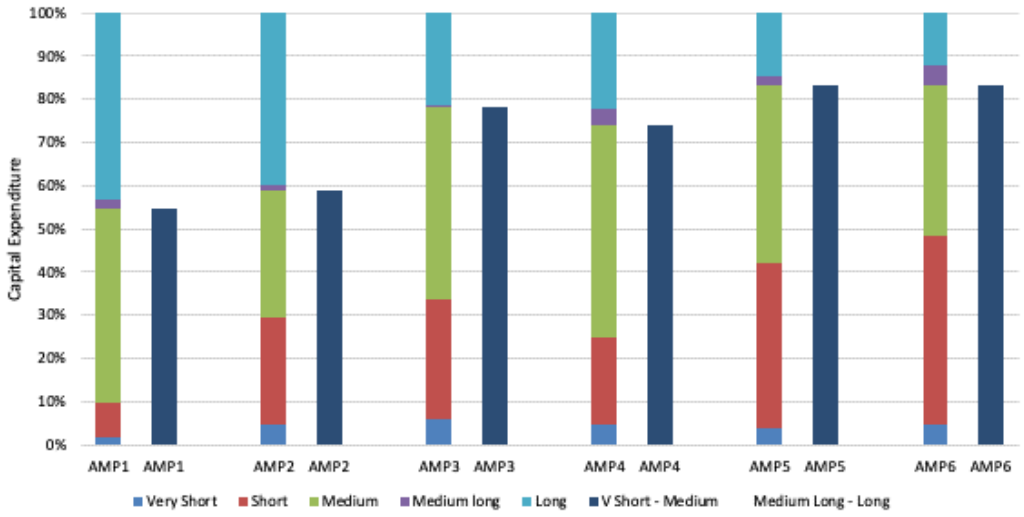
(ii) Short – Assets having a life between 6 to 15 years, e.g. some Instrumentation Control and Automation (ICA) plant, telemetry, vehicles and plant

(iii) Medium – Generally mechanical assets having a life of 16 to 30 years, e.g. pumping units and associated electrical plant, process plant, filter bed material

(iv) Medium Long – Generally mechanical assets having a life of 31 to 50 years, e.g. filter bed structures, steel storage tanks, site fencing, Glass Reinforced Plastic (GRP) cover and kiosks

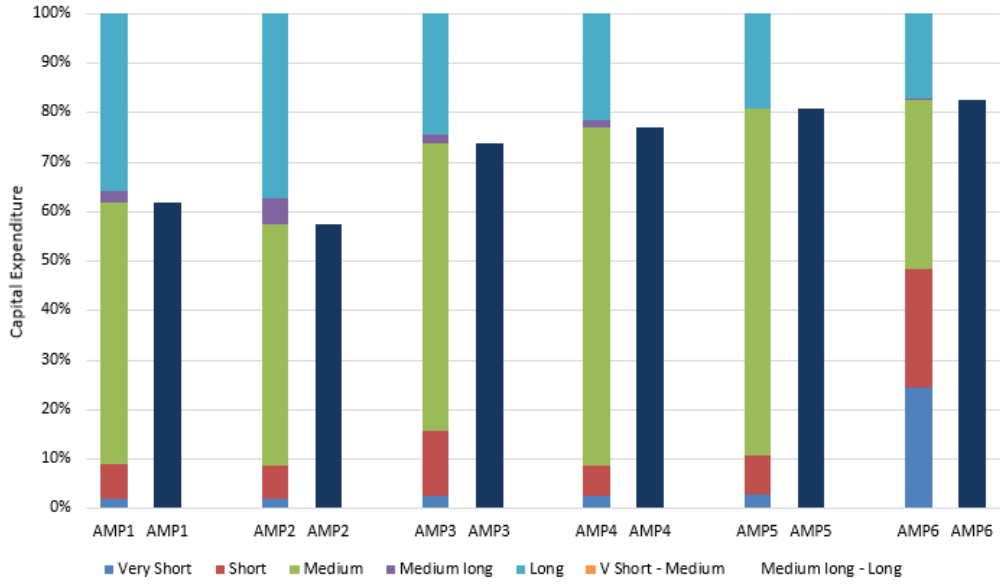
(v) Long – Generally operational structures including service reservoirs, treatment works structures, inter-process pipe work and filter bed structures

**Figure 6 Water - Proportions of Historical Enhancement Expenditure**




Source: Anglian Analysis

**Figure 7 Wastewater - Proportion of Historical Enhancement Expenditure**




Source: Anglian Analysis

(94) Anglian has analysed the impact on future capital maintenance expenditure requirements of its enhancement expenditure since privatisation in non-infrastructure assets (typically above ground assets such as water treatment works). The analysis excludes any enhancement expenditure beyond AMP7 which will of course have an impact on subsequent AMPs.

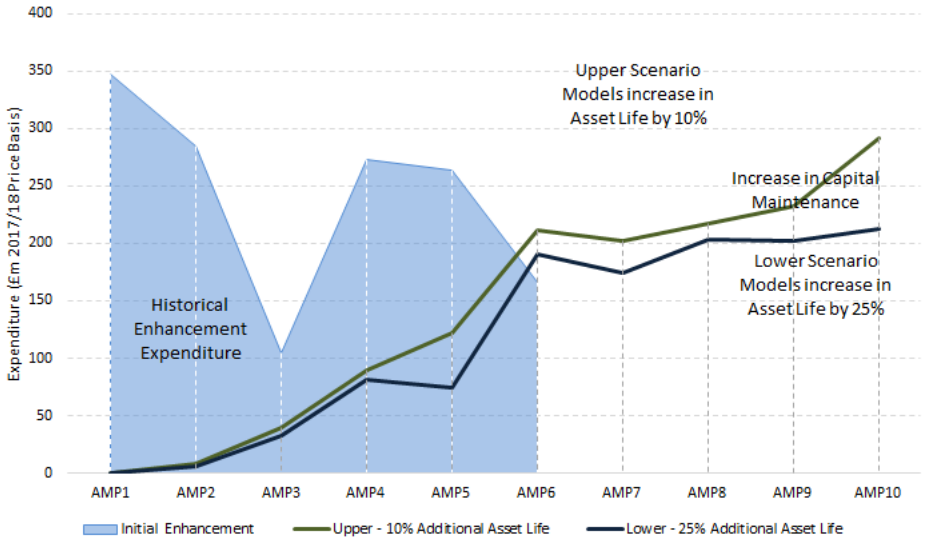
(95) To demonstrate the additional future expenditure requirements associated with its post-1990 enhancement expenditure, Anglian models two scenarios to demonstrate the associated maintenance costs. The first scenario is based on the assumption that the accounting asset life could be extended by 10% and the second assumes a 25% extension of the assumed accounting asset life. Consistent with expectation, both scenarios show an increasing trend in increased capital maintenance requirements.

The charts below show the historical enhancement expenditure and the future capital maintenance expenditure requirements resulting from it. The scenario envelopes detailed above are on an AMP by AMP basis. Both scenarios confirm the theoretical increase trend is supported in reality. This evidence aligns with future maintenance needs reflected in the WICS 2019 decision paper.

### 4.2.1 Water analysis

(96) In both scenarios the model demonstrates there will need to be an increase in expenditure specifically to maintain the outputs from previous enhancement investment in the short and long term.

**Figure 8 Water – Scenario Comparison for future Capital Maintenance as a result of Historical Enhancement Expenditure**




Source: Anglian

(97) The following chart presents the potential annual change in capital maintenance needs shown as a moving five-year average to remove the annual peaks and troughs. The chart shows the increase in requirements against the lower scenario along with an increasing trendline. This moving five-year average helps to remove the "lumpiness" within an AMP. Whilst the chart appears to flatten out from 2030 (start of AMP9) the data does not account for enhancement expenditure in AMP7 and beyond. The model is a function of asset life, historical expenditure, the relative proportion of refurbishment and replacement and efficiency.

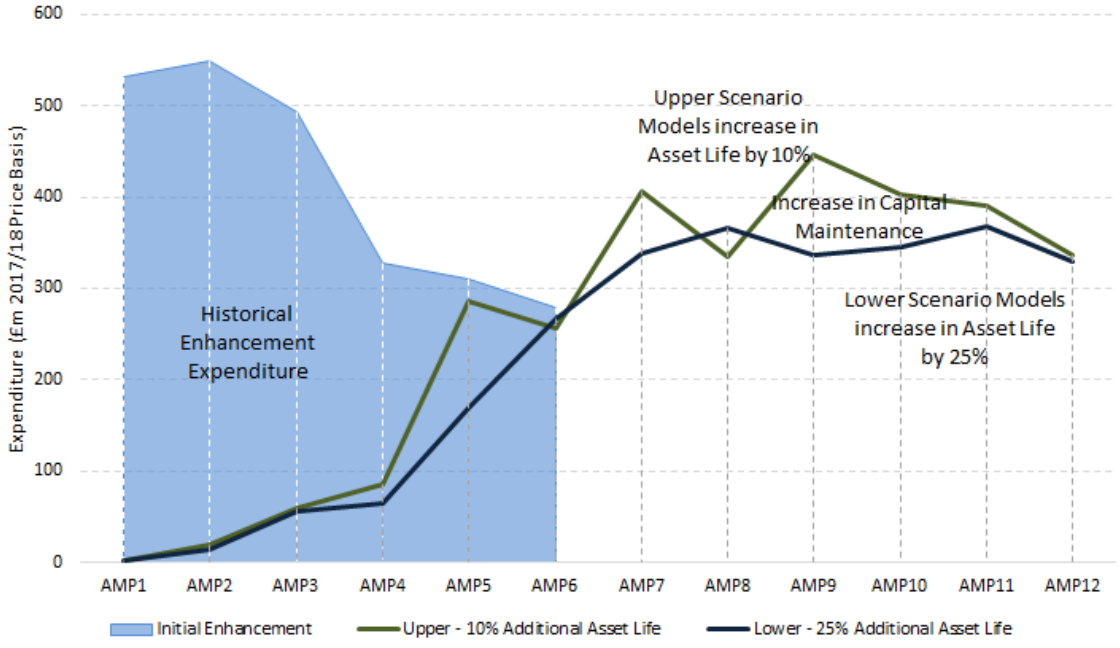
**Figure 9 Water – Future Capital Maintenance as a result of Historical Enhancement Expenditure (AMP1 – AMP6)**


Source: Anglian

### 4.2.2 Wastewater analysis

(98) Again, in both scenarios there is an increase in the short and long-term requirements in Capital Maintenance as a result of previous enhancement expenditure.

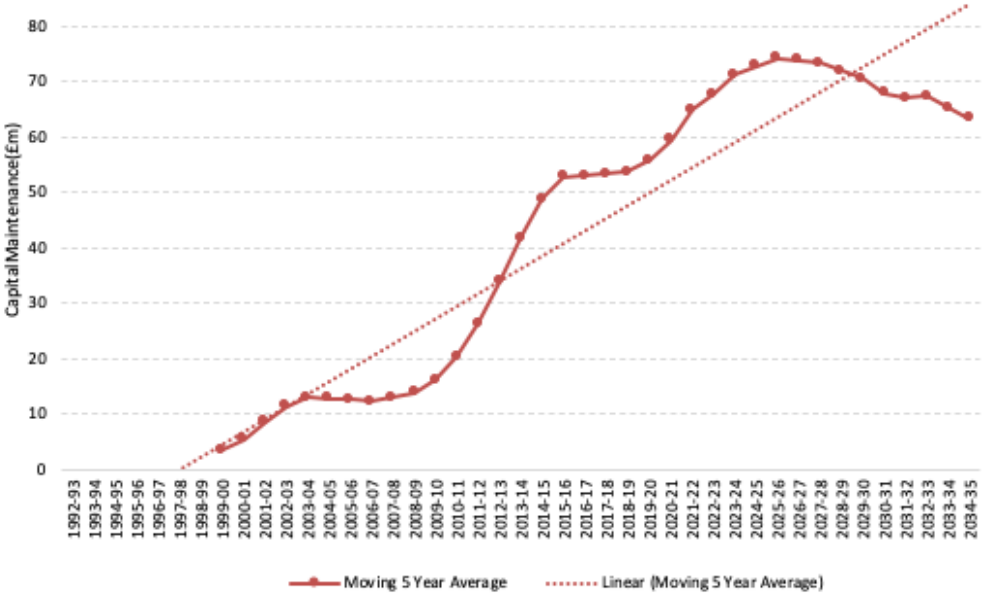
**Figure 10 Wastewater – Scenario Comparison for future Capital Maintenance as a result of Historical Enhancement Expenditure**




Source: Anglian

(99) The moving five-year average chart shows the increases in capital maintenance required to maintain current service and quality standards.

**Figure 11 Wastewater – Future Capital Maintenance as a result of Historical Enhancement Expenditure (AMP1 – AMP6)**




Source: Anglian

(100) The above analysis excludes enhancement expenditure in water and wastewater infrastructure assets (typically below ground pipes, mainly pipes) which have long service lives and would not be replaced within the time horizon shown.

(101) The data above also exclude the equally important impacts of asset deterioration and replacement of the assets inherited at privatisation on future capital maintenance expenditure. For example, 12% of Anglian's water main stock will be over 100 years old in 2020. Anglian's broad-brush estimate for their renewal is £700 million, and on the basis of current replacement rates it would take c. 75 years to complete.

(102) **It is therefore reasonable to conclude that historical levels of capital maintenance will not be sufficient in future AMPs to ensure the continued serviceability of Anglian's asset base.**

(103) However, it is also clear that these important factors have not been given adequate attention by Ofwat at PR19. Anglian has been proactive and collaborative with Ofwat in the area of asset management. Anglian Water published a thought leadership document on the Water UK's "Market Place for Ideas,"[63] which was also presented to Ofwat by Anglian's Director of Regulation. The paper sought to show the significant steps companies had made since 2000 in developing their total asset management capability. The paper identified the divergent approach Ofwat was taking, in reality ignoring the lessons learnt from the past and the sector wide criticism. The Bush and Earwaker paper builds on this initial work and identifies the potential remedies where the engagement has been limited throughout the PR19 process.[64]

[63] Capital Maintenance Planning (July 2015) (REP33).

[64] Bush & Earwaker Capital Maintenance Report (August 2019), Executive Summary (SOC191).

## 5 Ofwat misrepresents the evidence Anglian provided in support of its base cost requirements

(104) Ofwat has made a number of statements that create a misleading impression of the dialogue held between Anglian and Ofwat during the PR19 process relating to capital maintenance and the corresponding cost adjustment claim which Ofwat invited Anglian to submit in its meeting of 7 October.

(105) At a meeting on 30 April 2019 between Ofwat and Anglian, Ofwat was keen to better understand the drivers of the difference in base costs between the Anglian September 2018 Business Plan and Ofwat's IAP assessment. Anglian explained the bottom-up process it had undertaken to develop its plan, which resulted in the need for increases in capital maintenance to maintain the current risk profiles of the growing and ageing asset base and which offset the efficiencies it had included in its Botex plan. Ofwat invited Anglian to provide further evidence on the subject, which it duly did.[65] There was a similar meeting on 7 October 2019, after DD, at which point the gap between Anglian and Ofwat remained. Again, Ofwat invited Anglian to provide further evidence in the form of a cost adjustment claim.

(106) The purpose of these additional submissions was to provide Ofwat with evidence as to how Anglian had built the totality of its AMP7 capital maintenance requirements and the evidence base supporting it. Anglian provided specific examples of the type of assets that drive different capital maintenance requirements to those implied from Ofwat's econometric cost models. Anglian does not repeat here previous evidence submitted during the price review process setting out Anglian's approach to assessing future needs on a bottom-up basis consistent with both the previous critique of Ofwat and the resultant development of the Common Framework.[66] As such, the submissions did not neatly fit within Ofwat's cost adjustment claim criteria, which required companies to demonstrate *"unique or atypical material costs"* which drive higher efficient costs for the company relative to its peers.[67] However, it was the only regulatory mechanism available to Anglian to engage further with Ofwat on this critically important topic.

(107) Ofwat has interpreted the information in these additional submissions in its Response as solely justifying the difference between the Anglian values and that derived from Ofwat's models. Rather, Anglian's submissions sought to explain the difference between its view and Ofwat's as to what was needed to maintain assets, following on from constructive discussions with Ofwat and the direction given at the 30 April 2019 meeting. These submissions demonstrated how Anglian's approach to assessing future asset needs was consistent with previous approaches that had been developed, such as the Common Framework,[68] in direct response to previous criticisms of Ofwat's approach. This approach has been adopted by companies since 2000 to different levels of capability and maturity. The forward-looking risk-based approach is seen as world leading and its full application has been dismissed by Ofwat.

(108) The explanation of why Anglian's "cost adjustment claim" changed between IAP and DD is a simple one. This reflected the modification to Ofwat's approach to setting Botex allowances between IAP and DD and the corresponding difference between the expenditure requirements derived by Anglian's approach relative to Ofwat's econometric modelled outputs.

(109) In its Response, Ofwat describes these submissions as "cost adjustment claims" and attempts to undermine the evidence provided because it did not fit with the cost adjustment claim requirements, despite Ofwat's open encouragement for Anglian to provide additional evidence to it.

(110) Ofwat has claimed several times that this evidence was submitted late and outside its timetabled deadlines. The evidence that Ofwat has presented as Anglian's cost adjustment claim was submitted to

[65] Asset Management Dashboards (SOC364).

[66] UKWIR Capital Maintenance Planning (SOC328).

[67] PR19 Final Methodology, page 148 (SOC314).

[68] UKWIR Capital Maintenance Planning (SOC328).

Ofwat in line with specific deadlines agreed with Ofwat during the meetings in question. During those constructive meetings, provision of this additional evidence was discussed as a means to explain Anglian's overall Botex plan.

(111) Ofwat has said that "*The final value of [Anglian's cost adjustment claim] was not determined using bottom-up evidence but set at the difference between our draft determination and the company's representation to this determination*".[69] This misrepresents Anglian's Plan, which was based on a bottom-up assessment of future need, adjusted for the factors listed above, including asset health and risk, and calibrated through investment prioritisation and optimisation tools and business challenge. The supplementary evidence Anglian submitted in May and October 2019 was not to supplant that detailed analysis, but to build on it to explain what was driving the difference between its Plan and Ofwat's assessment.

(112) Ofwat's misrepresentation of Anglian's supplementary evidence on capital maintenance is then used to support its claim that "*the information provided to support the cost adjustment claim does not evidence the statement that the company followed the framework that was developed following the PR99 review, i.e. the UKWIR Capital Maintenance Planning Common Framework*."[70] This claim is baseless and deflects from that simple fact that Ofwat's assessment of capital maintenance requirements has not sought at any stage to take into account the principles established by the Common Framework to assess future requirements.

(113) Finally, Ofwat's suggestion that its cost adjustment claim process mechanism *"ensures [that its] PR19 methodology is consistent with the recommendations made in 2000 by the [Environmental Audit Committee]"*[71] is baseless and deliberately misleading. Anglian finds no credible evidence to support this statement and this is the first time the Company is aware that Ofwat has made such a claim throughout the process.

## 6 Ofwat fails to engage with the evidence provided on the impact on resilience

(114) Ofwat's Response to Anglian's SOC fails to engage with the previous evidence provided by Anglian on the derivation of its future maintenance requirements. For example, there is not a single reference in Ofwat's Response to Anglian's updated Resilience in the Round assessment[72] as part of which rigorous asset management approaches are central to achieving operational resilience.

[69] Response to Anglian, para. 3.78.

[70] Response to Anglian, para. 3.85.

[71] Response to Anglian, para. 3.84.

[72] Arup Resilience Assessment (2020) (SOC285).

# Appendix 1

## Summary of Historical Enhancement Drivers

**Water**

| Regulatory Drivers | Anglian Water Specifics | Process Technology |
|---|---|---|
| **AMP1 1990-1995** | | |
| EU Drinking Water Directive/Drinking Water Regulations | Removal of pesticides (PCV 0.1ug/l) and other trace organic material | GAC adsorption and Ozonation<br>• GAC Tanks<br>• GAC media removal systems<br>• Air Blowers<br>• Backwash Pumps<br>• Chemical Dosing<br>• Instrumentation and Control<br>• Buildings |
| **AMP2 1995–2000** | | |
| | Lead – Plumbosolvency control | Orthophosphoric acid dosing<br>• Tanks<br>• Chemical Dosing Pumps<br>• Instrumentation and control |
| **AMP3 2000-2005** | | |
| The Drinking Water (Undertakings) (England and Wales) Regulations 2000 | Nitrate removal/reduction (PCV 50mg/l) | Nitrate Removal/Blending<br>• Ion exchange units<br>• Multi-iport valves<br>• Brine make up tanks<br>• Blending tanks<br>• Chemical dosing<br>• Instrumentation and control<br>• Buildings |
| | Cryptosporidium Barrier for Ground Water | Micro/Ultra Filtration<br>• Membrane Modules<br>• Membranes<br>• Acid and Alkali Storage<br>• Chemical Dosing<br>• Instrumentation and control<br>• Buildings |
| | Cryptosporidium Barrier for Surface Water | As Ground Water above |
| | Bromate (PCV 10ug/l) | Ozone refurbishment |

| Regulatory Drivers | Anglian Water Specifics | Process Technology |
|---|---|---|
| | Iron – Section 19 Undertakings (PCV 200 ug/l) | Water Mains Rehabilitation<br>• Replacement<br>• Scraping and Relining |
| | Lead – plumbosolvency control (From 50 ug/l to 25 ug/l) | Orthophosphoric acid dosing<br>• Tanks<br>• Chemical Dosing Pumps<br>• Instrumentation and control<br>Lead communication pipe replacement trials |
| **AMP4 2005-2010** | | |
| The Drinking Water (Undertakings) (England and Wales) Regulations 2000 | Compliance with PCVs | Online monitoring/automatic control<br>• pH<br>• Turbidity<br>• Chlorine<br>• Aluminium<br>• Temperature<br>• Iron |
| | Lead – plumbosolvency control (From 25 ug/l to 10 ug/l) | Orthophosphoric acid dosing<br>Lead communication pipe removal |
| | Nickel (PCV 20ug/l) | Blending of water |
| **AMP5 2010-2015** | | |
| Maintaining Quality of Drinking Water (DWPA's) | Pesticide compliance (PCV 0.1 ug/l) | UV Treatment<br>• UV units<br>• Lamps |
| | Selenium reduction (PCV 10 ug/l) | |
| Eel Directive | Prevention of removal of eels from rivers at abstraction points | Fine Screens to River Intakes |
| **AMP6 2015-2020** | | |
| Water Supply (Water Quality) Regulations 2016 (as amended) | Pesticide removal (Metaldehyde) | Blending of sources and additional iron and manganese treatment |
| | Pesticide removal (Carbetamide and Metazachlior) | Virgin GAC media replacement |
| | Pesticide removal (Bentazone and Clopyralid) | Catchment solutions (farming infrastructure) |

**Wastewater**

| Regulatory Drivers | Anglian Water Specifics | Process Technology |
|---|---|---|
| **AMP1 1990-1995** | | |
| Urban Wastewater Treatment Regulations (UWWTR)<br>Nitrate Pollution Regulations<br>UWWTR – Dumping | Nutrient Removal for >10,000 population equivalent (pe) into sensitive areas<br><br>Plus COPA II completed by March 1992 | Nitrifying filters and activated sludge treatment. Configured for nitrification/denitrification/biological P removal<br>• Tanks<br>• Air Blowers<br>• Air Diffusers<br>• Instrumentation and control<br>• P Removal<br>• Chemical dosing<br>• Tanks |
| | Biological treatment for wastewater, new treatment standards for >15,000 pe | Biological treatment<br>• Activated Sludge<br>• Percolating Filters |
| Sludge to sea banned (1980's) | Sludge to sea ban | Sludge treatment including<br>• Liming plants<br>• Thickening and dewatering<br>• Anaerobic digesters<br>• Thermal Dryers |
| Environmental Planning Regulations | Odour Control | Odour Control<br>• Chemical dosing<br>• Tanks<br>• Covers |
| First Time Sewerage (Section 101a of the Water Act) | New sewerage systems to mainly rural communities | Complete Sewerage Systems<br>• Pipes<br>• Vacuum Stations<br>• Pumps |
| **AMP2 1995-2000** | | |
| Urban Wastewater Treatment Regulations (UWWTR) | New discharges standards apply primary treatment sites 2,000-10,000 pe works discharging to estuaries | Primary Settlement<br>• Tanks<br>• Lamella plate settlers<br>• Automatic de-sludging<br>• Chemical tanks<br>• Dosing equipment<br>• Instrumentation and control |

| Regulatory Drivers | Anglian Water Specifics | Process Technology |
|---|---|---|
| | Secondary treatment to Coastal treatment sites | Secondary Treatment and Disinfection<br>• Tanks<br>• Pumps<br>• Air Blowers<br>• Air Diffusers<br>• UV Equipment<br>• Buildings |
| | Screening of Unsatisfactory CSO | Fine Screens |
| **AMP3 2000-2005** | | |
| Safe Sludge Matrix | Higher pathogen kill required for treated sludge | Advanced Digestion<br>• Tanks<br>• Heating plant<br>• Heat exchangers<br>• Gas Holders<br>• Thickening and dewatering equipment<br>• Pumps<br>• Instrumentation and control<br>• Buildings |
| Landfill Tax | Requirement for reduction in organic content in screening | Screening washing and grit cleaning |
| Renewable Obligation Order 2006 | Use of waste methane gas | Combined Heat and Power Units (CHP) |
| **AMP4 2005-2010** | | |
| Water Framework Directive/River Basin Management Plans 2009 -15 | Compliance with:<br>Freshwater Fish Directive<br>Habitats Directive<br>Revised Bathing Water Directive<br>Shellfish Water Directive<br>Water Framework Directive (Pollutant and Chemicals)<br>Groundwater Directive<br>Ground Water Daughter Directive<br>Discharge Flow Limits | Extensions to wastewater treatment plans dependent on driver. |

| Regulatory Drivers | Anglian Water Specifics | Process Technology |
|---|---|---|
| **AMP5 2010-2015** | | |
| Urban Wastewater/River Basement Management Plans | P removal | P Removal Dosing Systems<br>• Chemical Dosing<br>• Tanks<br>Additional secondary treatment for BOD and Ammonia |
| | Chemical Investigations Programme | Advanced testing equipment |
| Water Framework Directive | Requires companies to meet good status by 2015 | |
| Transfer of Private Sewers | Overnight Transfer of c.33k of sewers | |
| **AMP6 2015-2020** | | |
| | P removal | Trail on innovative technologies to lower P concentrations<br>Natural Capital Solutions<br>P Removal Dosing Systems<br>• Chemical Dosing<br>• Tanks |
| | Chemical Investigations | Advance testing equipment |
| Private Pumping Stations | Overnight transfer of c. 1500 of pumping stations | Refurbishment to safe and serviceable standard<br>• Pumps<br>• Instrumentation and control systems |

# Part G.3: Reply to Ofwat's response on facilitating sustainable economic and housing growth

## 1 Overview

(i) Ofwat's FD fails to provide adequate funding for growth, leaving a significant funding gap between Anglian's assessment of the region's needs and the funding available. The combined impact is to leave Anglian significantly underfunded in AMP7 and inappropriately exposed to most of the risk associated with accommodating growth.

(ii) This compromises Anglian's ability to meet its statutory obligations and is inconsistent with Ofwat's duties and with the Government's SPS. It will lead to poorer customer service for developer customers, frustrating home building and creating increased business risk as investments to enable growth are reduced or deferred. It could also result in lower standards of performance by Anglian, including increased incidence of pollution incidents, harmful discharges to the environment, low water pressure and sewer flooding.

(iii) Ofwat's response to these is contained in various documents it has submitted to the CMA, including its **Response to Anglian** and its **Response on Cost Efficiency**.[73]

(iv) Anglian believes that the focus for the CMA's redetermination should be setting appropriate upfront cost allowances and ensuring appropriate risk sharing mechanisms should growth materialise at a level different to that reflected upfront in the redetermination. Ofwat's responses do not address these key concerns highlighted by Anglian. Anglian provided evidence in its SOC that:

  (a) The drivers and scale of their impact on growth-related costs are not covered by Ofwat's base cost models and adjustments;

  (b) Its investment costs are efficient and Ofwat's assessment fails to demonstrate that the evidence provided by Anglian during the price review process has been systematically assessed;

  (c) Ofwat's Developer Services Revenue Adjustment ("**DSRA**") and (more generally) its "*overall framework*" does not "*offer considerable protection against the risk of higher growth*"[74] as Ofwat suggests.

(v) The impact of Covid-19 on growth in Anglian's region is still unclear and may remain so for some time. A discussion of the initial impacts of Covid-19 on Anglian is being provided as a separate submission to the CMA. Given this uncertainty, the focus for this redetermination should be on risk-sharing, not forecasts. Anglian welcomes the opportunity to work with the CMA to develop appropriate true-up mechanisms to remove volume forecasting risk from companies and customers.

## 2 Introduction

(115) Anglian's SOC outlined concerns about the provision of adequate funding for growth in the FD.

(116) Ofwat's response to these is contained in various documents it has submitted to the CMA, including in its Response to Anglian and its Response on Cost Efficiency. This document summarises Anglian's reply to these and should be read alongside:

[73] Response on Cost Efficiency (006).

[74] Response to Anglian, paras. 1.43 and 3.141.

(i) Anglian's revised growth demand and investment forecast

(a) Revised growth data tables;[75]

(b) Growth updated data table commentary;[76]

(c) Growth technical assurance report (by Jacobs Engineering Group);[77] and

(ii) Technical note on growth modelling issues (by Vivid Economics).[78]

(117) The impact of Covid-19 on growth in Anglian's region is still unclear and may remain so for some time.

(118) Given this uncertainty, the focus for this redetermination should be on risk-sharing, not forecasts. It is only through effective true-up mechanisms relating to the full range of growth-driven investment (operating from an efficient baseline allowance) that forecasting risk can be shared between consumers and/or investors. Appropriately calibrated, such mechanisms de-risk the inevitable differences between ex-ante forecasts and outturn growth. Such approaches have regulatory precedent and would appropriately serve to diminish the need for the CMA to determine up front forecasts with precision.

(119) Anglian's updated growth-related investment programme, based on the most up-to-date forecast of growth in its region, represents the most appropriate basis on which to set an allowance for AMP7. Anglian evidences how this expenditure requirement has been rigorously developed based on the updated information relating to forecast new connection and population growth. Should these forecasts not materialise due to factors outside management control, most notably Covid-19, Anglian's proposal is for the related expenditure to be trued-up by the combination of Ofwat's DSRA and Anglian's proposed uncertainty mechanism.

(120) Anglian welcomes the opportunity to work with the CMA to develop appropriate true-up mechanisms to remove volume forecasting risk from companies and customers.

## 3 Updated expenditure requirements

(121) Anglian launched a programme of work in February 2020 to review its growth forecast to take account of 18 months additional data on housing growth activity since the development of its business plan. Anglian submitted its revised growth forecast as part of its SOC.

(122) Anglian also reviewed the associated investment requirements to support this growth, whose volume and location was now different. Developing its growth investment programme took over 18 months for its business plan, in part due to the requirements to assess investment needs in its over 1,000 wastewater catchments. The revised totex plan was therefore not completed in time for submission with the SOC but is provided as part of this suite of documents. A summary of the reduced investment figures and a comparison to Anglian's DD representation August 2019 plan is shown below. The table commentary also outlines how the new investments affect the proposed Water Recycling Treatment uncertainty mechanism.

[75] Revised Growth Data Tables (REP34).

[76] Updated Growth Data Table Commentary (REP35).

[77] Growth Technical Assurance Report (REP36).

[78] Vivid Technical Note on Growth Modelling Issues (REP12).

**Table 7 Anglian's investment programme for growth in AMP7**

| Description (PR19 business case name) | Description | Totex, DD Plan August 2019 (£m) | Totex, May 2020 (£m) | Change (£m) |
|---|---|---|---|---|
| Water network reinforcement (Supply-side enhancements, treated water distribution) | Reinforcing the water distribution network to accommodate growth | 58 | 63 | 5 |
| Site-specific mains (Housing growth - new developments) | Site-specific mains, often known as Housing and Estate Mains | 75 | 60 | -15 |
| New connections (Housing growth - new connections element of new developments) | Connections, metering etc. | 94 | 78 | -17 |
| Wastewater network reinforcement and site-specific (New development and growth) | Reinforcing the sewerage network to accommodate growth and on-site supervision | 259 | 276 | 17 |
| Growth at water recycling centres (excluding sludge) | Enhancing capacity at treatment works to accommodate growth | 171 | 147 | -24 |
| | **Total** | **657** | **624** | **-33** |

Source: Anglian, summary of revised totex in tables WS2 and WWS2 (REP026).

(123) Given the ongoing uncertainty, this investment programme, based on the most up-to-date forecast of growth in the region before the Covid-19 pandemic, represents the most appropriate basis on which to set a baseline allowance for AMP7. This is on the basis that it has been rigorously developed using the relevant forecast and that the allowance will be adjusted by the DSRA and Anglian's proposed uncertainty mechanism to reflect outturn growth.

## 4 Anglian's proposed investment costs are efficient and have not been assessed properly by Ofwat

(124) Anglian's proposed investment costs are efficient. Its approach to securing cost efficiency in these areas are detailed in paragraphs 371 to 383 of Anglian's SOC. Anglian's investment proposals are efficient compared to the allowances estimated by Vivid Economics models for growth, discussed in paragraphs 729 to 733 of Anglian's SOC.

(125) Ofwat states that it "*assessed growth costs based on a comprehensive 'hybrid' approach, which combines the base cost models with a growth unit cost adjustment and deep dive analysis*"[79] and that it "r*emain[s] of the view that [Anglian] has failed to provide convincing evidence that our base cost models, deep dives and growth unit cost adjustment in combination do not provide a sufficient allowance*".[80]

(126) Ofwat states it has undertaken a deep-dive review of Anglian's submission. However, the summary of Ofwat's review of the evidence provided (including Anglian's Enhancement business cases, DD Representation and October 2019 submission) is covered in just five paragraphs.[81] The other pages referenced by Ofwat relate to introductory statements and discussion of risk-sharing mechanisms. In

[79] Response to Anglian, para. 3.6.

[80] Response to Anglian, para. 3.131.

[81] Response on Cost Efficiency (006), pages 21 and 22.

email correspondence received on 7 May 2020 (copied to the CMA), Ofwat confirmed that this represents the entirety of the output of its assessment.[82]

(127) Anglian maintains that this cannot be considered a "*deep dive*"[83] of the evidence provided to support the level of proposed expenditure (over £600 million). The shortcomings of this assessment is compounded when considered alongside the poor quality of the base cost model. Anglian invites the CMA to undertake a proper review of the evidence provided and will make its teams and systems available to facilitate this as required, should the CMA and its advisors wish to drill down beyond the significant evidence provided in the SOC.

## 5 Growth-related costs are not appropriately captured by Ofwat's base cost models

(128) Ofwat's Response does not engage with the concerns raised in Anglian's SOC relating to Ofwat's inadequate approach to modelling growth costs.[84] These concerns remain.

(129) Ofwat also describes its approach as growth being "*lump[ed] in*" with base costs[85] and applies a model adjustment that does not address the shortfall of its model.

(130) The explanatory variables used in Ofwat's models do not measure the geographic profile of growth, which can significantly affect the efficient costs of accommodating it. That is, they are poor proxies for the true drivers of growth costs. The Botex Plus models principally measure the relationship between the included explanatory factors and base costs, which are much greater in magnitude than growth costs and companies have had very different rates of growth historically. As a result, the relationship with these proxy cost drivers is attenuated and reduced.

(131) Ofwat's cost allowances fail to recognise that the cost of growth is not merely in the assets and works immediately required to connect new users, but in the consequential investment throughout the system to accommodate higher volumes while maintaining service standards. The outcomes from Ofwat's modelling do not seem to include this crucial cost element for Anglian.

(132) Perhaps as a result, the implicit unit cost per connection in Ofwat's FD is a small fraction of what it had been at previous price reviews. For example, Ofwat's model adjustment for growth at PR19 provides and uplift of £783 per water connection to cover all costs (i.e. connection, on-site mains and network reinforcement. However, Ofwat's own connection cost benchmark for 2017 suggests median costs of £633 to £1,624 per connection, depending on length and surface type.[86] This benchmark does not include the cost of new mains or network reinforcement. It seems implausible that a change of this magnitude is intended as an 'efficiency stretch', it is more likely simply a by-product of a modelling approach that does not properly account for how growth drives network costs.

(133) Cost driver issues are discussed in the Technical note on growth modelling issues produced by Vivid.[87] Vivid's note also outlines: (i) how growth in demand (i.e. population) is the critical scale driver for offsite costs; (ii) how implicit allowances of growth costs can be calculated and are relevant for understanding the sufficiency of Ofwat's cost allowance for growth: and (iii) that data issues can be addressed when

[82] Email correspondence between Ofwat and Anglian (7 May 2020) (REP48A).

[83] Response to Anglian, para. 1.41 and Table 3.5.

[84] Response to Anglian para. 3.121.

[85] Notes of hearing with Ofwat held at Competition and Markets Authority, Cabot Square, London on Tuesday, 25 February 2020, page 14.

[86] Information notice, IN 17/02 February 2017, Ofwat publishes new independent comparison of monopoly water companies' new water supply connection costs.

[87] Vivid Technical Note on Growth Modelling Issues (REP12).

modelling growth expenditure.[88] The note highlights the wide range of efficiency scores in Ofwat's model and robustness of stand-alone growth models to cost allocations issues raised by Ofwat.

## 6 Ofwat incorrectly asserts that its Developer Services Revenue Adjustment ("DSRA") offers "*considerable*" protection against the risk of higher growth

(134) Ofwat argues that that PR19 offers companies "considerable"[89] protection against high growth through three main mechanisms. This justification is offered as part of a suite of mechanisms, namely:

(i) DSRA which "*provides a volume driver revenue adjustment for new development costs*";

(ii) "*the cost sharing mechanism*"; and

(iii) "*the resetting price control determinations every five years, which provides the opportunity to adjust for high growth rates*".[90]

(135) In suggesting that the DSRA offers "*considerable*" protection, Ofwat exposes either a lack of understanding of the drivers of growth expenditure or knowingly exposes companies to the risk of incurring growth-driven expenditure not captured by the narrow driver of the rate of new connections.

(136) In referencing the cost-sharing mechanism, Ofwat is suggesting that, should growth occur above the level that is assumed ex-ante in the price control, Anglian would only be able to recover a proportion of the costs (currently a third, which Anglian note is in dispute) relating to growth. This mechanism is designed to share the under or outperformance between companies and customers for the delivery of known outcomes to incentivise efficiency. Its justification here against volume risk, outside management control is clearly inappropriate as a sufficient remedy.

(137) The resetting of the price control offers zero protection to companies for variations that occur in the AMP7 period. This merely suggests Ofwat may not allow such exposure to persist in subsequent periods.

(138) Ofwat accepts that the DSRA does not provide full coverage of growth costs. The different treatment of network reinforcement (in scope for DSRA) and water recycling treatment (outside the scope of DSRA) is arbitrary. Both are required to enable growth and neither respond one-to-one to connection volumes and yet Ofwat is content to include network reinforcement within the DSRA but not treatment costs. Ofwat does not explain why these two similar types of expenditure are treated differently.

(139) The ongoing Covid-19 pandemic exemplifies the need for clear, robust growth risk-sharing mechanisms. Such mechanisms, appropriately calibrated, would de-risk ex-ante forecasts. Adoption of Anglian's broader proposals achieve an appropriate balance of forecasting risk and reduce the emphasis on the need for the CMA to determine growth forecasts of new connection and population with precision.

(140) If Covid-19 affects connection volumes more than population growth, then the protection provided by the DSRA may be further reduced, which increases the risk of inappropriate funding being available for network reinforcement activity.

## 7 Anglian's proposed true-up mechanism

(141) To appropriately share the risks of growth between Anglian and its customers, Anglian proposed that Anglian's Water Recycling Treatment true-up mechanism be adopted.[91] Ofwat highlights challenges to

[88] *Ibidem*.
[89] Response to Anglian, paras. 1.43 and 3.14.
[90] Response to Anglian, para. 3.142.
[91] Anglian's SOC, Chapter E.2: Growth, Section 5.4, para. 727.

this mechanism.[92] Anglian welcomes comments on how its proposal can evolve to address Ofwat's concerns. The mechanism should have no perverse incentive effects: it leaves companies exposed to cost risk (and therefore incentivised to be efficient), it only protects against volume risk. Anglian does not believe it has either the incentive or the ability 'inefficiently' to connect excessive volumes but for the avoidance of doubt any such concerns can be easily addressed by supporting third party assurance (similar to those proposed by Ofwat for the Internal Interconnector Programme ODI) where investment decisions are assured as being in relation to a specific need and that the best value option for the customer has been selected. Baseline levels are closely linked to the proposed investments in totex, and so are easy to audit against the latest investment proposals.

(142) Anglian notes that Ofwat's DSRA itself gives rise to distortive incentive risks. By underfunding growth, Anglian is incentivised not to invest and thus to take additional environmental quality risks. Conversely, Anglian's proposed mechanism encourages long-term, best-value investment decisions.

(143) For the reasons set out above, Anglian requests that the CMA implements a more effective true-up mechanism, to protect customers and Anglian if levels of growth vary from forecast. Covid-19 has materially added to the uncertainties since the FD, further strengthening the need for an effective, fully symmetrical, growth risk-sharing mechanism. Anglian welcomes the opportunity to work with the CMA to reach a determination which remedies the shortcomings in Ofwat's approach and best addresses current challenges.

[92] Response to Anglian, para. 3.150 to 3.157.

# Part G.4: Reply on Enhancement cost efficiency

## 1 Overview

(i) In its Response to Anglian's SOC, Ofwat cites that the reasons for intervention in Anglian's Enhancement costs is that it considers that "*its costs are not efficient*".[93] This paper explains why Ofwat has not established, to the required evidential standard, that Anglian's costs are inefficient against an appropriate industry benchmark or indeed, so inefficient as to warrant an efficiency "challenge" of the magnitude imposed by Ofwat in Anglian's FD.

(ii) Whilst Ofwat argues Anglian is inefficient based on the delta between its modelled costs and the costs in Anglian's Plan, the key shortcomings in Ofwat's modelling mean that the difference between Anglian's Plan and Ofwat's modelling cannot only represent company inefficiency and should not be interpreted as such by default. Ofwat has failed to address the evidence put forward by Anglian in its SOC regarding the limitations of Ofwat's models.

(iii) By contrast, Anglian has demonstrated the steps it has taken to ensure that the costs in its Plan are appropriate and Anglian's own benchmarking assessments fail to show inefficiency in relation to its Enhancement costs. Without further meaningful evidence being presented by Ofwat, Anglian cannot reconcile the reality of an efficient Enhancement programme with Ofwat's assertions that its Enhancement costs are inefficient.

(iv) At FD, Ofwat applied efficiency challenges totalling £113 million which amounts to over 70% of the challenges applied to Anglian's Enhancement costs. As a result of these cost challenges, Anglian will be unable to deliver the Plan supported by its customers. Given the magnitude of these efficiency cuts and the failure by Ofwat to provide evidence to substantiate its arguments, they represent an unacceptable level of challenge and risk to Anglian, its customers and the environment.

(v) Whilst Ofwat also relies on information asymmetry for efficiency challenges, its arguments in that respect are contradictory and fail to adequately justify its cuts to Anglian's Enhancement needs. Ofwat's approach to information asymmetry simply constitutes Ofwat's "argument of last resort" which it uses both to: (i) shift the burden of proof on companies to prove efficiency when it failed to prove inefficiency itself; and (ii) subsequently to dismiss evidence put forward by companies on the basis that, as a regulator, it has access to more information.

(vi) Anglian requests that the CMA assess the evidence it has put forward in its SOC and together with this Reply when assessing the efficiency of Anglian's Enhancement costs, specifically noting that:

  (a) Ofwat's efficiency challenges (modelled and company-specific) are overlaid onto efficiencies which are already built into Anglian's own Plan, resulting in an unreasonable level of challenge in Anglian's Enhancement programme.

  (b) Ofwat's efficiency challenges are based on an inappropriate choice of benchmark.

[93] For example, Ofwat's Response, para. 3.168.

(c) Ofwat's efficiency challenge of 1.1% future productivity (i.e. frontier-shift) is a double count of the efficiency assumptions included in the forward-looking benchmark.

## 2 Introduction

(144) Ofwat's conclusions regarding the "inefficiency" of Anglian's Enhancement costs are used to justify its future productivity, modelled efficiency and company-specific efficiency challenges, which amounts to £113 million out of a total £161 million challenge (i.e. over 70%) applied by Ofwat to Anglian's Enhancement costs:[94]

**Table 8 Impact of Ofwat's efficiency challenges on Anglian's Enhancement Plan**

| Area of challenge | Gap for water (£m) | Gap for water recycling (£m) | Total gap (£m) |
|---|---|---|---|
| Future productivity | 0 | 20 | 20 |
| Modelled efficiency | 15 | 41 | 56 |
| Company-specific efficiency | 34 | 3 | 37 |
| Total | 49 | 64 | 113[95] |

*Source: Anglian*

(145) Additional detail on the future productivity challenge can be found in **Chapter E.4: Frontier shift** of Anglian's SOC. **Tables 20 and 21** in **Chapter E.3: Enhancement** of Anglian's SOC further breakdown each of the modelled and company-specific efficiency challenges and how these are applied to Anglian's Plan.

(146) Ofwat's justifications for these efficiency cuts are flawed and methodologically incorrect. **Sections 3.2.3** (future productivity), **3.2.4** (modelled efficiency) and **3.2.5** (company-specific efficiency), in **Chapter E.3: Enhancement** of Anglian's SOC demonstrate that these challenges ignore important cost drivers of Enhancement, erroneously attribute model error to inefficiency and apply a frontier-shift efficiency challenge on a forward-looking benchmark, resulting in a double count.

(147) Ofwat's view on Enhancement efficiency from IAP to FD has been principally informed by comparing company costs against benchmarked models.[96] Anglian agrees that this could be an adequate approach if the models used were fit for this purpose. However, Anglian has previously highlighted the shortcomings of Ofwat's assessment. These result in an insufficient Enhancement allowance which Ofwat infers to be due to inefficiency without additional evidence to support that this is the case.[97] Whilst Ofwat has failed to adequately evidence that Anglian's Enhancement costs are inefficient, Anglian has itself carried out a series of independent benchmarking exercises on its Enhancement costs which have not revealed any inefficiency.

[94] See also Anglian's SOC, Table 18, page 176.

[95] This figure excludes an additional approximately £2 million allowance Anglian benefits from in the FD for DPC and third-party adjustments, which brings the net Enhancement expenditure gap to £161 million.

[96] As demonstrated in Ofwat's IAP Test Question Assessment (SOC410). Ofwat's assessment on enhancement efficiency sets out that "*Its costs in a number of enhancement areas where we have benchmark models, such as lead reduction, growth and metering are less efficient than its peers*", page 9.

[97] See Anglian's SOC, Chapter E.3: Enhancement, Section 3.2.4.

(148) Given the magnitude of these efficiency cuts and the failure by Ofwat to provide evidence to substantiate its arguments, these efficiency challenges represent an unacceptable level of challenge and risk to Anglian, its customers and the environment.

(149) This document highlights:

(i) **Section 3** - The lack of evidence provided by Ofwat in relation to each of its efficiency arguments;

(ii) **Section 4** - How Anglian has developed its view of appropriate costs for delivery of its AMP7 Enhancement programme, including the independent benchmarking carried out;

(iii) **Section 5** - Ofwat's use of information asymmetry when justifying efficiency costs;

(iv) **Section 6** - The impact of Ofwat's FD on Anglian's Enhancement programme for AMP7.

## 3 Lack of evidence provided by Ofwat in relation to each of its efficiency arguments

(150) Whilst Ofwat has repeatedly raised inefficiency arguments in relation to Anglian's Enhancement costs, it has failed to substantially engage with Anglian's arguments in the SOC as to why its inefficiency challenges are flawed and has failed to provide compelling evidence to support the inefficiency cuts applied to Anglian's Enhancement programme.

(151) As set out in Anglian's SOC, Ofwat's approach to efficiency as well as the future productivity, modelled efficiency and company-specific challenges it raises are not robust. Anglian summarises the deficiencies with each challenge below.

### 3.1 Future productivity:

(152) As developed in **Chapter E.4: Frontier shift** of Anglian's SOC, Ofwat's future productivity challenge is incorrect as it applies an additional frontier shift to forecast costs that already include one. As a result of the additional 1.1% future productivity challenge applied by Ofwat, together with the frontier shift assumed by the estimated frontier companies,[98] Anglian is subject to a total future productivity challenge of 5% per annum.[99] Ofwat accepts that "*there could be scope for double counting*".[100] However, Anglian notes that Ofwat is disputing the value of this double count as it is unclear what the estimated benchmark companies assumed for their frontier shift.[101] This is because, due to a lack of clarity in the requirements, companies interpreted the requirements differently, and it is therefore unclear what the companies assumed for their frontier shifts.[102] This is easily rectified by a clarification request to the industry.[103] Despite Ofwat's Base models being based on historical data, and the analysis for the WINEP programme being based on forecast data, Ofwat uses an identical net frontier shift challenge for the WINEP programme as it does for Base expenditure. Equally, on retail costs, where Ofwat put weight on a forward-looking benchmark, they do not apply a frontier shift assumption. This inconsistency demonstrates how Ofwat's approach is inappropriate. Anglian considers that no net frontier shift overlay

[98] The upper quartile companies for WINEP (United Utilities, South West Water and Severn Trent Water) applied a frontier shift adjustment to their estimations of their WINEP expenditures.

[99] Anglian's SOC, para. 790 and footnote 463. The 'ongoing efficiency improvement' assumptions on Enhancement submitted in the business plans of companies that are above the benchmark on the WINEP modelling (United Utilities, Severn Trent and South West) were between 2.7% and 5.0%, or 3.9% on average. 5% is the sum of 1.1% and 3.9% (Table App24a, of September 2018 Plan Data Tables, average per annum "ongoing efficiency improvement" for wastewater network plus, weighted by infra and non-infra (SOC002)).

[100] Ofwat's Response on Cost Efficiency (006), para. 7.66.

[101] Ofwat's Response on Cost Efficiency (006), paras. 7.64-7.74.

[102] September 2018 Plan Data Tables, Table App24a (SOC002).

[103] Anglian considers that it is necessary to ask *all* companies to clarify their assumptions as Ofwat's enhancement modelling is so inaccurate that it is unclear which companies represent the frontier.

should be applied when forward-looking benchmarks are used which already reflect companies' own frontier shift assessments.

### 3.2 Modelled efficiency

(153) As set out in **Chapter E.3: Enhancement** of Anglian's SOC,[104] issues with Ofwat's modelled efficiency challenge include (i) benchmarking and choice of benchmark; and (ii) treatment of Enhancement opex. Ofwat's Enhancement cost modelling is particularly inaccurate and far more inaccurate than Ofwat's Botex Plus modelling, which in turn is less accurate than the Botex modelling the CMA developed in 2015 (where the CMA used an industry-average benchmark).[105] As such, it is inappropriate for Ofwat to apply a catch-up efficiency challenge to Enhancement expenditure. Anglian provides more evidence on this point in the confidence intervals analysis prepared by Oxera as part of Anglian's SOC and in Section 4.4 of Oxera's Report on cost assessment issues.[106]

### 3.3 Company-specific efficiency

(154) As set out in **Chapter E.3: Enhancement** of Anglian's SOC, Ofwat's company-specific efficiency challenge to Enhancement expenditure is inappropriately based on Ofwat's efficiency challenge from its Base cost modelling.[107] This approach is *ad hoc*. There is no reason to consider that a company's efficiency on Base expenditure (i.e. "day-to-day business as usual" expenditure) is a good indicator of a company's efficiency on Enhancement expenditure (i.e. large lumpy capital Enhancement projects). Furthermore, Ofwat's approach is not supported by regulatory precedents, including previous assessments in the water industry, which did not assess similarly efficiency for Base costs and Enhancement.[108] Moreover, Oxera's analysis, as submitted as part of the SOC, shows that, using more appropriate Botex Plus models with smoothed Capital Maintenance expenditure, Anglian is efficient in both water and wastewater (see Figures 4.5 and 4.6 of Oxera's Report on cost assessment issues).[109] As such, even if Ofwat's *ad hoc* approach is used, no company-specific efficiency assumption should be applied to Anglian.

(155) Most recently, at the CMA hearing on 20 May 2020, Ofwat presented the Table below alleging Anglian's Enhancement costs were inefficient:

**Table 9 Ofwat's challenge on Anglian's Enhancement Plan as presented to the CMA on 20 May 2020**

| Expenditure area | Company unit cost | Industry median unit cost |
|---|---|---|
| Lead standards<br>(£ per lead pipe replaced) | 5,284 (**highest** in the sector) | 1,353 |
| Metering<br>(£ per meter installed) | 279 (**fourth highest**) | 248 |
| Leakage reduction<br>(£m per megalitre a day) | 3.3 (**third highest**) | 2.0 |

[104] Anglian's SOC, paras. 794-799.

[105] Anglian's SOC, para. 800 and para. 604; Bristol (2015) (SOC275).

[106] Oxera Analysis of Confidence Intervals (SOC509); Oxera's Report on cost assessment issues, Section 4.4 (REP13).

[107] Securing Cost Efficiency Technical Appendix, pages 51 and 52 (SOC243).

[108] For example: (i) in the CMA review of Bristol's PR14 determination, the results of the CMA's Opex/Botex modelling were not used to derive their view of the capex efficiency challenge for Bristol's Enhancement expenditure; and (ii) in Northern Ireland Water's PC15 final determination, capital efficiency targets were derived through triangulation of cost base analysis and views on capital procurement efficiencies from independent sources. The resulting efficiency factors were materially different to those derived for opex.

[109] Oxera's Report on cost assessment issues (REP13).

| Expenditure area | Company unit cost | Industry median unit cost |
|---|---|---|
| Environmental (**WINEP**) | **Less efficient** than industry average in most of Ofwat's benchmarking models | |
| First time sewerage | **20% less efficient** than industry average | |

Source: Ofwat presentation to the CMA, 20 May 2020, slide 35.[110]

(156) As highlighted above and in Anglian's SOC,[111] Ofwat's assessment of Enhancement efficiency is flawed in several ways from multiple aspects and Ofwat's conclusion of inefficiency is, in fact, the result of the limited accuracy of its models. Ofwat has failed to address in its Response the analysis prepared by Oxera and submitted by Anglian as part of its SOC[112] which showed that Ofwat's Enhancement models present large confidence intervals, i.e. Ofwat's cost predictions for Anglian's Enhancement are flawed. In Oxera's Report on cost assessment issues, based on their analysis of confidence intervals, Oxera states that "*it is highly unlikely that a catch-up efficiency target is appropriate on the basis of Ofwat's forward-looking econometric models for enhancement*".[113]

(157) Anglian sets out below its counter-arguments for Ofwat's assertions as set out in Table 9 above.

(158) On **lead standards**, the range of costs across companies is extreme (£505-£5,254), with Anglian's unit cost being four times greater than the median. This is evidently unrealistic and clearly suggests that variables other than simply efficiency are at play and undermine the statistical robustness of Ofwat's model. Ofwat has refused to question the robustness of its model despite the evidence provided by Anglian showing that Anglian's costs look high on a "number of pipes" basis rather than "length of pipes" basis, not as a result of inefficiency but due to Ofwat's failure to include length of pipes as a cost driver in its model.[114] That is, Ofwat's models suffer from omitted variable bias and thus cannot be relied upon to predict efficient costs.[115] This is evident in Figure 56 in **Chapter E.3: Enhancement** of Anglian's SOC, which shows that Ofwat's econometric model for lead standards is one of the least accurate of all Ofwat's enhancement cost models.[116] Furthermore, the unit cost presented by Ofwat is misleading as it includes £1.4 million of costs associated with Anglian's "Water in buildings" programme, an integrated package of measures used to assess and manage the risks to consumers posed by the quality of water within public buildings. These costs are unrelated to pipe replacement costs and artificially drive up the unit cost presented by Ofwat.

(159) On **leakage**, it is not surprising that Ofwat finds Anglian's unit costs to be one of the highest in the industry as Anglian is the industry leader with the lowest level of leakage of any company. This observation just confirms Anglian's argument that it is more costly to reduce leakage as leakage falls, and that such higher unit costs should be accounted for by Ofwat. Anglian has provided substantial evidence from thirdparties and from its own historical records showing that the marginal cost of further reducing leakage increase as leakage performance increase.[117]

(160) On **metering**, Ofwat's benchmarking models do not take into account the very high level of meter penetration in Anglian's region. For areas with high meter penetration, unit costs for new meter

[110] Ofwat Initial Presentation to CMA (20 May 2020) (REP11).

[111] Anglian's SOC, para. 800.

[112] Oxera Analysis of Confidence Intervals (SOC509).

[113] Oxera's Report on cost assessment issues, Section 4.4, page 39 (REP13).

[114] Response to Anglian, para. 3.179. Part A.3: Review of Enhancement arguments (REP02).

[115] Ofwat's deep dive adjustment related to this point falls significantly short of correcting for this.

[116] Anglian's SOC, Chapter E.3: Enhancement, Figure 56.

[117] Anglian's SOC, Chapter H: Leakage, Section 3. Part E: Review of Leakage arguments (REP06).

installations are more costly as a greater proportion of meters to be installed under these programmes will be difficult and costly, relative to areas of low meter penetration.[118]

(161) On **WINEP**, Anglian notes that Ofwat's view on inefficiency depends significantly on a simple model for phosphorus removal which is heavily reliant on the complexity threshold.[119] Ofwat has not undertaken any sensitivity analysis on this issue (or, at least, not shared such analysis with Anglian). While of better standard, Ofwat's WINEP models are significantly more inaccurate than their Botex Plus models (Figure 57 in **Chapter E.3: Enhancement** of Anglian's SOC[120]), and, as such, an upper quartile catch-up efficiency challenge is not appropriate. Similarly, on first time sewerage, Ofwat's assessment relies on an insufficiently reliable model which relies on skewed data where two companies represent the vast majority of spend and outputs.[121] This is evident in Figure 57, which shows that Ofwat's econometric model for **first time sewerage**, along with lead standards, are the least accurate of all Ofwat's enhancement cost models.[122] In both these areas Anglian reiterates that deep dive assessments would have been more appropriate and would have facilitated meaningful conclusions on Anglian's efficiency.

## 4 How Anglian has developed its view of appropriate costs for delivery of its AMP7 Enhancement[123]

(162) Anglian's Enhancement expenditure is developed through a process which (i) considers the need and scope for investment on a component by component basis (built at equipment or process group); (ii) challenges itself to build only when this is absolutely necessary, and to deliver low-cost, innovative solutions; and (iii) ensures efficiency by embedding historical costs and approaches, e.g. through use of modular processes[124] and alliancing.[125]

(163) The sections below illustrate both (i) how efficiency is embedded in Anglian's cost modelling and (ii) the additional independent benchmarking Anglian carried out, where possible, to ensure the efficiency of its Plan.

### 4.1 Efficiency is embedded in Anglian's cost modelling

(164) Since 2004, Anglian has adopted a cost estimation system based on a robust and systematic approach that captures the outturn total cost of delivered projects through the project cycle life, from their different alliance partners (all of whom operate in the competitive sector and were selected on the basis of a competitive tendering process). This methodology has allowed Anglian to build an extensive cost model library with over 2,500 cost models that contain specific company cost data. This approach ensures the efficiencies from the most recent projects are embedded in future costs. All future Enhancement schemes are scoped and estimated using these cost models. This approach ensures that the most optimal minimum required engineering scope has been included in the estimation.

[118] Part A.3: Review of Enhancement arguments (REP02).

[119] Part A.3: Review of Enhancement arguments (REP02).

[120] Anglian's SOC, Chapter E.3: Enhancement, Figure 57.

[121] Anglian's DD Representation, page 145 (SOC168), Anglian FD Cost Efficiency Appendix, page 6 (SOC232) and Anglian's SOC, Chapter E.3: Enhancement, Table 21.

[122] Anglian's SOC, Chapter E.3: Enhancement, Figure 57.

[123] See also Anglian's SOC, Chapter E.3: Enhancement.

[124] For example, for the new Water Treatment Works at Pyewipe Water Recycling Centre which will supply industrial customers.

[125] Anglian has a rigorous approach to alliancing, with a total incentivisation model under which alliance partners can only make a return if they outperform. This model means that Anglian's alliance partners need – and want – to invest in IT and develop innovative solutions when providing services to Anglian. They have a vested interest in finding new, more efficient ways of working. This approach helps to achieve lower costs for customers, as half the outperformance is returned to customers during the AMP, and the revealed efficient cost then form the starting point for future cost models. Anglian's September 2018 Plan, page 93 (SOC001).

(165) For each investment and alternative options, Anglian's risk, opportunity and value ("**ROV**") process takes into account baseline and residual risks of each alternative considered as well as values for both private (costs to Anglian, e.g. fines, costs of incidents) and societal (e.g. environmental and social)[126] impact. Anglian undertook engineering assessments for all Enhancement schemes to be delivered in AMP7. This included extensive modelling and option analysis, multi-criteria assessment and cost-benefit analysis in order to identify the best value options to be selected.

(166) In relation to AMP7, Anglian took additional steps to ensure the efficiency of its costs through:[127]

(i) an additional £199 million totex stretch applied on top of £226 million from Anglian's 1% productivity assumption;[128]

(ii) where reasonable, spanning investment over multiple AMPs to reduce short term cost impact for customers (£84 million); and

(iii) application of overhead savings from synergies associated with delivering the WINEP programme through portfolio delivery (£38 million).[129]

(167) These challenges had a significant impact on reducing the level of expenditure included in Anglian's Plan over and above the embedded efficiencies included in its cost modelling and future productivity challenges. It is this process that has resulted in Anglian's unit costs for the replacement of communication pipes to drop from £514 per metre to £212 per metre,[130] and £279 per new meter installation.[131] Anglian therefore considers that it has taken reasonable steps to ensure that these unit costs are appropriate and efficient.

### 4.2 Efficiency benchmarking

(168) As well as ensuring that its plans and models are built with efficiency as a core criterion, Anglian then stress-tests its Enhancement costs through independent benchmarking.

### 4.3 Overall benchmarking approach

(169) During the procurement process of its alliance partners, Anglian undertakes a cost assessment of the bidders, in some cases through schedules of rates which ensure that it receives competitive market rates. Where possible during the PR19 process, Anglian compared the costs in its Plan with external benchmarks. These covered a wide spread of its Enhancement expenditure including WINEP, WRMP, growth and resilience expenditure. Key external comparisons Anglian has sought throughout the PR19 process are summarised below.[132] Anglian notes that, unlike Ofwat's assertions, none of these varied external comparisons have suggested that Anglian's Enhancement costs appear to be inefficient and

[126] The societal impacts are calculated using Anglian's extensive societal valuation work, which was commended in Ofwat's IAP for contributing toward Anglian's 'A' rating on customer engagement at IAP stage (IAP Test Area Assessment (SOC315)).

[127] Anglian's September 2018 Plan, page 99 (SOC001).

[128] Anglian's September 2018 Plan, page 93 (SOC001).

[129] DD Representation, section 8.1.1 (SOC168).

[130] IAP Water Data Tables Commentary, page 148 (SOC107). Based on a cost of £1,028 to replace lead communication pipes with average length of 2 metres, and a cost of £4,229 to replace communication and customer owned pipes with an average length of 20 metres.

[131] As noted in Ofwat's presentation (see Table 9 above based on Ofwat Initial Presentation to CMA (20 May 2020) (REP11)). However, it should be noted that this is an average and masks variation in installation costs. For example, new smart meter installations have a unit cost of £280.99 per meter, whereas new dumb meter installations have a unit rate of £275.28 per meter. See IAP Water Data Tables Commentary, page 65 (SOC107).

[132] More details on these benchmarking analyses are available in annexes referenced below.

Anglian is therefore unable to align the evidence it has seen so far with Ofwat's criticism in a meaningful way.

#### 4.3.1 Mott Macdonald benchmarking[133]

(170) Anglian's Enhancement costs in its Plan were externally reviewed and benchmarked by Mott MacDonald against other water companies' costs for PR19 before submission to Ofwat and were found to be efficient, as illustrated by Figure 12 below.[134] Ofwat dismissed this benchmarking evidence on the basis of the uncertainty shown by the confidence intervals.[135] This dismissal does not reflect the fact that out of the ten programmes analysed, the costs of three programmes (representing 60% of the benchmarked value) were below the range of the confidence interval, none of the programmes have costs higher than the confidence interval range, and that with a +/-15% confidence interval range, Anglian's costs are as likely to be 1% less efficient than the industry as they are to be 29% more cost efficient than the industry dataset. Whilst dismissing this evidence of efficiency, Ofwat places considerable importance on its own models which, as highlighted by Oxera as part of Anglian's SOC, themselves have a significant degree of uncertainty.[136]

(171) Anglian notes that, (i) Oxera's Report on cost assessment issues shows that the estimated Botex Plus efficiency gap for Anglian can be entirely explained by uncertainty even when more appropriate models are used;[137] and (ii) Oxera had already shown that the accuracy of Ofwat's enhancement models were worse than their Botex Plus models.[138] Yet, Ofwat put considerable weight on the outcome from these models. As such, it seems inconsistent for Ofwat to consider that confidence intervals are too wide to rely on the outcome that Anglian's costs are lower than the industry average.

[133] Anglian's September 2018 Plan, pages 99 to 101 (SOC001) and Anglian Water Benchmarking (SOC025).

[134] This comparison utilised Mott Macdonald's independent cost base from five different water companies. This exercised considered 95 projects across 10 Enhancement programmes. The data was normalised for time, location and coverage to ensure comparison on a like-for-like basis. The comparison also included efficiency factors to adjust comparator costs downward to ensure Anglian was comparing with efficient costs. To do this, the Ofwat relative efficiency figures taken from Ofwat's "Cost Assessment – Advanced Econometric Models (20 March 2014)" were used to allow Mott Macdonald to strip out the inefficiencies included within the comparator data, to give a more representative view of Anglian's standing within the industry.

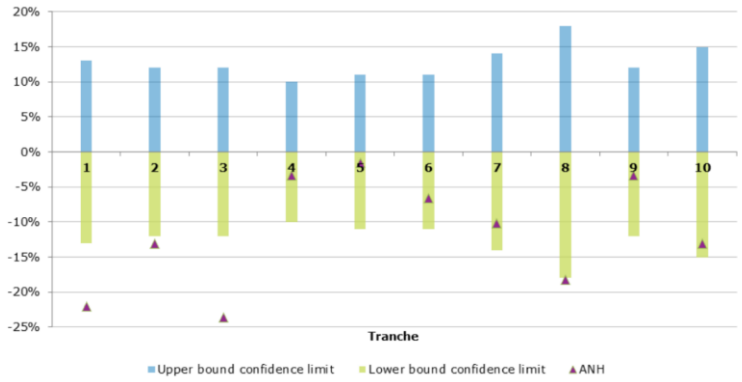
[135] "*The report states that, for a selected set of six projects in the company's resilience programme, capital costs are on average a 13% lower than those from three other companies. However, the confidence range attached to the cost estimates used as comparators for the benchmarking exercise is +/-12%, which questions the actual cost efficiency of the resilience projects as a whole*" - Ofwat FD Resilience Enhancement Feeder, Deep-dive ANH cell J19 (SOC377).

[136] Oxera Analysis of Confidence Intervals (SOC509).

[137] Oxera's Report on cost assessment issues (REP13).

[138] Anglian's SOC, Chapter E.3: Enhancement, Figures 56 and 57 and Oxera Analysis of Confidence Intervals (SOC509).

**Figure 12 Comparison of Anglian's costs against industry costs[139]**




Source: Anglian

### 4.3.2 Strategic Pipeline Alliance tendering cost comparison[140]

(172) Where market testing through procurement is available this can be a reliable validation of whether costs are efficient. In a specific example, Anglian provided Ofwat with the findings from Anglian's Strategic Pipeline Alliance ("**SPA**") procurement for WRMP market testing, which was the most up to date available. Anglian started an OJEU tendering process on its interconnectors programme after the submission of its Plan. The most complex scheme, with the larger diameter (900 mm) and larger booster pumping station, was selected for tendering which reflects economies of scale. The tendering process allowed Anglian to market test its unit rate for pipelines, booster pumping stations and storage reservoirs with construction companies using tendered costs information, thereby covering 60% of interconnector costs for this scheme. This demonstrated Anglian's costs for laying water mains are consistent with the upper quartile level of costs, with Anglian's costs of £58.6 million comparing to an average of £67.2 million.

### 4.3.3 Benchmarking smart metering[141]

(173) Anglian provided international benchmarking of its smart metering costs using observed costs for the rollout of smart meters in the United States provided independently by KPMG. This showed its costs to be lower than all of these benchmarks. Anglian followed this up with further comparisons of larger smart meter rollouts in Spain and Australia in its IAP response which also showed Anglian's costs to be efficient.[142]

### 4.3.4 Benchmarking growth costs

(174) In its DD Representation, Anglian included a comparison with other companies' published growth charges.[143] The analysis shows that across the entire sample, Anglian is 11% more efficient than the upper quartile for cost efficiency. Anglian has very similar costs to the upper quartile for smaller sites and as sites get larger it becomes even more efficient. This demonstrates that, when other company

[139] The bars in the chart represent the following areas of enhancement: 1) Addressing flow at water recycling centres (increase flow to full treatment); 2) Growth at water recycling centres (capacity enhancement); 3) Growth at water recycling centres (dry weather flow programme); 4) Addressing flow at water recycling centres (flow at water recycling centres); 5) Addressing flow at water recycling centres (Urban Wastewater Treatment Directive); 6) Phosphorus removal; 7) Phosphorus removal/ no deterioration; 8) WRMP supply side (infrastructure); 9) WRMP supply side (non-infrastructure); 10) Resilience.

[140] KPMG Strategic Pipeline Scheme Review, page 7 (SOC132).

[141] Anglian's September 2018 Plan (SOC001), September 2018 Plan Water Data Tables Commentary, page 44 (SOC004), and KPMG Smart Metering Benchmarking, page 7 (SOC131).

[142] IAP Water Data Tables Commentary, pages 60 to 63 (SOC107).

[143] DD Growth Expenditure Deep Dive, pages 25 to 27 (SOC171) and full analysis in DD Growth Deep Dive Anglian Site specific mains benchmarking (SOC186).

unit charges are applied to Anglian's types of developments, Anglian is efficient. This suggests that a company operating at upper quartile levels of efficiency would deliver Anglian's programme for £83 million as compared to £75 million in Anglian's Plan. This has provided further assurance to Anglian that the costs that it has derived in its plan for AMP7 through the process set out in Section 4.1 above are appropriate.

## 5 Information asymmetry

(175) To assess efficiency, Ofwat argues that, due to information asymmetry, it is justified to "*place the onus on the companies to provide sufficient evidence to prove that the allowances they wish to claim represent efficient expenditure*".[144] However, Ofwat then makes a diametrically opposed argument to dismiss evidence provided by companies on the basis of information asymmetry.[145] Ofwat's approach to information asymmetry is contradictory, which reveals that information asymmetry simply constitutes Ofwat's "argument of last resort" which it uses both to shift the burden of proof on companies to prove efficiency when it failed to prove inefficiency itself, and subsequently to dismiss evidence put forward by companies on the basis that as a regulator it has access to more information. This creates perverse incentives for companies who might be minded to either (i) stop service improvement to cut down Enhancement costs at the detriment of customers to avoid any efficiency challenge or (ii) to artificially inflate their costs to balance off Ofwat's arbitrary efficiency challenges across the board.

## 6 Impact of Ofwat's FD on Anglian's Enhancement programme

(176) As noted in Anglian's SOC, the additional efficiency cost challenges that Ofwat applies in the FD mean that Anglian will not be able to deliver the Plan supported by its customers. Given the magnitude of these efficiency cuts and the failure by Ofwat to provide evidence to substantiate its arguments, these efficiency challenges represent an unacceptable level of challenge and risk to Anglian, its customers and the environment.

(177) As indicated in section 3 above, Ofwat has failed to adequately evidence that Anglian's Enhancement costs are inefficient. Section 4 above shows that Anglian has built its Enhancement costs in manner which ensures the costs in its Plan are appropriate and has also itself carried out a series of external independent benchmarking exercises on its Enhancement costs, which have not revealed any inefficiency. Furthermore, as set out in Section 5, whilst Ofwat also relies on information asymmetry for efficiency challenges, its arguments in that respect are contradictory and fail to adequately justify its challenges to Anglian's Enhancement needs. On this basis, and without further meaningful evidence being presented by Ofwat, Anglian cannot reconcile the reality of an efficient Enhancement programme with Ofwat's assertions that Anglian's Enhancement costs are inefficient.

[144] Ofwat's Overall Stretch on Costs and Outcomes, pages 27 to 28 and Ofwat Response to Anglian, pages 59 and 62.

[145] *"[Ofwat] unlike the companies – [is] able to take an expert, independent and objective view across the sector as a whole, drawing on the representations and evidence from all of the individual companies (including the 13 companies who are not disputing their final determinations). We can also consider historical performance across the sector and make comparisons of performance across companies (of which we have decades of knowledge)"* (Ofwat's Response on Overall Stretch, page 33). Ofwat also dismisses any criticism raised by companies claiming that *"in truth, the companies disagree with how we have exercised our judgement as a regulator. The essence of their complaint is that Ofwat's funding was less generous than they would like"* (Ofwat's Response on Overall Stretch, page 32).

# Part G.5: WRMP Supply-side decision-making process

## 1 Overview

(i) In its Response to Anglian's SOC, Ofwat notes that:

  (a) whilst it does not dispute the WRMP consultation process and agrees that it positively engaged with Anglian, it has "*consistently challenged*" Anglian regarding the transparency and robustness of its decision making and identifying its preferred supply-side programme;

  (b) in its FD, it only challenged Anglian's interconnector scope where Anglian's allowance enables investment in resilience beyond the minimum requirements identified within Anglian's WRMP; and

  (c) it questions the reliability and certainty of the guidance (e.g. WRMP24) Anglian has relied on when establishing the future requirements for its region and customers as reflected in its Plan.

(ii) This document addresses Ofwat's assertions in its Response as summarised above and specifically notes that Anglian considers that it has fully justified the robustness and transparency of its WRMP decision-making process to Ofwat and has proactively engaged with Ofwat providing a range of further evidence during the PR19 process.

(iii) Anglian's Plan strikes the correct balance between known, firm requirements and potential future ones, considering whole life costs of its WRMP options and that this is supported by both the recently published National Framework and draft WRMP24 guidance.

(iv) Anglian requests that the CMA:

  (a) assesses the evidence it has put forward in its SOC and in this Response when considering Ofwat's arguments that Anglian's WRMP decision-making process has lacked transparency and robustness;

  (b) considers the recently published National Framework and draft WRMP24 guidance when assessing Anglian's approach to establishing its WRMP options in its Plan; and

  (c) ultimately, reverses Ofwat's capacity challenge on Anglian's WRMP needs as these contradict the long-term need of Anglian's region and are not in the best interest of Anglian's customers.

## 2 Introduction

(178) This document explains how Anglian reached its preferred September 2018 Plan to deliver its WRMP. It focusses on the supply-side of Anglian's WRMP options to address Ofwat's specific challenges on the interconnector programme. Specifically:

(i) **Section 3** – provides a road map of how Anglian developed the WRMP supply-side options for its Plan, showing the process Anglian followed from identifying its "least cost" plan to selecting its "best value" plan and the additional stress-testing carried out;

(ii) **Section 4** – highlights Anglian's full engagement with Ofwat in the development of its Plan; and

(iii) **Section 5** – summarises Anglian's approach to taking the best available evidence into account when preparing its Plan to strike the correct balance between known, firm requirements and potential futures ones, considering the whole life costs of its options.

# 3 Development of WRMP supply-side options for Anglian's Plan

## 3.1 Development of feasible options

(179) The supply-side options in Anglian's Plan have been developed following the eight-stage framework set out in UK Water Industry Research ("**UKWIR**") Guidance on decision making processes[146] and the Water Resource Planning Guideline ("**WRPG**") as set out further below.[147] Anglian notes that in its revised draft WRMP 2019,[148] each stage of its supply-side options development is cross referred to the relevant technical guidelines from the WRPG.[149] Each step is briefly summarised below:

### 3.1.1 Stage 1: Unconstrained list

(180) Anglian's starting point when considering WRMP options is very broad. 800 "unconstrained" options were initially considered by Anglian as part of the WRMP planning process. This is a list of all the possible options that could reasonably be included in Anglian's Plan and are considered technically feasible.[150]

### 3.1.2 Stage 2: Constrained list

(181) A series of screening stages refined this "unconstrained" list. These screening stages considered whether each option (i) addressed the problem; (ii) breached an unalterable planning consent; (iii) was not promotable (e.g. if the option was likely to involve "excessive" whole life cost); and (iv) had a high risk of failure.[151] Anglian engaged with the EA in the development of these screening tests and on the constrained options list. This screening process generated a "constrained" list of 300 options.

### 3.1.3 Stage 3: Feasibility studies

(182) Next, Anglian completed feasibility studies for each of the constrained options. Factors considered in the feasibility studies include water quality, cost estimates, implementation periods and customer support.[152] This reduced the 300 constrained options to 100 feasible options.[153] Constrained options for each WRZ include both supply transfers from one WRZ to another to address supply-demand issues as

[146] UKWIR Guidance on Decision Making Process (REP37).

[147] EA Interim Water Resources Planning Guideline (SOC334).

[148] Revised draft WRMP (SOC204). See in particular, Revised Draft WRMP Options Appraisal (SOC206) and Revised Draft WRMP Supply Side Option Development (SOC207).

[149] In Anglian's Revised Draft WRMP Supply Side Option Development (SOC207), Anglian has cross-referenced the relevant points in the WRPG checklist in each chapter (EA Water Resources Planning Guidelines Checklist (REP38)).

[150] *Idem*, Section 3.

[151] Further details of the screening criteria are set out in Anglian's Revised Draft WRMP Supply Side Option Development, section 3.1. (SOC207). These are a series of sub-criteria questions against each of these four screening stages (e.g. one of the sub-criteria was "Will the option be resilient and deliver the predicted deployable output and water quality both now and in the future (i.e. within the option's life)?") The options rejected at this stage and the reasons for their rejection are set out in Appendix B (Rejection register) of this document. This is a record of all the options rejected at each stage of the process, including at what stage, and why the option was rejected.

[152] Section 4 and 5 of the Revised Draft WRMP Supply Side Option Development (SOC207) set out the details of the factors considered in these feasibility studies.

[153] Reasons for the rejection of schemes at the feasibility stage are set out in Appendix B (Rejection register) of the Revised Draft WRMP Supply Side Option Development (SOC207).

well as new resources.[154] Once the feasible options were confirmed, they were included in the options appraisal process detailed in the next section.

(183) The details of all the options considered and ultimately rejected during Anglian's development of feasible options are set out in an appendix to Anglian's revised draft WRMP 2019.[155]

### 3.2 Option appraisal process and identification of the Plan

(184) Anglian then engaged in an option appraisal process to identify the options that would ultimately be included in its Plan. The options appraisal process developed and stress-tested a Baseline Least Cost Plan ("**BLCP"**) an Alternative Least Cost Plan ("**ALCP"**) and a Best Value Plan ("**BVP"**). These are described in Table 10 below. For the avoidance of doubt, in its Response, Ofwat refers to Anglian's ALCP as its "least cost plan".[156]

**Table 10 Definitions of the different plans examined by Anglian**

| Baseline Least Cost Plan | Alternative Least Cost Plan | Best Value Plan |
|---|---|---|
| This is the default least cost strategy, selected through the first stage of the Economics of Balancing Supply and Demand ("**EBSD**") modelling. EBSD allows planners to meet a supply-demand deficit with the lowest overall cost, or "least cost" solution. This plan does not provide the flexibility or connectivity required to meet the future challenges in Anglian's region. | This plan represents the least cost version of Anglian's best value strategy. The overall strategy is consistent with Anglian's best value plan, but the scheme capacities are sized only to address the supply demand deficits identified for WRMP19, and do not address any future uncertainty. | This plan represents Anglian's best value strategy which provides additional benefits to address future uncertainty. |

Source: Anglian

(185) The steps taken to develop, assess and stress-test these three plans are illustrated in Figure 13 below and further described in the paragraphs that follow.[157]

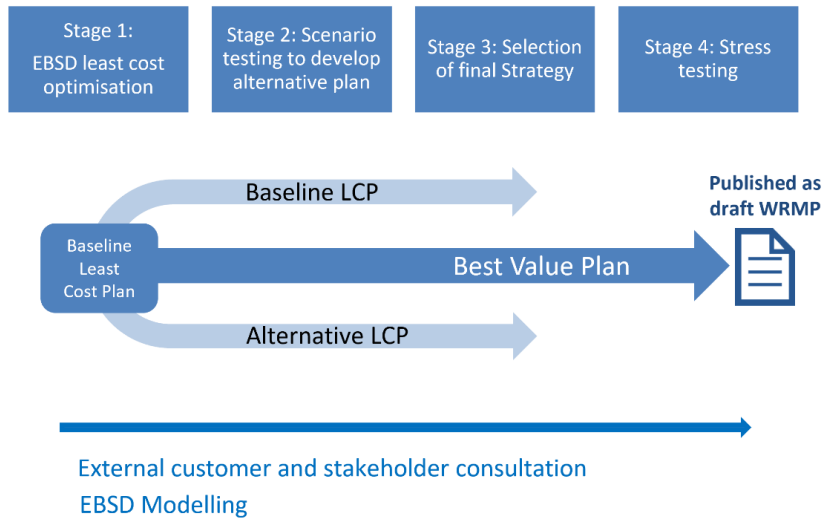
[154] The constrained options and the details of the feasible options are presented in Revised Draft WRMP Supply Side Option Development, section 6 (SOC207).

[155] *Idem*, Appendix B (Rejection register).

[156] Response to Anglian, para. 3.203.

[157] Further details for each step can be found in the sections of Anglian's Revised Draft WRMP Options Appraisal (SOC206) referenced at each stage.

**Figure 13 Four stage process to develop supply-side strategy**




Source: Anglian

### 3.2.1 Stage 1- Developing BLCP[158]

(186) The feasible options were modelled using the industry-standard EBSD to produce a BLCP solution comprising 19 investments. The BLCP contains treatment options in Lincolnshire and transfers to Ruthamford. It selects a new resource (desalination) in 2024 to supply the east along with transfers into the central areas (Bury, Newmarket WRZs). In subsequent AMPs it connects Newmarket WRZ to Ely WRZ and up to North Fenland WRZ with small capacity transfers (4-10Ml/d).

### 3.2.2 Stage 2 - Developing ALCP[159]

(187) Anglian ran 60 alternative EBSD scenarios using the BLCP to create a set of alternative plans. The scenarios included testing which options would be selected if Anglian maximised the use of existing resources between WRZs and to understand how the plan would change if a strategic resource (e.g. a winter storage reservoir) was developed in preference to other smaller new resources.

(188) At this stage, Anglian also tested sets of options under different future scenarios, such as extreme droughts and additional future exports to neighbouring water companies. The alternative plans had common transfer strategies. The main difference between plans was the capacity of transfers.

### 3.2.3 Stage 3 - Identifying the BVP[160]

(189) Anglian used performance criteria to assess the ALCP.[161] This process demonstrated that increasing the capacity in some transfers had the benefit of providing flexibility and adaptability to meet potential future challenges. It also enabled a wider range of new water resource options that may be required in the future.

(190) Anglian refined the capacities of the options through the stress testing process. The three plans (BLCP, ALCP and BVP) were tested and compared against a range of performance criteria to identify the final

[158] Revised Draft WRMP Options Appraisal, Section 3.1 (SOC206).

[159] *Idem*, Section 3.2.

[160] *Idem*, Section 3.3.

[161] All performance criteria used to assess the ALCP are set out in Anglian's Revised Draft WRMP Options Appraisal, Section 3.3 (SOC206).

strategy. The BVP showed optimal performance against the performance criteria assessment (cost, adaptability and flexibility, risk and resilience, alignment with Water Resources East,[162] alignment with customer preferences, environmental and social impacts).

#### 3.2.4 Stage 4 - Further Stress Testing[163]

(191) Anglian conducted further EBSD stress tests using fixed capacities to ensure that the final strategy was robust to future uncertainties. The strategy was tested under four scenarios: (i) extreme drought with an approximate 1 in 500-year return period; (ii) drier climate change scenarios; (iii) lower water savings than estimated; and (iv) future trades with neighbouring water companies. These tests demonstrated that the BVP was adaptable in a range of possible future scenarios.[164]

### 3.3 Least Worst Regrets Analysis

(192) As set out in **Chapter E.3: Enhancement** of Anglian's SOC, Ofwat's approach in the FD fails to recognise that Anglian had based and planned the capacity for the relevant interconnector schemes, as set out in its Plan, to address future supply demand uncertainty, resilience needs and future strategic scheme utilisation. Specifically, in relation to assessing future supply demand uncertainty, it was not possible to fully quantify these needs as part of WRMP19, due to timing of water resources planning methodological changes ahead of WRMP24.

(193) Building on the stress testing results (see Section 3.2.4 above), Anglian took an additional stress testing approach to quantify the most appropriate interconnector capacities for delivery in AMP7.[165] Anglian also commissioned NERA Economic Consulting to carry out a Least Worst Regrets Analysis (**"LWRA**"), which demonstrated that Anglian's plan is robust.[166] The LWRA was used to provide further supplementary evidence of the best balance between adaptability for future uncertainty against Business as Usual ("**BAU"**).

(194) The LWRA considered the ALCP and BVP plans, in addition to a "**BVP Max**" plan (where the BVP schemes were sized to their maximum utilisation across all scenarios). The Net Present Value ("**NPV"**) of totex over 80 years was calculated for nine scenarios for each initial plan.[167] Regret was calculated as the difference between the cost of the chosen investment option against the hypothetical optimal (least cost) decision in each scenario. Results are illustrated in Figure14 below.

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[162] WRE is a partnership including water companies, farmers and local authorities in the East of England, taking a collaborative approach to water resource management in the East of England. Further details can be found on the WRE website - wre.org.uk.

[163] *Idem*, Section 3.4.

[164] Revised Draft WRMP Options Appraisal, Table 3.9 (SOC206), showing additional options required under each stress test scenarios.

[165] This approach took into account a broad set of criteria including costs, adaptability, deliverability, customer preferences and environmental and social impacts. After stress-testing the Plan for different scenarios (e.g. extreme drought and higher climate change impact), Anglian prepared a best value plan that balanced known pressures with the need for an element of future-proofing to avoid future re-work.

[166] WRMP Least Worst Regret Analysis (SOC220). The Least Worst Regret Analysis is a practical tool for decision-making in the context of uncertainty and especially where it is difficult or inappropriate to attach probabilities to possible futures states of the world (Stan Zachary, Least worst regret (LWR) analysis for decision-making under uncertainty, with applications to future energy scenarios (3 August 2016), p.1). The rationale for using LWR analysis to appraise Anglian's investment options is that there are multiple sources of uncertainties regarding the future water demand-supply balance due to the uncertain effects of climate change, changing planning standards, costs, and performance of new supply and demand schemes.

[167] The scenarios are: WRMP baseline; Demand management options save 15% less water; demand management options save 30% less water; extreme drought in Essex and Suffolk; extreme drought in Norfolk; extreme drought in Ruthamford; high climate change; strategic growth (including ox-cam arc); and low growth (following historic ONS trend).

**Figure 14 Least Worst Regrets Analysis**

| Portfolio | LWR results under uncertainty scenarios | | | | LWR |
|---|---|---|---|---|---|
| | ✗ | 👎 | 👉 | 👍 | |
| Alt LCP | 2 | 4 | 2 | 3 | 3rd |
| BVP | 0 | 3 | 3 | 3 | 2nd |
| BVPMax | 0 | 2 | 4 | 3 | 1st |

✗ Reservoir unable to be utilised in scenario

👎 Highest regret portfolio

👉

👍 Least regret portfolio

**Best balance of future uncertainty against BAU**

Source: Anglian

(195) As illustrated above, the BVP Max plan showed the "least worst regret" across all scenarios, followed by the BVP, whereas in some drought scenarios the ALCP was too small to allow a strategic reservoir to be utilised to meet the deficit. The BVP Max provides the most opportunities to select different future new resources and adapt to the needs of the various scenarios. However, it has the highest AMP7 capex (8% higher than ALCP).

(196) The LWRA clearly indicates that the BVP (which corresponds to Anglian's revised WRMP) continues to strike a balance between ALCP and the most flexible portfolio, the BVP Max plan. It has a lower regret than the ALCP, and its corresponding capex in AMP7 is only 4% higher than the LCP. Critically, the BVP provides more opportunities to adapt to different scenarios and, unlike the ALCP, is compatible with a strategic reservoir for all of the relevant scenarios.

(197) In its Response, Ofwat notes that since Anglian provided detail regarding its LWRA to Ofwat in October 2019, it does not consider that this analysis was utilised in development of Anglian's draft WRMP or Plan.[168] Anglian notes that the LWRA was a final analysis conducted after the development of the revised draft WRMP and Plan to test the robustness of Anglian's Plan. Details were provided to Ofwat in early October 2019.[169] It was intended to supplement the stress testing already undertaken during the WRMP process, as described in the WRMP Options Appraisal, which was also shared with Ofwat.[170]

## 4 Full engagement with Ofwat

(198) Whilst Ofwat does not dispute the WRMP consultation process and agrees that it positively engaged with Anglian, it notes that it has "*consistently challenged*" Anglian regarding the transparency and robustness of its decision making and identifying its preferred programme.[171]

[168] Response to Anglian, para. 3.214.

[169] Following issue of the Least Worst Regret Analysis to the EA on 25 September 2019.

[170] Revised Draft WRMP Options Appraisal, Section 3.4 (SOC206).

[171] Response to Anglian, para. 3.205.

(199) As set out in Section 3 above, Anglian has developed the WRMP options for its Plan following a detailed and rigorous process dictated by relevant industry guidelines. Ofwat has been consulted throughout this process.

(200) In addition, Anglian has clearly set out its approach to developing its WRMP options to Ofwat throughout the PR19 process. Anglian has had several constructive engagements with Ofwat (e.g. 30 April 2019 (post IAP response), 1 August 2019 (session on cost assessment), and 7 October 2019, (post DD Representation)). Anglian has also provided additional material required by Ofwat at each opportunity to present further explanation. This included:

(i) Requests for information of October 2019: Anglian provided further clarification concerning the sizing of individual interconnectors, the optioneering process for intra-zonal schemes, and the development of the East Ruston scheme, the need for which was included late in the process by the EA.[172]

(ii) Requests for information of October 2019: Anglian provided a detailed breakdown of the schemes, costs and capacities included in the BLCP, ALCP and BVP together with an explanation for schemes with capacity building to address future uncertainty to deliver in the case of a 1 in 500 year drought, new climate change projections and sustainability reductions, and how the stress testing approach (see Section 3.2.4 above) informed where the ALCP would not provide sufficient capacity.[173] Anglian also shared its note on the LWRA with Ofwat on 16 October 2019.[174]

(201) On the basis of the above, and despite Ofwat's assertions in its Response, Anglian considers that it has fully justified the robustness and transparency of its WRMP decision-making process to Ofwat and has responded to Ofwat's queries in full at every step of the engagement process.

## 5 Best available guidance taken into account when preparing Anglian's Plan

(202) Ofwat notes that it is concerned that the "*uncertainty regarding the future requirements that are driving the company's investment*" does not result in an optimal long-term solution and could lead to a very different set of requirements and result in a considerably different best value plan.[175] Specifically, Ofwat notes that (i) the WRMP24 guidance has not yet been issued and there remain decisions to be made regarding the assessment process; and (ii) the impact of this new planning approach on the whole system, would need to be fully assessed to understand how it impacted Anglian's requirements.[176]

(203) Anglian acknowledges that its Final WRMP19 goes beyond minimum requirements to consider factors that could be "core scenarios" in WRMP24.[177] However, Ofwat's arguments mischaracterise the uncertainty of the future guidance used by Anglian and fail to acknowledge:

(i) that Anglian's Plan strikes a balance between known, firm requirements and potential future ones, considering whole life costs of its options; and

[172] WRMP Response to Ofwat Queries (October 2019) (SOC222).

[173] WRMP Response to Ofwat Queries (16 October 2019) (SOC219).

[174] WRMP Least Worst Regret Analysis (SOC220).

[175] Response to Anglian, paras. 3.198 and 3.213.

[176] Response to Anglian, paras. 3.210 and 3.211.

[177] These will be published for consultation in August 2022.The 'core scenarios' include a higher drought resilience standard (1 in 500 year), additional growth (e.g. Oxcam arc), export requirements (e.g. Anglian to Affinity transfer), and potential reservoir development.

(ii) that the recent publication of a National Framework for water resources by the EA in March 2020[178] and draft WRMP24 guidance consultation in May 2020[179] support the approach Anglian has taken in its Plan to develop options to address future needs.

(204) For example, Ofwat notes that Anglian's ALCP, which Ofwat's refers to as Anglian's "least cost plan", limits the maximum utilisation required in its baseline 1-in-200 drought scenario and that this is the maximum flow in the WRMP19 planning tables.[180] Anglian's Plan, which is based on its BVP, has evaluated the need to be resilient to a 1-in 500-year drought event as it has been designed to accommodate for future supply demand uncertainty associated with pressures on its supply demand balance that will occur at WRMP24; this will require investment in AMP8 and beyond, but was not quantifiable within WRMP19.[181]

(205) The National Framework sets out that *"regional plans should be based on achieving a level of drought resilience so that emergency drought order restrictions, such as providing water only at certain times of the day (rota cuts) or through temporary taps (standpipes) in the streets, are expected to be implemented no more often than once in 500 years on average. This should be achieved by the 2030s and regional groups should determine a date within that range by considering the costs and benefits of alternative approaches to find an optimum. This planning assumption has been agreed by the senior steering group and is in line with the recommendation from the National Infrastructure Commission.*"[182] These regional plans are intended to directly inform WRMP24. Anglian notes that, the National Framework, while led by the EA, has been developed in collaboration with Ofwat, DWI and Defra as well as a wide range of stakeholders represented through the senior steering group.[183] Ofwat has itself been represented at these steering groups.

(206) The draft WRMP24 guidance[184] notes that WASCs should demonstrate that their Plans:

(i) consider how to solve the challenges demonstrated in the National Framework; and

(ii) for companies that are wholly and mainly in England, include a system that is resilient to any drought of a return period of approximately once in 500 years.[185]

(207) Anglian therefore maintains that its Plan strikes the correct balance between known, firm requirements and potential future ones, considering whole life costs of its options and that this is supported by both the National Framework and draft WRMP24 guidance, which it would urge the CMA to consider in making its re-determination.

## 6 Concluding remarks

(208) As set out in **Table 24** of **Chapter E.3: Enhancement** of Anglian's SOC, Anglian has developed its Plan specifically to build the best long-term solution, leading to savings of £18.1 million in whole life costs.[186]

[178] EA's National Framework (SOC281).

[179] EA Draft Water Resources Planning Guidelines WRMP24 (REP39).

[180] Response to Anglian, para. 3.203 and Anglian WRMP planning tables refered to by Ofwat in it's Response to Anglian, page 96 and submitted by Ofwat to the CMA as "A002 - Anglian Water WRMP planning tables". Ofwat's.

[181] Anglian's SOC, Chapter E.3: Enhancement, Interconnectors case study.

[182] EA's National Framework, page 8 (SOC281).

[183] EA's National Framework, page 15 (SOC281).

[184] Anglian notes that Ofwat is listed as an author of the guidance alongside the EA.

[185] EA Draft Water Resources Planning Guidelines WRMP24, Section 4.1 (REP39).

[186] Anglian's SOC, Table 24.

Conversely, Ofwat's position in the FD will lead to Anglian having to adopt WRMP solutions which give rise to overall higher costs for customers and will be detrimental to the environment.

(209) Anglian believes that its WRMP decision-making and option development process outlined above has been robust and transparent. In line with current decision-making guidance,[187] Anglian considered an extensive range of individual options and modelled a range of scenarios in order to develop its Plan, which takes into account the whole life costs and benefits to its customers.

(210) Anglian therefore requests that the CMA:

(i) assesses the evidence it has put forward in its SOC, together with this Response when considering Ofwat's arguments that Anglian's WRMP decision-making process has lacked transparency and robustness;

(ii) considers the recently published National Framework and draft WRMP24 guidance when assessing Anglian's approach to establishing its WRMP options in its Plan; and

(iii) ultimately, reverses Ofwat's capacity challenge on Anglian's WRMP needs as these contradict the needs of Anglian's region and are not in the best interest of Anglian's customers.

[187] EA Interim Water Resources Planning Guideline (SOC334).

## Part G.6: Reply on Frontier shift

(211) In its Response to Anglian's SOC Ofwat has defended again its approach to determining Real Price Effect (RPE) adjustments and future productivity improvements. Anglian has previously set out its concerns (which remain) about Ofwat's analysis in the following places:

(i) September 2018 Plan, pages 101-102 (SOC001)

(ii) IAP Response, April 2019, pages 32-33 (SOC104)

(iii) DD Representation, August 2019, pages 92-101 (SOC168)

(iv) Anglian's SOC, April 2020, paragraphs 845 – 853.

(212) Anglian also fully endorses the concerns set out in the following papers, provided with this submission as appendices:

(i) Response to KPMG analysis of future productivity potential, March 2018.[188]

(ii) A review of Ofwat's PR19 approach to estimating frontier shift, First Economics, March 2019.[189]

(iii) A review of Ofwat's PR19 approach to estimating frontier shift, First Economics, February 2020.[190]

(213) In its SOC, Anglian drew heavily from the First Economics, February 2020 report.[191] Anglian is aware that other disputing companies have referenced this report in their submissions. For the avoidance of doubt Anglian confirms that it fully endorses the contents of this report.

(214) Anglian does not re-state its concerns about the flaws with Ofwat's approach here, however those concerns remain. Anglian is confident that the CMA will (i) make a robust forecast of the future frontier shift; (ii) that in assessing RPEs it will use a framework that considers the likely movement of input prices of all cost types; and (iii) that in assessing productivity improvements it will consider the productivity achievements of the most relevant comparator sectors over the most appropriate time periods.

(215) As a matter of good practice, it is appropriate to update frontier shift forecasts periodically to reflect new information. Indeed, Anglian updated its own forecasts, using the same data sources, in its DD Representation twelve months after its September 2018 Plan. Anglian notes that in making a new forecast of frontier shift the CMA will be able to reflect the impact on forecasts of the Covid-19 pandemic, including the impact on future inflation.

(216) Anglian also corrects Ofwat's assertion that due to the '*information asymmetry between companies and Ofwat […] companies are likely to put forward cases where real price adjustments are positive rather than negative*,[192] noting that Anglian in fact applied a negative RPE for energy costs in its Plan together with positive RPEs for labour and chemicals, materials, plant and equipment and other costs.

(217) Anglian remains concerned that Ofwat, despite recognising the linkage,[193] fails to appropriately account for the link between the treatment of productivity improvement and RPE – collectively 'frontier shift'.

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[188] Response to KPMG analysis of future productivity potential (March 2018) (REP42).

[189] First Economics Frontier Shift Report (March 2019) (REP40).

[190] First Economics Frontier Shift Report (February 2020) (REP41).

[191] *Ibidem*.

[192] Response to Anglian, para. 3.242.

[193] Securing Cost Efficiency Appendix, page 176 (SOC243).

(218) The term "frontier shift" was adopted for the first time in the water industry in the 1990s. It sought to forecast how fast the costs of all companies, including those already at the efficiency frontier, might fall over the forthcoming price control period. It is widely accepted in utility regulation that the rate of frontier shift depends on the net movement of two factors which are capable of measurement: input price changes and productivity improvements.[194] This movement is expressed relative to the notified index by which companies' allowed revenues are inflated because this notified index captures the input price changes and productivity improvements of the economy as a whole. Frontier shift forecasts therefore represents the extent to which a regulated company might achieve out-performance relative to the rate at which other firms supplying UK households with goods and services are able to improve productivity growth and constrain increases in input prices.

(219) Ofwat's appropriation of the term 'frontier shift' to refer to productivity improvement alone indicates a lack of consistent application of established regulatory tools and appears consistent with a focus on achieving lower customer bills by any means. Anglian considers that the CMA will recognise appropriately the components of frontier shift in its own assessment.

(220) One area where Ofwat's fails to account for this link between productivity improvement and RPE is in the extension of its application of frontier shift adjustments to unmodelled base costs and selected enhancement costs at the FD. Anglian's view is that Ofwat double-counted frontier shift adjustments when applying them to these costs as companies had already included frontier shift assumptions in such costs. Ofwat states, "*We found that frontier shift assumptions [by which they mean productivity improvements] on enhancement expenditure tend to be limited and were often offset by real price effects*."[195] In other words, Ofwat concluded that companies had made no productivity adjustments at all as a result of the fact that Ofwat considered RPEs may have largely offset them. Ofwat goes on to state that "*there is no evidence that the upper quartile companies have applied a net frontier shift challenge to WINEP enhancement expenditure, i.e. a frontier shift adjustment that is greater than the corresponding real price effect adjustment*."[196]

(221) Anglian agrees that it is unclear what the frontier shift assumption embedded in companies' forecast enhancement costs is, as: (i) Table 24a, which provides this information, was interpreted differently by companies and requires clarification; and (ii) given the very large uncertainty in Ofwat's benchmarking of enhancement costs,[197] it is unclear which companies represent the frontier. However, Anglian does not agree that, just because it is unclear what adjustments companies might have made, it is then acceptable to assume they have made no adjustments at all. Anglian thinks that Ofwat should have taken steps to remove their uncertainty by requesting further information from companies, as they did in other areas during the PR19 process where there were gaps in their knowledge.

(222) Anglian considers that the above point, in combination with the extracts from Ofwat's response document on paragraph 9, fail to justify Ofwat's conclusion that "*therefore […] our application of frontier shift does not double count efficiency gains*."[198]

(223) Ofwat notes that no company provided representations to the CMA on its application of frontier shift to metering costs.[199] Anglian challenges this, stating in its SOC that it *"disagrees with the application of frontier shift adjustments to cost allowances which already include such adjustments. Anglian therefore*

[194] First Economics Frontier Shift Report (February 2020), page 1 (REP41).

[195] Response to Anglian, para. 3.258.

[196] *Ibidem.*

[197] Anglian's SOC, Chapter E.3: Enhancement, Section 3.2, Figures 56 and 57.

[198] Response to Anglian, para. 3.258.

[199] Response, para. 3.259.

*disagrees with the extended application which Ofwat made at FD. Ofwat's allowances for unmodelled base costs and enhancement costs were based on companies' future forecasts which already include frontier shift adjustments"*.[200] The enhancement costs referred to in this paragraph of Anglian's SOC include metering costs and WINEP costs and Anglian made no distinction between the two.

(224) A second area where Ofwat fails to account for this link between productivity improvement and RPE is in its proposals for a true-up for the labour RPE it has allowed in price controls.

(225) While Ofwat recognises that there is a linkage between productivity and input price inflation, stating, *"we are including a real price effect adjustment for real wage growth to reflect improvements in labour productivity"*, it failed to account for this linkage in its true-up mechanism.[201] In particular, Ofwat proposed a true-up for its labour RPE but did not recognise the need for a corresponding true-up on productivity. In its DD Representation, Anglian presented the scenario where, due to some external economic force, wages stagnate while productivity continues at the sluggish rate of recent years. Companies would lose the value of their labour RPE via the true-up but would have no mechanism to be compensated for Ofwat's productivity error. The Covid-19 pandemic and Brexit provide perfect examples of external economic and other forces which might drive this very scenario. If a true-up for input price inflation is to be applied then a consistent true-up for productivity should also be applied.

[200] Anglian's SOC, Chapter E.4: Frontier shift, Section 4.3, para. 850.

[201] Securing Cost Efficiency Appendix, page 176 (SOC243).

# Part G.7: Reply on Opex/Capex Misallocation

## 1 Overview

(i) In Chapter E.5: Misallocation of Opex and Capex of its SOC, Anglian outlined how Ofwat's approach at FD resulted in a misallocation of approximately £157 million of opex as capex, and the impact it would have on the company. Ofwat has not engaged in a meaningful way with the arguments Anglian has set out in its SOC.

(ii) The misallocation is a result of Ofwat treating base and growth costs together while calculating the opex/capex composition of total allowed expenditure. Ofwat assumed that the cost challenge was nearly equally split between opex and capex – ignoring that that a significant proportion of the challenge was to capex-heavy growth costs. Anglian raised this issue before FD, and asked that Ofwat calculate the opex/capex split of growth costs separately (similar to its approach for enhancement).

(iii) Ofwat's response seems to accept, or at least does not contest, that the FD results in a misallocation. Nor does it engage with the arguments in Anglian's SOC. Rather, its justification appears to be that (unaffected) companies are generally supportive of its approach and that to remain consistent with its cost assessment, it should consider base and growth costs together.

(iv) Ofwat's position is not tenable. It cannot adopt a uniform approach for all companies when it is clear that it is inappropriate for Anglian's circumstances. Further, it would be easy to separately calculate the growth allowance and indeed, Ofwat has already done so.

(v) Ofwat also does not consider the practical impact of the misallocation. As a result of the FD Anglian will be unable to recover the c.£157 million of misallocated opex during AMP7.

(vi) This is equal to c.£32 million per annum, or about 20% of total salary costs in Anglian's opex budget. To mitigate the effects of Ofwat's error, Anglian will be forced to make short-term expenditure reductions that will reduce the quality of service and increase the need for greater levels of expenditure in future periods to recover from this harm.

## 2 Ofwat does not contest that it has misallocated opex as capex

(226) Ofwat's Response to Anglian seems to accept, or at least does not contest, that the FD results in a misallocation of c.£157 million of Anglian's opex as capex. Ofwat has set out its justifications for treating growth and base expenditure together, and appears to be arguing that it has not corrected the misallocation at cost recovery only to follow a uniform approach with its cost assessment.

(227) While Ofwat claims to "*take account for the cost challenge*"[202] imposed on Anglian, it has treated base and growth costs together in a Botex Plus model. When it comes to cost recovery, Ofwat ignores the fact that growth costs have a significantly higher proportion of capex (c.98%) than base costs (c.33%). In effect, Ofwat has assumed that the cost challenge was almost equally split between opex and capex. In reality, the majority of the Botex Plus costs disallowed were capex. This has led to c.£157 million of opex being incorrectly characterised as capex.[203]

(228) Furthermore, Ofwat has implicitly acknowledged the issue arising out of treating capex-heavy expenditure together with base costs. Between the DD and the FD, it separated the assessment of

[202] Response to Anglian, para. 1.87.

[203] Anglian's SOC, Chapter E.5: Misallocation of Opex and Capex, Section 3.

enhancement costs from base costs. It noted that enhancement costs have a "*greater proportion of capex*" and considering enhancement and base costs together could lead to the "*challenge being more evenly split between opex and capex than the companies' expenditure profiles would suggest it should be".*[204] Ofwat has failed to justify, either in the FD or in its Response to Anglian, why the correction applied to the opex / capex split between enhancement and base costs should not also be applied to growth costs.

## 3 Ofwat's allocation is not consistent with Anglian's business plan approach

(229) Ofwat's contention that its allocation is consistent with Anglian's business plan approach is misleading.

(230) The gist of Ofwat's justification is:

(i) Ofwat considers that it has maintained Anglian's Business Plan approach of recovering opex through PAYG and capex through RCV. The PAYG rates applied at the FD "*were consistent with the basis set out by Anglian in its business plan, adjusted for changes made to base and enhancement costs*."[205]

(ii) Ofwat revised its approach between the DD and the FD to better reflect its cost challenge, by separately calculating the opex/capex split on base and enhancement costs. This revised approach was shared with companies ahead of the FD, and "*overall companies were generally supportive of the revised approach, and several companies stated that this addressed the concerns they had raised previously*".[206]

(231) Ofwat's argument is, however, misleading. The opex / capex split applied at the FD was not the natural PAYG rate, and not consistent with Anglian's Business Plan. As set out in Section 2 above and more fully explained in **Chapter E.5: Misallocation of Opex and Capex** of Anglian's SOC, Ofwat's FD not only significantly reduced the allowed expenditure, but also changed the composition (i.e. reduced more capex than opex). Contending that it had simply applied Anglian's own proposed opex / capex split is thus comparing apples and pears given that Ofwat itself had changed the underlying fundamentals on which Anglian had based its Business Plan.

(232) Finally, Ofwat's contention that companies were *"generally supportive"* of Ofwat's approach[207] is irrelevant given that the split between opex / capex as well as the natural rate of PAYG is specific to each company. When Ofwat conducted a 'soft consultation' between the DD and the FD, while some companies were supportive of its modified approach, Anglian and Wessex Water both outlined their concerns over the impact of the revised approach of including growth costs within the base cost models.[208] The fact that some companies remained unaffected doesn't mean that there isn't an issue. Anglian faced particularly severe consequences since it has initially proposed significant growth expenditure (c.£720 million) of which a significant amount (c.£318 million) was disallowed at the FD. This constituted the majority of the cost challenge on Botex Plus expenditure.

[204] Securing Cost Efficiency Technical Appendix, page 152 (SOC243).

[205] Response to Anglian, page 167.

[206] Response to Anglian, paras. 6.63, 6.65.

[207] Response to Anglian, para. 6.65.

[208] Securing Cost Efficiency Technical Appendix, page 153 (SOC243).

## 4 Ofwat's FD does not provide sufficient justification for why base and growth costs should be considered together for cost recovery

(233) Ofwat has also not provided sufficient justification of why base and growth costs should be considered together. Ofwat has merely reiterated its arguments from the FD, namely:

(i) Base and growth costs are modelled together as they have similar cost drivers to minimise inconsistencies in cost allocation. Ofwat does not consider it appropriate to split base and growth costs since it does not set separate allowances. Ofwat also adds that "*Anglian Water itself acknowledges that 'the 'allowance' for growth is not directly visible.*"[209]

(ii) Ofwat notes that it has made methodological changes at the FD, including making an additional allowance for high growth companies.[210]

(234) Ofwat has, however, failed to address, let alone rebut, the arguments in **Chapter E.5: Misallocation of Opex and Capex** of Anglian's SOC.

(235) First, Ofwat conflates the cost assessment and cost recovery elements of the price control. Ofwat's argument that base and growth costs are modelled together as they have similar cost drivers goes to the issue of *cost assessment*. By contrast, the calculation of the current opex / capex split does not impact cost allocations – it is only related to the issue of *cost recovery*. Having similar cost drivers, as assumed by Ofwat, does not impact whether costs are related to opex or capex. In other words, modelling the costs together at cost assessment does not necessitate a unified approach at cost recovery.

(236) Second, it would be easy to address the misallocation by considering base and growth costs separately. Ofwat has quoted a line from **Chapter D: Risk and Return** of Anglian's SOC to suggest that Anglian recognises that it would be difficult to separate growth from base costs. The quotation is selective and misleading. The full quote is "*The 'allowance' for growth is not directly visible but Anglian's calculations suggest that, looking across the sector, it provides anything from 52% to 164% of companies' business plan expenditure*".[211] This merely indicates that the growth allowance needs to be calculated and indeed, Ofwat has already made this calculation (and shared with Anglian its methodology for calculating the growth element of Botex Plus costs).[212]

(237) Third, Ofwat has argued that it has already made changes to its methodology at the FD. However, these changes (e.g. the allowance for high growth companies) only serve to narrow the challenge on growth costs. Once again, these are changes that impact the cost assessment element of the price control. They do not remedy the misallocation of opex and capex.

(238) As set out in Section 2 above, Ofwat does not contest that its approach has resulted in a misallocation for Anglian. However, Ofwat's justification appears to be that (unaffected) companies are "*generally supportive*"[213] of its approach and it does not wish to separate growth costs from its Botex Plus model at cost recovery to ensure consistency with its cost assessment approach.

(239) Ofwat's justification is not tenable. While the regulator may wish to adopt the same approach for all companies, it must deviate from this when it is clear that it is inappropriate for a specific company's circumstances. In *Bristol (2015),* the CMA considered that there were significant risks that Ofwat's totex

[209] Response to Anglian, para. 6.68.

[210] Response to Anglian, para. 6.68.

[211] Anglian's SOC, Chapter D: Risk and return, para. 481.

[212] Anglian's SOC, Chapter E.5: Misallocation of Opex and Capex, para. 872.

[213] Response to Anglian, para. 6.65.

assessment did not adequately reflect Bristol's costs. At redetermination, the CMA based its assessment on alternative models but also recognised that there "*remained a need to consider potential company-specific adjustments that may not be adequately captured in the model*s" and therefore applied adjustments to take account of specific characteristics or circumstances of Bristol.[214]

## 5 Furthermore, Ofwat does not engage with the impact of the misallocation

(240) Ofwat has not engaged with **Chapter E.5: Misallocation of Opex and Capex** of Anglian's SOC in terms of the impact of the misallocation*:*

(i) Ofwat merely notes that "*Anglian Water claims we did not account for misallocation of opex as capex when calculating the financial ratios for the financeability assessment*";[215] and

(ii) Ofwat asserts that the allowed PAYG revenues " *are sufficient to fund Anglian Water's opex*".[216]

(241) Ofwat's financeability assessment has not accounted for the additional c.£157 million of opex that Anglian will have to spend. If Anglian spends the allowed opex, its ratios will be lower than the minimum required for a Baa1 rating:

(i) Anglian's correct AICR (accounting for the misallocation) will be 1.31x rather than the 1.50x derived by Ofwat (where 1.50x-1.70x is the range required for a Baa1 rating); and

(ii) Anglian's correct FFO/Net Debt ratio (accounting for the misallocation) will be 8.90% rather than the 9.49% derived by Ofwat (where 10-15% is the range required for a Baa1 rating).[217]

(242) More broadly, this is contrary to the "totex thinking" that Ofwat has advocated in the past. It has previously tried to equalise incentives relating to both opex and capex, to remove the perceived incentive to invest in capital expenditure (i.e. a 'capex bias'). However, Ofwat's general approach to cost assessment at PR19 combined with the misallocation reduces the opex allowance and represents a significant step back from enabling the most efficient, whole life cost totex solutions to be delivered for the long-term benefit of customers and the environment.[218]

(243) This practical effect of the misallocation would leave Anglian in serious danger of being downgraded and unable to finance itself on the terms imposed by the price control. To put this into context, the c.£157 million misallocated is equal to c.£32 million per annum, or about 20% of total salary costs in Anglian's opex budget. To mitigate the effects of Ofwat's misallocation, Anglian may be forced to make otherwise unnecessary redundancies; this is particularly harmful in the times of Covid-19. Anglian will also have to focus on other short-term expenditure reductions which will reduce the quality of service provided to customers and increase the certainty of needing greater levels of expenditure in future periods to recover from this harm.[219]

[214] *Bristol (2015)*, paras. 24-26 (SOC275).

[215] Response to Anglian, para. 6.61.

[216] Response to Anglian, para. 1.89.

[217] Oxera Financeability Report, tables 6.1 and 6.3 (SOC448).

[218] Anglian's SOC, Chapter E.5: Misallocation of Opex and Capex, Section 6.

[219] Anglian's SOC, Chapter E.5: Misallocation of Opex and Capex, Section 7.

# Anglian Water PR19

# Part H: Reply on Cost service disconnect

# Part H: Reply on Cost service disconnect

## 1 Overview

(i) Ofwat's Response is inconsistent on the interaction between cost and service. It makes reference to acknowledging in theory there is a relationship between service and cost. But, in practice, it has done nothing to reflect this, and has advanced no further credible evidence in its Response that the FD addresses the relationship between the quality of service delivered and the costs of doing so.

(ii) The level of evidence provided by Ofwat's charts to support its position falls well short of the standard expected in a regulatory debate, particularly when used to support a position as radical as to claim that it need not reflect additional expenditure requirements to either maintain high quality service or to achieve further service improvement. The refusal by Ofwat to recognise that maintaining and providing higher quality of service often costs more to achieve drives a large part of its mischaracterisation of Anglian's costs that are needed to maintain and enhance quality as being "inefficiency".

(iii) Anglian's SOC provided robust evidence of historical and future-looking evidence demonstrating how its costs increase as the service provided improved.[1] The CMA, when assessing efficient existing and future costs, should therefore take quality output measures, such as leakage, into account as a cost driver when setting its view of expenditure allowances.

## 2 Response summary – cost quality trade-off

(1) In this Redetermination, there is a fundamental difference in perspective between Anglian and Ofwat, in how to assess the relationship between the level of service provided by a company, either now or in future, and the costs of providing it.

(2) Anglian contests that Ofwat fails to reflect service quality robustly in base models, and specifically in Anglian's case, maintain its industry-leading position on leakage. This failure contributes to Ofwat's conclusion that Anglian is an inefficient company. Anglian, in contrast, believes the same data shows a sector-leading high-performing company, providing good outcomes for customers from its expenditure.

(3) This difference becomes still more pronounced when assessing future costs: Anglian believes it has presented evidence to show that maintaining the high performance as the network expands and further pushing the frontier comes at a higher cost than worse-performing companies would incur to catch up to Anglian's performance levels.[2] With the exception of Ofwat's insufficient enhancement expenditure[3] for shifting the leakage frontier, Ofwat makes no account for the marginal costs of service improvement in other areas. This does not accord with its stated position in its SOC Response.[4]

(4) Whatever the precise form the CMA's own assessment of efficiency might take, Anglian believes it should take a view on this fundamental question: should a model of network efficiency incorporate measures of quality, as a cost driver? Anglian's view is that leaving out such drivers is obviously methodologically invalid and the omission results in a downward bias to the estimate of Anglian's efficiency. In general, network investment and opex decisions are taken to optimise quality outputs,

[1] Anglian's SOC, Chapter F: Cost service disconnect, Section 3.3.

[2] Anglian's SOC, Chapter F: Cost service disconnect, Section 2, para. 896.

[3] Response to Anglian SOC, para 1.37.

[4] Response to Anglian, para 1.67: "*We agree that there can be a trade-off between service quality and cost, and improvements in service quality can come at a higher cost*."

against a rising cost curve.[5] Oxera's Report on cost assessment issues shows that it is possible to include measures of quality in the cost models and that these demonstrate rising cost curves (with the exception of highly dense networks).[6] Anglian has also provided substantial, broad-based evidence of such cost curves and how it uses them in the regular course of its business, planning and delivering works. Anglian is happy to provide further illustrations of this.

(5) Against this – and against established economic theory and regulatory precedent – Ofwat can only cite scatter charts showing average rankings of its own assessment of companies' relative efficiency on cost and quality.[7] These originally purported to show a positive relationship: high quality can be achieved at lower cost.[8] However, the charts in Ofwat's FD were the result of a simple error: Ofwat had not taken account of the different numbers of companies supplying water (17 WASCs and WOCs) to those supplying sewerage services (10 WASCs), when averaging across the rankings, thus rendering those average rankings meaningless (a company rating 10 for sewerage services is the best in the industry, while one rated 10 for water is eighth-best, yet Ofwat treated these scores the same).

(6) Anglian pointed this error out in its SOC (having not seen these scatter charts before the FD), along with other concerns.[9] Ofwat seems to have accepted this criticism, but rather than concluding that an obvious error in its evidence base should cause it to rethink its conclusions, it now provides the CMA with corrected scatter charts that it nonetheless claims still support its conclusions.[10] It has now done this separately for water, wastewater and retail.[11] This decomposition does not enhance the statistical association. This remains very weak and statistically insignificant. In the case of wastewater, the positive relationship Ofwat originally found has almost entirely disappeared: the new chart shows essentially no relationship ($R^2 = 0.0028$) between the two composite variables Ofwat is comparing.[12] Moreover, Ofwat continues to simply compare ranks, which are biased. The cost efficiency ranks are biased as the models exclude quality of service, as well as many other key cost drivers, while the quality of service ranks are biased as they do not account for company-specific factors. Despite this, Ofwat appears to continue to cite these charts as the key evidence in support of its modelling decision to ignore quality as a cost driver.[13]

(7) Anglian finds this hard to understand. The scatter charts do not show any relationship between costs and quality; nor can they be expected to. The non-relationship simply shows that these charts are not measuring anything meaningful, being based solely on averages of rankings, which themselves are biased, a meaningless and arbitrary measure of company performance. Anglian does not believe the CMA should spend much time considering the scatter charts, so does not further discuss them in detail, but notes:

   (i) The cost efficiency rankings are based on Ofwat's own models, which are in dispute (including, but not limited to, their exclusion of quality of service measures within them).

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5 Anglian provided in its SOC, Chapter F: Cost service disconnect, evidence demonstrating both where it had made service improvements in the margin using existing resources, but in order to achieve scalable improvements in service quality this is associated with an increasing marginal cost. Anglian provided this information for both leakage and interruptions to supply. Ofwat has not engaged on this detail.

6 Oxera's Report on cost assessment issues (REP13).

7 Response to Anglian, para. 5.19, Table 5.1 and Table 5.2; and. Response on Overall Stretch, paras. 7.23, 7.28 and Table 7.1.

8 Response on Overall Stretch, para. 7.23.

9 Anglian's SOC, Chapter F: Cost service disconnect, Section 2.1.

10 Response on Overall Stretch, Figures 7.4, 7.5 and 7.6.

11 Response on Overall Stretch, Figures 7.1, 7.2 and 7.3 and Response on Outcomes, Figures 7.4, 7.5 and 7.6.

12 The equivalent R-squared value for the water service is 0.1948 which remains statistically poor.

13 Response on Overall Stretch, para 7.4: "*Our analysis shows that companies can achieve good cost efficiency and good outcome performance*".

(ii) The service quality rankings are arbitrary measures of performance in that they are unrelated to cost, effort or customer valuations, and fail to account for other company-specific or regional factors.

(8) A serious attempt at quantitative analysis to credibly assess the appropriate level of stretch presented by Ofwat's FD would necessarily need to capture how quality drives costs. This would probably involve estimation of cost curves (along which a company would move, given a technology and efficiency level) as well as shifts in those cost curves (to reflect technology and efficiency changes). It is not surprising that Ofwat's scatter charts do not show any relationship, as they have none of this complexity. However, the task is not to construct a perfect model, but simply to assess whether the evidence base shows that quality is – as expected and as precedent suggests – a driver of cost. Anglian has provided evidence of this from its own internal modelling tools as well as modelling by Oxera's Report on cost assessment issues.[14]

(9) The level of "evidence" provided by Ofwat's charts falls well short of the standard expected in a regulatory debate of any sort, particularly when used to support a position as radical as to deny any requirement to reflect the additional costs of improving future service levels. Anglian believes that Ofwat would instantly have rejected such flimsy "evidence", had it been put forward by a company to support its business plan during the price review.

(10) Ofwat's simplistic scatter charts purport to justify its dismissal of the detailed evidence supporting Anglian's Plan. Anglian described its approach to building its plan in Section B.3 of its SOC, including the scope and efficiency challenges built into its process. Anglian's position on the costs of service provision are based upon its planning tools used in the ordinary course of business, which are informed and checked against out-turn data derived from 22,500 completed capital projects. Some examples were provided to the CMA in Anglian's SOC and the accompanying report from ICS.[15] Anglian would be happy to engage further with the CMA and its engineering advisors, at any level of detail they wish to explore. The Plan was also derived from detailed and triangulated evidence on customer valuation and preferences, just as is Anglian's approach to asset maintenance in within-AMP delivery, again as described in the SOC. Because its Plan was built bottom-up, from specific asset requirements and evidenced stretching targets for unit costs, Anglian was able to categorise its enhancement expenditure requirements between: (i) quality enhancement (mostly driven by WINEP obligations); (ii) maintaining the supply demand balance (SDB) (mostly driven by WRMP requirements which include WINEP obligations) and developer-driven growth; and (iii) delivering enhanced customer service levels (ESL). It can split out the costs and the specific modelling underlying them much further, should the CMA and its engineering advisors require, to assist them in building their own assessment of the appropriate cost allowances for these programmes. Anglian accepts that a regulator will need to apply a high-level efficiency challenge, not assess each point at this granular level, but such a challenge must be based on sound evidence and must be consistent with engineering realities. Ofwat's scatter plots of average rankings are a wholly inadequate, over-simplistic basis for dismissing detailed company evidence.

(11) Ofwat's FD decision to include an additional allowance in base on the basis of the alternative models which it introduced at FD, and enhancement expenditure for leakage, does not correct the problem. It is simply an arbitrary addition, unrelated to the evidence Anglian supplied on marginal costs and customer valuation, that simply shows that Ofwat itself does not believe its own cost modelling approach is valid and does consider that quality of service does indeed increase costs.

[14] Oxera's Report on cost assessment issues (REP13).

[15] Anglian's SOC, Chapter B.3: Anglian's Plan and how it was built, Section 7.1 and ICS Report on Ofwat's Overall Stretch Appendix (SOC280).

(12) Ofwat has not advanced further credible evidence that its PR19 settlement is robustly derived using sound economics on the relationship between service delivered and the costs of doing so. Nor does Ofwat's approach appropriately seek to account for customer preferences, nor engage on arguments that companies' operating regions or costs for delivering a specific level of service may cost different amounts.

(13) This approach severely harms the credibility of the regulatory system in the water sector. As Anglian explains in its supplementary paper,[16] there is a necessary link between the cost drivers included in setting price controls and the incentives provided. Ofwat's view that increased quality is free, requiring no compensation for the companies pushing the sector-leading frontier, creates an incentive to be mediocre. The shortfall in allowances encourages short-term behaviour that may not be the most cost-effective in the long run, including quick fixes to do the minimum necessary to avoid performance penalties.

(14) Were Ofwat correct that there is no increased cost to improving quality, then these malign outcomes would not arise, since companies would not require any cost allowances to improve quality and could simply meet quality targets whatever the cost allowance they are given. However, Ofwat is not correct and has no credible evidence in support of its view.

(15) The CMA, when assessing efficient existing and future costs, should therefore take quality output measures, such as leakage, into account as a cost driver when setting its view of expenditure allowances.

[16] Challenges to incentive-based regulation Paper (REP18).

# Anglian Water PR19

## Part I: Reply to Ofwat's Response on Risk and Return

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# Part I.1: Reply on WACC

## 1 Overview

(i) Ofwat's Response on Risk and Return largely reiterates arguments that it presented in the PR19 process. It has not addressed the fundamental concerns with its approach that Anglian, and other companies have raised in the Statements of Case. Consequently, Ofwat continues to advocate a WACC estimate that is significantly below the actual cost of capital over AMP7, thereby risking the financial resilience of Anglian and diluting the long-term incentive for investors to invest in the sector.

In particular:

(ii) Ofwat has introduced major changes to how the total market return and risk-free rate are estimated. It is these methodology changes, rather than changes in the market, that account for the majority of the reduction in the allowed base equity return since PR14. Ofwat continues to articulate a position that is not supported by a balanced analysis of the available evidence.

(iii) In terms of the total market return, there have been two important updates since the PR19 FDs: a revised forecast of the forward-looking RPI-CPI wedge from 100bp to 90bp, and the publication of DMS returns data for 2019. Under Ofwat's approach to estimating the TMR, the cumulative impact of incorporating these updates is to increase the RPI-real TMR by c.20bp.

(iv) Ofwat has mischaracterised Anglian's position as seeking to claim for the actual cost of embedded debt. Anglian's position is that the allowance should provide for an efficiently financed company to recover its cost of embedded debt. By imposing its own view of an efficient financing strategy, drawing on the benefit of hindsight, Ofwat is not allowing companies to recover historical financing costs that were incurred efficiently based on the market rates and regulatory policy at the time. This is inconsistent with its previous statements and exposes companies to significant risk of changes in market conditions as well as retroactive changes in regulatory policy, which the company cannot control for. Ofwat's approach does not create the right incentives as it rewards or penalises companies for factors that are outside their control (i.e. future market movements) rather than factors they do control (i.e. whether their debt issuances reflect efficient market rates at the time of issuance).

(v) Ofwat claims that Anglian accepted its provisional WACC in 2018 and implies that Anglian should not be disputing it now. This is both wrong as a matter of regulatory process, and an incorrect representation of the position the Board took on these matters. In the Board Assurance Statement to Anglian's DD, the Anglian Board stated clearly that: "*Despite a low WACC assumed in our September Plan, the Board was able to provide assurance that the plan was financeable due to its commitment to re-invest dividends from the base-plan back into the Company. However, Ofwat has since made a number of interventions which have increased the overall risk in the plan. Ofwat has also proposed a further reduction in the WACC. The Board can therefore only attest to the long-term financial resilience of the Company when the balance of risk, and the level of WACC determined by Ofwat enables the Company to finance the delivery of its business plan*."[1]

[1] DD Board Assurance Statement, page 2 (SOC170).

## 2 Ofwat has set an insufficient cost of equity allowance

(1) In terms of the cost of equity, Anglian invites the CMA to consider the robustness of Ofwat's approach in the following areas.

(i) The **total market return** **("TMR")** estimate should reflect the most recent information where available. There have been two important updates since the PR19 FDs. First, the Office for Budget Responsibility has revised its forecast of the forward-looking RPI-CPI wedge from 100bp to 90bp.[2] Second, the Credit Suisse Global Investment Returns Yearbook 2020 (the "**DMS 2020 Yearbook**") has been published, with data on 2019 returns.[3] Under Ofwat's own approach to estimating the TMR, the cumulative impact of incorporating these updates is to increase the RPI-real TMR by c.20bp.

(ii) Ofwat continues to advocate relying on the JKM efficient estimator to average historical equity market returns. The **approach to averaging** has a non-trivial impact on TMR estimates drawn from historical returns. Anglian therefore considers that it is appropriate, in line with CMA precedent, to use a range of averaging techniques. Furthermore, for the purposes of a regulatory cost of capital assessment, the arithmetic average is the most relevant data point for informing the estimate and should certainly not be excluded from the analysis.[4] Excluding the arithmetic average means that the TMR is a downward biased estimate of the discount rate that investors will apply to discount future cash flows.[5]

(iii) An **inflation series** is needed to deflate nominal historical returns. There remains a difference in position with regards to the appropriate historical inflation series to use, particularly for the period from 1947 onwards. Each of the available inflation series has shortcomings. However, Ofwat has continually understated the issues with the CPI series and overstated the issues with RPI as a measure of *historical* inflation. The CPI series used by Ofwat is heavily affected by back-cast estimates between 1947 and 1988, which are not intended for official use given their sensitivity to modelling and input assumptions. The implied RPI-CPI wedge in the back-cast estimates over this period is considerably smaller than the actual wedge that has existed since CPI was first published as official statistic in 1997, suggesting that this series leads to upwardly biased CPI estimates. Given that RPI was the official statistic for the majority of the period from 1947 to present – and is based on reported, actual data rather than modelled estimates – Anglian considers that RPI is the better series to use. Furthermore, the recent decrease in the OBR estimate of the formula effect indicates that caution is needed when making *ad hoc* adjustments to the historical average of RPI.

(iv) In terms of the **risk-free rate** ("**RFR**"), it is important to recognise that current ILG yields are highly volatile and near historically low levels. Locking in current spot rates into a fixed cost of capital allowance requires a high level of confidence that current yields will persist over AMP7. The significant swings in ILG yields since the FDs were published highlights the risk that Ofwat's financeability duty will not be discharged by relying on spot data.[6] The volatility of ILG yields and the fact these yields are currently substantially below equilibrium levels points to adopting an RFR estimate above current spot rates.

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[2] OBR Forecast evaluation Report (December 2019), page 21, Box 2.3 (REP43).

[3] Credit Suisse, Global Investment Returns Yearbook 2020, (February 2020).

[4] Schaefer, S., Comments on CMA views on Estimating Expected Returns, submission to the CMA on behalf of the Energy Networks Association, (15 April 2020).

[5] Cooper (1996), pages 156-7 (SOC436).

[6] KPMG Reply to CMA's approach to cost of equity in NATS PFs, paras. 4.5.4-4.5.9 (REP20).

(v) Anglian submitted evidence from KPMG supporting a range for the **equity beta** of 0.66 to 0.72,[7] which is higher than Ofwat's equity beta of 0.63 as a result of placing more weight on 5-year estimates and applying a Vasicek adjustment. Anglian has commissioned Professor Alan Gregory, Professor Richard Harris and Dr Rajesh Tharyan to consider the appropriate approach to estimating regulatory betas, and estimate an equity beta for PR19.[8] The authors find evidence that structural breaks took place in late 2014 and March 2020, supporting the use of a five-year estimation period, and conclude that a reasonable central estimate of the equity beta is 0.72.

(vi) Ofwat continues to support a **debt beta** of 0.125 based on a 'decompositional' analysis undertaken by Europe Economics. Anglian notes that the CMA has rejected similar estimates in the *NATS (2020)* Provisional Findings (where it has used a debt beta assumption of 0.05).[9] Empirical research on debt beta suggests that a debt beta of no more than 0.05 is appropriate for the water sector.[10]

(2) Anglian disagrees with Ofwat's suggestion that the market valuations of Severn Trent and United Utilities imply the PR19 base equity return is reasonable (or potentially even too high).[11] As Ofwat has previously acknowledged, various factors influence the market equity value of regulated companies. Efforts to compare the market equity premium to the value of regulated equity have to appropriately account for these various factors. Consequently, drawing inferences about the cost of equity from market-to-asset ratios is inherently uncertain.

(3) This was recognised by Wright et al,[12] the authors of the UKRN cost of capital study on which Ofwat has based its approach to estimating the PR19 WACC: "*What is evident from this analysis is transaction premia alone do not provide sufficient evidence to make inferences about the cost of equity. Different drivers of outperformance are at play and multiple combinations of various drivers can explain observed premia. In addition, the role of expected outperformance means that the premia may result from unobserved investor assumptions that may be considered unrealistic or optimistic but are nevertheless the reality behind the premia*".

(4) The need for caution in interpreting such analysis has also been previously acknowledged by the CMA.[13] For example, in the case of *Bristol (2015)*, the CMA noted that: "*In practice, there are a number of reasons why investors may value assets at [a] figure greater than that implied by the RCV. The MAR is a single number which only produces a cross-check of investors' overall expectations of long-term returns on investment in water company assets.*"[14]

(5) In contrast to the Europe Economics analysis cited by Ofwat, Anglian presents evidence, as shown in **Part I.2: Reply on Financeability** below, that indicates that the current traded premia of Severn Trent and United Utilities can be explained, under various plausible scenarios, by factors other than the cost of equity (e.g. company-specific outperformance expectations, general election outcomes, the value of non-regulated business lines, accrued dividends, and takeover premium).

(6) Given the uncertainty in making inferences about the regulatory cost of equity allowance from market valuations, there are no grounds to depart from the position adopted in previous CMA redeterminations

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7 KPMG Cost of Capital Report (SOC422).

8 Gregory et al, Estimation of Beta for Regulatory Charge Control (REP23).

9 Provisional Findings in *NATS (2020)*, page 160 (SOC440).

10 Oxera Cost of Equity for RIIO-2 Report (REP24).

11 Ofwat, Reference of the PR19 final determinations: Cross-cutting issues, page 35 (March 2020).

12 Wright et al (2018), page 13 (SOC423).

13 *See Heathrow/Gatwick (2007)*, *Bristol (2010)* (SOC347), *Phoenix Gas (2012)* (SOC352), and *Bristol (2015)* (SOC275).

14 *Bristol (2015),* para. 10.208 (SOC275).

that evidence from traded market premia does not provide a reliable guide in practice to the cost of equity used by investors in regulated utilities.

## 3 Ofwat's approach to the cost of debt penalises efficiently financed companies

(7) Ofwat continues to adopt a position that underestimates the cost of debt for an efficiently financed water company. It has mischaracterised Anglian's position as a claim for guaranteed pass-through of the actual cost of embedded debt.[15] For clarity, Anglian considers that the cost of debt allowance should allow an efficiently financed company to recover its cost of embedded debt. Ofwat's approach and assumptions in estimating an industry-wide 'efficient' cost of embedded debt mean that Anglian will be unable to recover costs stemming from efficient financing decisions taken over multiple decades.

(8) Ofwat's approach assumes that there is a single 'efficient' cost of embedded debt for all water companies in England and Wales. By contrast, Anglian considers that two efficiently financed companies could have a different embedded debt cost depending on the timings of their debt issuance.[16] A company that raised a material proportion of its debt in pre-financial crisis years will have a higher cost of embedded debt than one that has issued debt more recently.

(9) Ofwat's approach to setting the cost of embedded debt implies that, even when water companies issue debt at the most efficient cost available to them in the market at a given point in time, they are still exposed to significant risks of a mismatch between their (efficient) costs and regulatory allowances in the future. This risk arises from the fact that companies receive a cost of debt allowance that changes from one price control to the next depending on: (i) changes in market conditions; and (ii) discretion in regulatory policy ex post when setting the allowed cost of debt. Ofwat implicitly argues that the combined risk of the impact of these two factors should be allocated entirely to companies, despite the fact that companies have no control of these factors. As a result, Ofwat's approach does not create the right incentives because it exposes companies to risks that they cannot control.

(10) Ofwat mistakes the fact that market movements and changes in regulatory policy (that companies do not control) result in some companies outperforming and others underperforming their allowance as evidence that its policy creates the right incentives. The fact that there are winners and losers does not mean that the regulatory policy sets the right incentives, appropriately allocates risk, or rewards efficient performance. Indeed, there is no evidence that companies that have benefitted from Ofwat's approach are better at financing (as Ofwat's argumentation implies); rather, these companies have benefitted from the timing of their debt issuance.

(11) By imposing its own view of an efficient financing strategy, and drawing on the benefit of hindsight, Ofwat is not allowing companies to recover historical financing costs that were incurred efficiently based on the information available at the time. This is despite Ofwat (i) explicitly encouraging the use of long-term financing in the past;[17] (ii) previously recognising the benefits to customers of companies taking

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[15] Response on Risk and Return, para. 3.94.

[16] See *Bristol (2010),* Appendix N, para. 47 (SOC347): *"Ofwat sets a single rate for all companies of a particular size. This has the advantage of giving companies a strong incentive to reduce the cost of their debt. However, one of the main factors affecting the cost of fixed-rate debt is the time it was taken out, and interest rates fluctuate over time. As debt issuance may be affected by company-specific factors (for instance, the timing of capex) and the cost of fixed-rate debt is affected by unpredictable changes in interest rates, there may be a danger of this approach penalizing companies that need to borrow at times of high interest rates. It might prove unsustainable if such companies are unable to finance their functions, or in order to avoid this, it might require headroom over and above the actual average to the detriment of consumers".*

[17] See Ofwat, Cost of capital – a consultation paper, volume 1, Office of Water Services (July 1991), page iii: *"The industry needs long term finance. Much of this is likely to be in the form of long term bonds."*; Oxera Capital Structure of Water Companies (2002), page 6 (SOC445): Ofwat Directorate General Philip Fletcher said in a 2001 speech: "Given the exceptionally long lives of system assets, this would suggest the need for a relatively long average duration and an interest rate structure aimed at maintaining a broadly stable real interest cost over time."

advantage of cheap long-tenor debt in the early 2000s;[18] and (iii) having never stated in previous reviews that long-dated debt would not be remunerated.

(12) Ofwat's use of a 15-year trailing average when estimating the cost of embedded debt has the effect of penalising companies simply because they have outstanding debt issuances from 2000 to 2005 when debt was more expensive (as shown by the benchmark iBoxx index) and when regulatory policy encouraged companies to take long-tenor debt. At a sector level, this accounts for around 20% of total debt. A longer trailing average would allow recovery of efficient costs, incentivise prudent financing policy and support an appropriate allocation of risk.

(13) Ofwat also selectively ignores some elements of the actual all-in cost of debt to calibrate market benchmarks. Specifically, Ofwat has excluded swaps from its 'balance sheet' cross-check of the cost of embedded debt. The exclusion of swaps presents a misleading view of actual borrowing costs and under-states all-in costs. The 'all-in' cost of 5.15% implied by the balance sheet is materially higher than the FD allowance (4.47%).

(14) Swaps play an important role in companies' financing strategies and have done so for over 20 years. During the early 2000s, water companies relied heavily on swaps to borrow efficiently priced RPI index-linked-debt ("**ILD**") and Ofwat took account of that in its assessment of financeability. At PR09, Ofwat assumed that 33% of debt held by the notional company was ILD, and this assumption has continued in future price controls. Ofwat accepted the use of swaps at the time and did not inform companies that it may disregard them at a future price control. Anglian does not believe that there are grounds for excluding these instruments from the 'balance sheet' approach, absent clear evidence of inefficiency.[19] In fact, swaps play a crucial role in helping access efficient finance and these savings are passed on to the customers. Ofwat's adviser CEPA notes that there "*is no evidence of derivatives being used for speculative purposes, but rather as a way to compensate for shifts in demand in the underlying capital markets, which have meant that companies have not been able to secure their optimal debt position from direct issuance alone.*"[20]

(15) Ofwat claims that swaps could distort borrowing costs; however, the adjustments to swaps applied by Ofwat under its balance sheet approach present a misleading view of actual borrowing costs and under-state efficient all-in financing costs for water companies in general. This is recognised by Europe Economics in its report for Ofwat, which states that "*excluding all non-standard instruments that might be included in a notional structure that is efficient could underestimate the efficient cost of embedded debt*."[21]

(16) Delineation between pure debt and swaps introduces a false distinction for the allocation of risk. There is no difference in practice in the nature of risk exposure or hedged position between these two positions, and it is not clear why, for example, index linked debt (which hedges inflation risk) should be considered a risk borne by customers and an inflation swap which achieves the same outcome should be considered a risk to be borne by equity.

(17) Ofwat is also selective in its exclusion of swaps. Cross-currency swaps are included in its analysis of sector costs (presumably because these swaps reduce observed costs). Ofwat's adjustment is asymmetric and does not exclude any instruments which reduce observed balance sheet costs, for

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[18] Ofwat Financeability and Financing the asset base (2011), para. 108 (SOC447): "*The refinancing trend began following the 1999 price review. Between 2004 and 2007, the pace of this increased, largely because the companies were able to take advantage of long tenor debt available at very cheap rates…customers benefit from this cheaper financing over time through the price setting process*."

[19] This was recognised by Ofwat's consultants, Europe Economics, who stated that "*we consider the best assumption to be that excluding all non-standard instruments that might be included in a notional structure that is efficient could underestimate the efficient cost of embedded debt*." Europe Economics Initial Assessment of the Cost of Capital (SOC442).

[20] Ofwat and CAA Alternative approaches to setting the cost of debt (REP44).

[21] Europe Economics Initial Assessment of the Cost of Capital (SOC442).

example shorter-dated issuances which Ofwat elsewhere states would introduce greater refinancing risk to the sector.

(18) The 'outperformance' adjustments that are applied to the cost of new debt and the cost of embedded debt are based on a flawed comparison of short-tenor bonds with a benchmark bond with maturity of over 20 years (iBoxx 10+). Ofwat's analysis is based on the iBoxx A/BBB 10+ index; hence, an index composed of bonds with maturity greater than or equal to 10 years. The average maturity of the bonds in this index is currently 20.6 years. Anglian's bonds presented in Ofwat's analysis have an average maturity of around 7.5 years.[22] The mismatch between the maturities of the two portfolios explains why some of Anglian's bonds are trading below the iBoxx A/BBB 10+. That is because the greater the maturity of a bond the greater the risk associated, and the higher the YTM. Therefore, comparing a 7-year bond with a 20-year bonds is effectively comparing instruments with different risk profiles, and, all else equal, the YTM of the 20-year bond should be greater than the 7-year bond. A more like-for-like comparison for this sub-set of Anglian's bonds would be the iBoxx A/BBB 7-10, constituted by bonds with maturity between 7 and 10 years with an average maturity of 8.6 years.

(19) When comparisons are made against the appropriate index (iBoxx A/BBB 7-10), Anglian's bonds are trading at the benchmark. Table 1 below summarises the spread between Anglian's bonds and the two iBoxx indices. As shown in this table, the use of the correct index produces an average spread close to nil.

**Table 1 Spreads**

| | iBoxx 10+ | iBoxx 7-10 |
|---|---|---|
| Average spread | -0.32 | -0.05 |
| Weighted average spread | -0.21 | -0.05 |

Note: Based on Thomson Reuters data, cut-off date 29 April 2020. The weighted average spread is based on the amount outstanding.

(20) KPMG analysis of water company bonds over a 20-year period shows that bonds with tenor within five years of the weighted average tenor of the constituents of the relevant iBoxx index experience no outperformance on yields at the issuance date when compared with the iBoxx index of appropriate creditworthiness.[23]

(21) Ofwat also provides evidence of outperformance using yields at issuance on three bonds that have recently been issued by water companies.[24] Anglian does not consider that this evidence supports Ofwat's arguments for the following reasons:

(i) A small sample of three bonds that have been issued during extreme market conditions is unlikely to reflect the population as a whole;

(ii) The tenor at issuance of these bonds is significantly lower than the weighted average tenor of the iBoxx; and

(iii) Since the publication of Ofwat's reply, there have been two further issuances by Thames Water, which have tenors, credit profiles and yields that are in line with the iBoxx.

[22] Ofwat, Risk and Return Document – CMA charts, tab Figure 3.4 AHS (2020).

[23] Anglian's SOC, Chapter I: Weighted Average Cost of Capital, Figure 85.

[24] Response on Risk and Return, Table 3.6.

(22) Ofwat considers that "*it is appropriate to calibrate the allowed cost of debt off the level of the index for the observed 'outperformance wedge' to make it a better estimate for the debt costs the sector has achieved in the case of embedded debt and is likely to achieve in the case of new debt*."[25]

(23) It is important to note in this context that several companies in the sector have adopted interest rate risk management policies which have enabled them to access lower rates and benefit from the low interest rate environment of recent times. Their low cost of debt over this period has come as a result of taking shorter-term interest rate positions, and leaves customers exposed if interest rates were to rise in the medium term. For example:

(i) Severn Trent has issued a significant amount of floating and short-dated debt (i.e. including debt with a tenor less than 10 years) between 2015 and 2020.

(ii) United Utilities has engineered a debt portfolio that effectively achieves a similar interest rate exposure. More specifically, United Utilities uses interest rate swaps to synthetically create debt instruments whose coupon resets every 10 years, rather than the longer-term 15-year investment horizon that is currently adopted for the notional company by Ofwat.

(24) In nearly all market conditions, interest rates are lower at shorter maturities. Issuing floating or shorter dated debt, or synthetically shortening tenors enables Severn Trent and United Utilities amongst others to lower their average cost of debt. This leaves companies exposed to refinancing risk after the short-term debt matures or the 10-year swaps have lapsed.

(25) Current cost of debt analyses do not incorporate the cost of refinancing risk, which is broadly the difference between yields on shorter and longer-dated debt. Simple calculations based on yields at issuance mean that this refinancing risk is not "priced in" to the observed balance sheet cost of debt. Hence, their cost of debt appears cheaper due to the current low interest rate environment where refinancing risk is not quantifiably priced in as a premium by the market.

(26) The exposure to refinancing risk in the medium-term has not disappeared. Should rates increase in future, this will lead to a higher cost of debt for these companies; under the PR19 approach to the cost of debt allowance, this will be passed onto customers in the form of higher bills.

(27) As a result, some companies' shorter-term financing policies are reducing the investment horizon and increasing the refinancing risk of the notional company. Despite Ofwat adopting a 15-year investment horizon and the numerous arguments in support of long-term investment horizons for regulated utilities, short-term financing strategies are influencing the notional company in the following ways:

(i) Outperformance wedge: Ofwat deducts an outperformance wedge from the iBoxx, which is primarily driven by water companies' actual debt issuance at shorter tenors than the iBoxx average of 20 years.

(ii) Balance Sheet cross-check: Ofwat's iBoxx-based Cost of Debt allowance is cross-checked against the actual Cost of Debt on companies' balance sheets. As outlined above, the actual Cost of Debt is distorted downwards owing to short-term financing strategies, and the hidden refinancing risk. The current cross-check therefore cannot be relied upon to indicate whether the iBoxx-based allowance has been calibrated correctly.

(iii) Ofwat suggests the MARs premia for Severn Trent and United Utilities be used as a top-down "sense check" on the WACC. However, a key driver of the high MARs is the recent financing outperformance. Therefore, the MARs of the two companies cannot be relied upon to indicate

[25] Response on Risk and Return, para. 3.111.

whether the iBoxx-based allowance has been calibrated correctly for a notional company with a long-term financing strategy.

(28) There are a number of reasons that suggest Ofwat's investment horizon of 15 years is already sub-optimal for a regulated utility. Moreover, by implicitly reflecting short-term financing strategies into the notional company's Cost of Debt allowance, Ofwat has effectively reduced the investment horizon below its own 15-year period.

(29) Ofwat has not recognised that its approach creates an incentive for companies to issue shorter-term debt to outperform the index and to remain financeable. Ofwat has incentivised companies to finance themselves with shorter tenor debt, discouraged companies from locking in the benefits of low interest rates for the long-term, and increased the exposure of customers to future increases in interest rates. This is not an efficient long-term financing strategy for a company with long-lived assets.

(30) A longer trailing average would incentivise prudent financing policy and support an appropriate allocation of risk. Correcting Ofwat's allowance for the cost of embedded debt to (i) remove the 25bps adjustment for the outperformance wedge; and (ii) extend the trailing average period to 20 years increases the cost of embedded debt implied by iBoxx to 5.11%. This is 14bps higher than Anglian's efficiently incurred cost of embedded debt (4.97%). Anglian believes that this difference between the observed cost of debt and the efficient cost implied by iBoxx – driven by Anglian's efficient treasury policy – should be shared with customers.

(31) Finally, Anglian notes that the choice of inflation forecast affects the calculation of the real cost of debt. A lower inflation forecast will lead to a higher real cost of debt. Anglian agrees with Ofwat that the latest evidence on inflation should be used to inform these forecasts. However, it is important that there is consistency in approach across the parameters. Ofwat's proposed approach of using long run forecasts for inflation is inconsistent with its decision to focus on 2020-25 evidence for other parameters (e.g. the risk-free rate).

## 4 The proposed change to the notional gearing level is not supported by evidence

(32) Ofwat notes that in the Provisional Findings in *NATS (2020)*, the CMA has raised the issue of a significant gap between the notional gearing level used in the WACC estimation (60%) and the market gearing of the beta comparators (closer to 30%). Based on the parameters assumed by the CMA, the standard approach used by regulators for estimating the WACC results in an allowed return that increases with gearing. The CMA has argued that this could lead to companies being overcompensated where the beta is de-levered using actual gearing and re-levered using a (higher) notional gearing value. Ofwat has suggested that a 'pragmatic solution' to this problem would be to reduce the notional gearing assumption from 60% to 56% (in line with Europe Economics' estimate of the enterprise value gearing of United Utilities and Severn Trent).

(33) The approach of de-levering using market gearing values and re-levering at the notional gearing level has been common practice for UK economic regulators. For water companies, the notional gearing level has been set on a net debt/RCV basis. At PR19, a notional (net debt/RCV) gearing level of 60% has been used for estimating the WACC, assessing financeability and calibrating the gearing outperformance sharing mechanism. Assuming that other parameters (such as the ratio of embedded to new debt) were adjusted accordingly, changing the notional gearing value would lead to a small reduction in the WACC estimate. This arises due to the substantially negative RFR used by Ofwat, which is distorting the relationships between gearing and the cost of equity.[26]

[26] KPMG Reply to CMA's approach to cost of equity in NATS PFs, paras. 1.5.1, 5.5.8 and 5.5.9 (REP20).

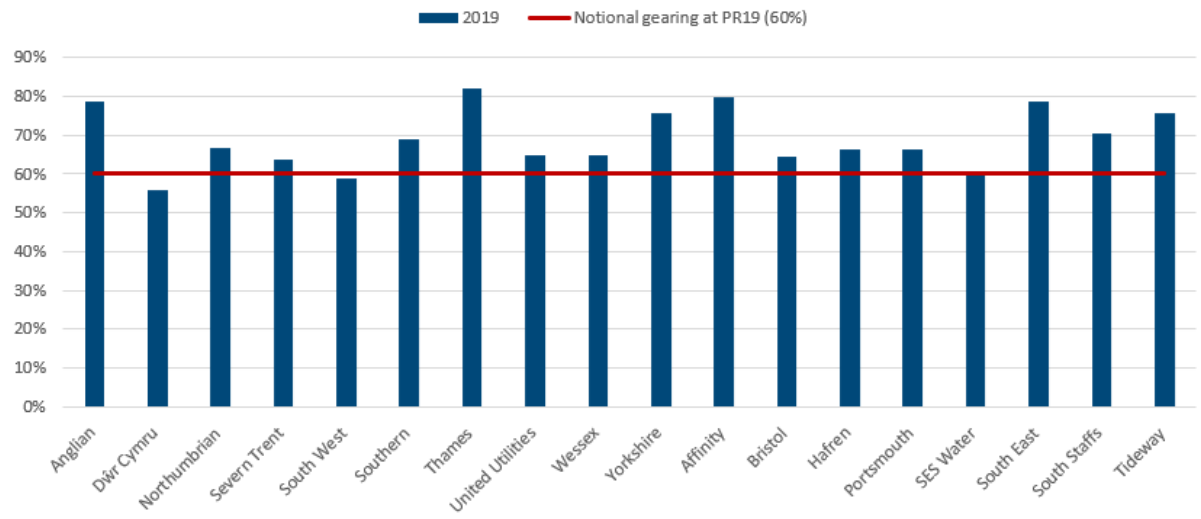
(34) Anglian disagrees with the principle of moving away from a notional gearing level set on the basis of a net debt/RCV ratio given the inconsistency that this would raise with the financeability assessment and gearing outperformance sharing mechanism, which both rely on net debt/RCV ratios as opposed to enterprise values. There is strong evidence that, on this basis, the notional gearing level should be at least 60%. Analysis of Ofwat's 'Monitoring Financial Resilience 2018/19' report shows that:

(i) The two listed companies,[27] Severn Trent and United Utilities, have both had net debt/RCV higher than 60% in every year from 2015/16 to 2018/19.

(ii) In 2018/19, companies' gearing ranged from 56% to 82% on a net debt/RCV basis. Ofwat's proposed 56% notional gearing assumption is therefore at the very bottom end of the range, with only one company (Dŵr Cymru)[28] currently at this level and 17 companies above it.

(iii) The industry-wide, simple average net debt/RCV was 69.0% in 2018/19, with a median of 66.6%.

**Figure 1 Gearing levels (net debt/RCV), 2018/19**




Source: Oxera analysis based on Ofwat's Financial Monitoring Report 2018-19 (SOC480).

(35) Anglian notes that Ofwat's gearing outperformance sharing mechanism was developed on the basis of a deadband of 10% above the notional gearing level.[29] If a notional gearing of 56% were to be used, on the basis of 2018/19 gearing levels, this would mean that:

(i) 11 of 18 companies would exceed the notional gearing level by more than 10% based on net debt/RCV ratios.

(ii) United Utilities' would be +9% from this proposed value, and would therefore be close to exceeding Ofwat's deadband despite being used as the benchmark for setting the notional level.

(36) This highlights the need for the notional gearing level to be set on the basis of a reasonable net debt/RCV assumption, as Ofwat and other regulators (e.g. Ofgem) have done over the course of multiple price controls.

[27] Excluding South West Water, as the listed parent company Pennon Group contained a significant non-regulated business.

[28] Dŵr Cymru is a single purpose company with no shareholders and is run solely for the benefit of customers.

[29] Ofwat Back in Balance July Position Statement, page 9 (SOC465).

## 5 Ofwat has ignored the asymmetric consequences of setting the allowed rate of return too low

(37) Ofwat has continued to argue that it has taken account of uncertainty in estimating the WACC by considering a range of evidence and selecting the midpoint of its range. The UKRN study on which Ofwat has based much of its approach and evidence on the WACC advocates selecting a point estimate based on explicit consideration of the "informational wedge" and "regulatory wedge".[30] Although Ofwat acknowledges that its price control package is negatively skewed and has frequently sought to cite companies' informational advantages, it has not undertaken a systematic assessment of the appropriate point in its WACC range in line with the recommendations of the UKRN study. By choosing the mid-point of the range, it implicitly assumes that the "informational wedge" entirely offsets the "regulatory wedge", but it has not provided robust evidence to support this position.

(38) The CMA has itself noted that there could be a case for a long-term premium on the cost of capital in certain settings.[31]

[30] See Wright et al (2018), section 8.2 (SOC423).

[31] Provisional Findings in *NATS (2020)*, para. 12.289 (SOC420).

# Part I.2: Reply on Financeability

## 1 Overview

(i) Ofwat's response indicates that it continues to underestimate the scale of the financeability challenge under its PR19 FD. The conclusion that the notional company can maintain a credit rating two notches above the minimum investment grade rating, rests on multiple unreasonable and unrealistic assumptions.

(ii) The notional company cannot achieve the Baa1 (or equivalent) rating that is assumed in the WACC analysis and that Ofwat is targeting in its own financeability analysis. This confirms the assessment that the equity return has been underestimated relative to the cost of debt. Ofwat also fails to acknowledge that since the FD, which it sought to calibrate to the minimum thresholds for a Baa1 rating, through the use of revenue advancement, the financeability of the notional company has worsened as a result of a reduction in inflation and other consequences of COVID-19.

(iii) Ofwat has acknowledged the financeability constraint faced by the notional company but has regarded it as a short-term problem that can be addressed through a PAYG revenue advancement of £80 million. Revenue advancement remedies make no difference to the ability of companies to meet their total debt obligations in terms of interest and capital repayments. These remedies do not address the inadequate allowance for the return on capital. Using revenue advancement remedies instead of allowing the appropriate rate of return will incentivise companies to reduce issuance of new debt in AMP7 and hence limit the scope to lock-in the customer benefits of issuing long-term debt at today's low rates.

(iv) Conscious that rating agencies disregard PAYG in assessing creditworthiness, and therefore implicitly that these will not address the financeability issue, Ofwat has now proposed alternative mitigations in response to Anglian's SOC, including faster transition to CPIH and changing the definition of the notional company by adjusting the notional gearing level. None of these proposed mitigations are an effective means of addressing the financeability constraint, which arises from the inadequacy of returns on equity. These proposals, which have only now been proposed for the first time, after the FDs, are inconsistent with Ofwat's previous statements and policy. These changes seek to make the notional company fit the FD and therefore redefine what is financeable, rather than setting a price control that meets the agreed financeability standard and so discharges Ofwat's financeability duty.

(v) Notwithstanding this, Ofwat has now also sought to use evidence on the share prices and credit ratings of other companies as evidence that its FD is financeable. Anglian's analysis shows that other factors are driving share prices and credit ratings of the specific companies in question and that the market data does not confirm Ofwat's claim that the PR19 FD is financeable for either the notional company or more widely across the sector. The key points are that:

  (a) The small number of companies that have maintained ratings of Baa1 either have benefitted from a generous embedded debt funding (lower cost of embedded debt than the notional company) or have credit-enhancing aligned structures; and

  (b) The share prices of Severn Trent and United Utilities are driven by macroeconomic events unrelated to the price control, as well as features of the regulatory settlements for these two companies (e.g. 'enhanced' status, company expectations around totex outperformance, being at the positive end of the approach to averaging the cost of debt)

that are not generalisable to the sector as a whole and are therefore not directly relevant to assessing the financeability of the notional company.

## 2 Ofwat's FD is not financeable

(39) As explained in Chapter J: Financeability of Anglian's Statement of Case, Anglian is not financeable on the basis of the notional capital structure. Based on the latest Moody's and Fitch rating methodologies, Anglian with a notional financial structure (i.e. without the credit-enhancing and financial resilience benefits of the Anglian corporate structure) would (at best) only achieve a Baa2 rating.

(40) This results in an inconsistency between the projected credit rating for the company with a notional financial structure based on the FD and Ofwat's own allowed cost of debt based on an average of 'A' and 'BBB' bonds i.e. BBB+/Baa1.

(41) Ofwat's position on the financeability of the notional company is contingent on making a number of unreasonable and unrealistic assumptions, including:

(i) AICR below threshold (the primary metric for Moody's & Fitch) would not constrain the achieved rating.

(ii) PAYG adjustments support credit quality and will be recognised by rating agencies, notional gearing could be assumed to decrease without incurring significant, unfunded refinancing/transaction/break costs or increasing the proportion of embedded to new debt.

(iii) Rating agencies will "look through" the mismatch between opex and capex.

(iv) There is sufficient financial headroom to manage increasing risk and increased asymmetry.

(v) The company will be able on average to perform in line with or outperform the regulatory settlement.

(vi) The cost of embedded debt allowance is sufficient to remunerate efficient financing costs.

(42) As a result, it cannot be assumed that an efficiently run company with a notional financial structure will be able to raise debt at the assumed rates. Anglian will incur higher costs of financing than assumed by Ofwat in setting the allowed cost of new debt. Consequently, Anglian is not financeable based on projected credit metrics.

(43) A regulated company needs to be financeable based on financial projections and expected cost of financing ex ante, and under a set of reasonable downside scenarios. The ability to withstand shocks is fundamental for both debt and equity capital providers. Without such tests, investors would be unable to evaluate whether debt and equity have a reasonable prospect of earning their required returns as well as recovering their capital employed.[32] Ofwat has performed high level reverse stress testing to assess resilience but has not modelled specific downside scenarios and has not carried out robust risk analysis to assess the likelihood of different risk scenarios:

(i) Ofwat's consideration of risk exposure and downside scenarios in the FD is too limited to inform robust conclusions on financeability.

(ii) Ofwat's argument that the scenarios it prescribed are not relevant for the notional company implies a false distinction between plausible downside scenarios for the notional and actual

[32] See *Bristol (2015)*, para. 11.52 (SOC275): "*we consider it good regulatory practice to consider the impact of downside shocks on financial ratios*".

structures – these scenarios are relevant and realistic for the notional company based on the FD.

(44) Anglian has conducted further analysis of downside scenarios on financial projections and implications for credit ratings based on the FD financial projections. This examines two different iterations of the base case for the notional capital structure:

(i) An Ofwat FD Base Case (excluding PAYG adjustments), which assumes financial projections in line with Ofwat's FD, adjusted to exclude the PAYG adjustment only.

(ii) An adjusted base case, which corrects for the (i) PAYG adjustment; (ii) misallocation of opex as capex;[33] and (iii) incorrect assessment of embedded debt costs. This is the base case that was submitted to the CMA in Chapter J: Financeability of Anglian's Statement of Case.

(45) Anglian's analysis is based on testing a set of realistic and plausible scenarios, including a selection of Ofwat's prescribed scenarios set out in its Back in Balance April Consultation[34] and a further six scenarios. The results are presented for AICR and FFO/Net Debt metrics.

(46) **[CONFIDENTIAL TO ANGLIAN]**

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**Table 2**
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**Table 3**
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## 3 Evidence from other companies does not support Ofwat's position

(53) Ofwat has sought to defend its financeability assessment by stating that companies with similar capital structures to Ofwat's notional company have been able to maintain credit ratings two notches above the benchmark. It has also cited the share prices of Severn Trent and United Utilities as evidence that the market has reacted favourably to its FDs.

(54) Anglian considers that credit ratings (and share prices) are driven by a variety of factors, not all of which relate to the price control e.g. the political uncertainty associated with a General Election. Moreover, differences between companies within the water sector need to be carefully considered when drawing inferences about the financeability of the price control for the notional company or the sector as a whole.

(i) First, the differences between the notional company and actual companies are non-trivial for the assessment of the rating, e.g. the notional company is not assumed to outperform or underperform against the regulatory assumptions.

[33] Modelled as £157 million overspend on opex and an equal underspend on capex.

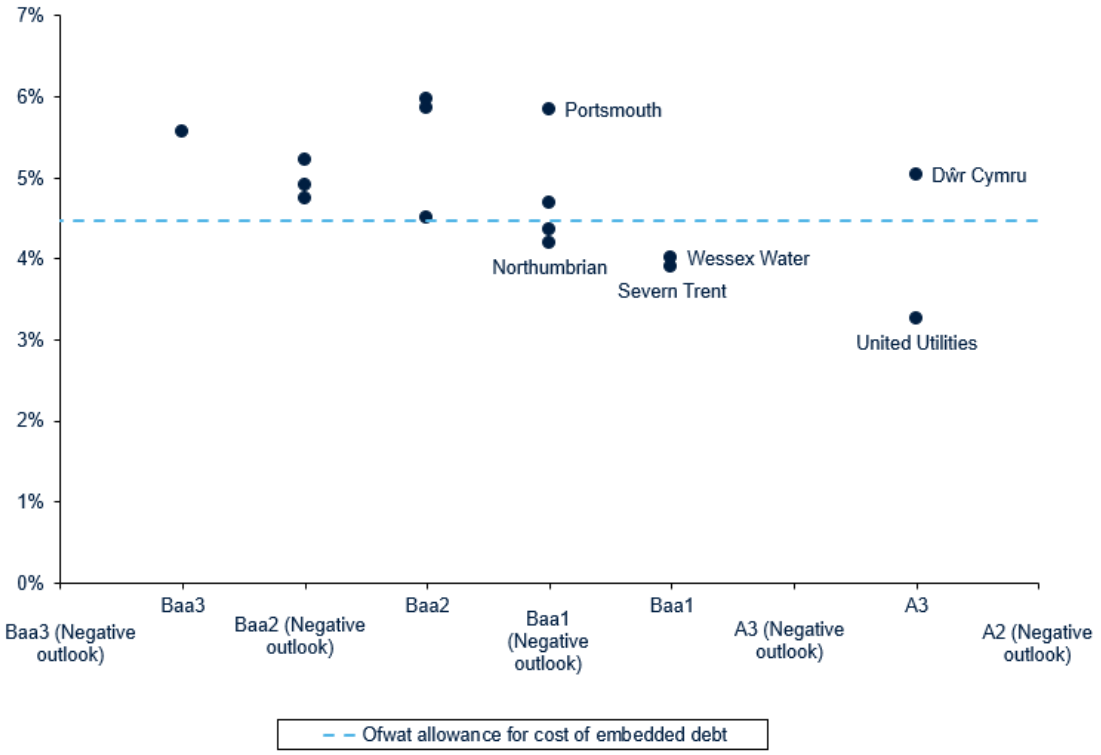
[34] Ofwat Back in Balance April Consultation (SOC464).

(ii) Second, Ofwat seems to consider a company's choice of gearing level as the most significant driver of creditworthiness. Analysis presented below suggests both that (i) several companies with gearing close to the notional level have been downgraded by at least one agency; and (ii) there is a stronger link between downgrades and companies' embedded debt costs.

(iii) Third, the fact that other companies have been able to maintain a certain credit rating over the course of the first few months of a price control is insufficient to conclude that the price control is financeable over five years or that it is resilient to shocks that have not materialised.

(55) The reaction of the credit ratings' agencies to the FDs was undisputedly negative. Moody's put the majority of the sector on review for downgrade and five companies remain on 'Negative Outlook' by at least one rating agency. The implications of a credit downgrade could be severe for the cost of debt of water companies and financeability in the long-run. For example, if the notional company has a rating below Baa1, the cost of raising debt is expected to be higher by around 40-55bp than for the notional company with Baa1 rating.[35] Figure 2 below shows that these credit ratings downgrades are linked to the difference between the cost of embedded debt and Ofwat's allowance.

**Figure 2 Company credit ratings and embedded debt costs**




Note: Moody's presents a 4.7% (nominal) estimate of the cost of embedded debt for Anglian as of March 2019. This is lower than the 4.97% cost of embedded debt for Anglian, which is presented in Anglian's Statement of Case as of March 2020. Oxera understands that the Moody's graph is based on data provided to Ofwat for the Annual Performance Reports. This data reflects the lower out-turn inflation for 2018/19, which temporarily reduced the nominal cost of debt.

Source: Oxera analysis based on Moody's Outlook remains negative as PR19 leads to unprecedented number of appeals, Exhibits 7 and 20 (REP26).

(56) As shown in Figures 3 and 4 below, analysis of the market valuations of Severn Trent and United Utilities shows that these companies' traded premia can be explained by factors such as company-specific

[35] Anglian's SOC, Chapter J: Financeability, para. 1289.

outperformance expectations and non-regulated business value that cannot be generalised to the sector as a whole. The key assumptions in this analysis are as follows:

(i) market capitalisation calculated as an average over January – April 2020;

(ii) regulated equity based on the equity portion of the AMP7 opening RCVs;

(iii) AMP7 outperformance expectations and the value of non-regulated business are from Barclays;[36]

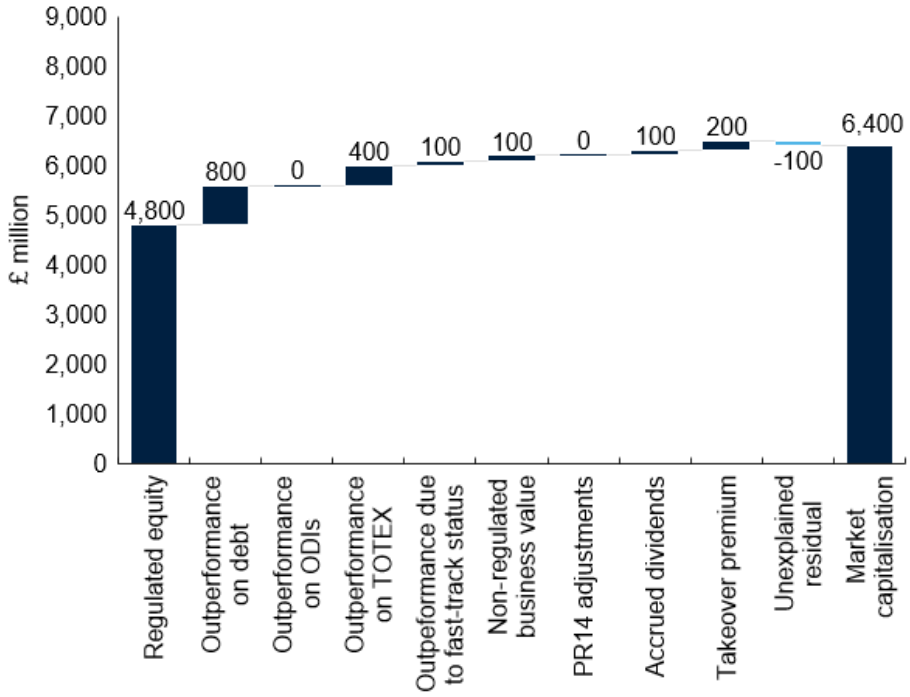
(iv) assumed that investors expect outperformance for these companies to reduce permanently by 50% after AMP7;

(v) expected outperformance discounted using the 6.27% nominal base equity return applied in the FDs; and

(vi) additions to the value of regulated equity: the value of PR14 adjustments to be realised in AMP7; accrued dividends; and a probability-adjusted takeover premium.

(57) Under these scenarios the unexplained residual between the bottom-up calculation of equity value, and the actual market capitalisation is negative. To the extent that conclusions can be drawn, the analysis is consistent with the conclusion that Ofwat has underestimated the cost of equity.

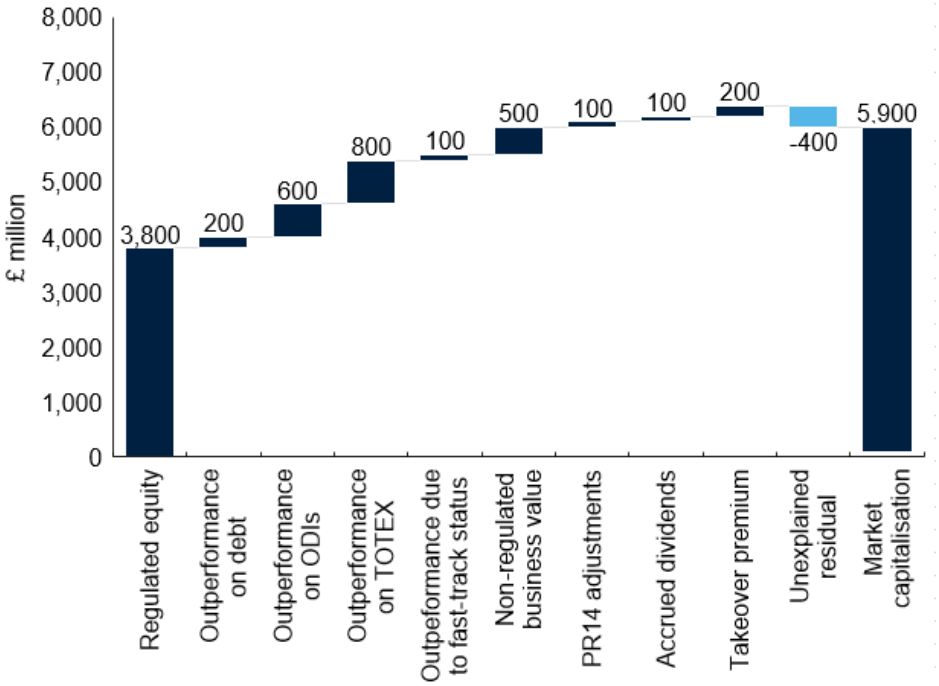
**Figure 3 Components of the premium (United Utilities)**




Source: Oxera analysis. Noe: Figures are rounded to the nearest 100.

[36] Barclays, Happy Valentine's Day Ofwat - and could CMA referrals be a match for Ofgem?, (14 February 2020), submitted by Ofwat as annex C007 to Ofwat's Reference of the PR19 final determinations (March 2020).

**Figure 4** **Components of the premium (Severn Trent)**




Source: Oxera analysis. Note: Figures are rounded to the nearest 100.

(58) Table 4 below summarises the credit ratings of the water companies and shows that similar factors explain why some companies are able to maintain Baa1 ratings. Currently, nine companies are rated below the 'two notches above investment grade' by at least one rating agency.

**Table 4** **Water companies' credit ratings**

| | Gearing 2019 | Moody's | S&P | Fitch | Reason it does not prove the notional company is financeable |
|---|---|---|---|---|---|
| **Dwr Cymru** | 56.0% | A3 | A- | A | Not-for-profit organisation, and structural credit enhancement |
| **United Utilities** | 64.8% | A3 | BBB+ | BBB+ | Has the lowest borrowing costs in the industry; is considered a strong performer by rating agencies; is a fast-tracked company |
| **Severn Trent** | 63.7% | Baa1 | BBB+ | N/a | Benefits from AMP6 performance rewards; is considered a strong performer by rating agencies; is a fast-tracked company |
| **Anglian Water** | 78.6% | Baa1 | A- | A- | Despite being a strong performer with structural credit enhancement, negative outlook by Moody's, CreditWatch negative by S&P |
| **Northumbrian Water** | 66.8% | Baa1 | BBB+ | N/a | Under review for downgrade by Moody's, and on CreditWatch negative by S&P |
| **Affinity Water** | 79.7% | Baa1 | BBB+ | N/a | Negative outlook by Moody's. Stable outlook for S&P. |
| **Thames Water** | 81.9% | Baa2 | BBB+ | N/a | Credit rating by Moody's is below the 'two notches above investment grade' level, Negative outlook by S&P |
| **Yorkshire Water** | 75.8% | Baa2 | A- | N/a | Credit rating by Moody's is below the 'two notches above investment grade' level, Negative outlook by S&P |

| | | | | | |
|---|---|---|---|---|---|
| **Wessex Water** | 64.7% | Baa1 | BBB | BBB | Credit ratings by S&P and Fitch are below the 'two notches above investment grade' level; otherwise, is considered a strong performer |
| **Portsmouth Water** | 66.3% | Baa1 | BBB | NR | Credit rating by S&P is below the 'two notches above investment grade' level |
| **SES Water** | 60.9% | Baa2 | BBB | NR | Credit ratings are below the 'two notches above investment grade' level despite gearing levels being close to the notional structure |
| **South Staffs Water** | 70.6% | Baa2 | BBB+ | N/a | Credit rating by Moody's is below the 'two notches above investment grade' level |
| **South East Water** | 78.5% | Baa2 | BBB | N/a | Credit ratings are below the 'two notches above investment grade' level |
| **Bristol Water** | 64.6% | Baa2 | N/a | NR | Sole credit rating is below the 'two notches above investment grade' level despite gearing levels being close to the notional structure |
| **Southern Water** | 68.8% | Baa3 | BBB+ | BBB+ | Credit rating by Moody's is below the 'two notches above investment grade' level |

Source: Oxera analysis Based on Ofwat, Reference of the PR19 final determinations: Cross-cutting issues, (March 2020), Table 7.1, Table 7.2.

## 4 Ofwat's proposed mitigations are not effective ways of addressing the financeability challenge

(59) Ofwat's approach to addressing the AMP7 financeability issue has been the advancement of revenue from future control periods through adjustment to PAYG and RCV run-off rates. In its response to Chapter J: Financeability of Anglian's Statement of Case, Ofwat reiterates its view that:

(i) the financeability constraint is a PR19-specific issue as the real return as a proportion of the notional return is low in comparison with past determinations for the RPI-indexed part of the RCV;[37]

(ii) the revenue advancement adjustment is the appropriate mechanism to address the financeability constraint;[38] and

(iii) it is not appropriate to apply a higher return on capital on the basis of financeability to target higher financial ratios as this would provide equity investors with a return on their investment in excess of the market return.[39]

(60) Anglian disagrees with Ofwat on this approach, which applies a short-term solution to a long-term problem. Ofwat's position on the risk-free rate is grounded in the view that the currently low interest rates will persist.[40] This implies that the cost of new debt and the WACC allowance as a whole will remain low relative to historical levels in the future, such that a higher share of the return will come through inflation of RCV rather than the real WACC.

(61) PwC's analysis does not show that this is a temporary problem that will be resolved at PR24.[41] It assumes that the cost of embedded debt for PR24 will equal the 15-year average of iBoxx. However, as shown elsewhere: the 15-year average is already today inconsistent with when water companies

[37] Response on Risk and Return, para. 4.70.
[38] Response on Risk and Return, para. 4.113.
[39] Response on Risk and Return, para. 4.112.
[40] Response on Risk and Return, paras. 4.102-4.103; Response to Anglian, para. 6.43.
[41] Response on Risk and Return, para. 4.104.

issued their debt, and a 20-year average is a closer match. In addition, the current tenor of iBoxx is c.20 years, hence a 20-year average would be a better assumption to use at PR24. Adjusting to a 20-year average iBoxx implies using a higher cost of embedded debt in the PwC financeability analysis for PR24.

(62) Neither Ofwat nor PwC consider that the advancement of revenue will incentivise companies to reduce their issuance of debt during AMP7. This would further increase the gap between the cost of embedded debt at PR24 used by PwC in its financeability analysis relative to the companies' actual cost of debt.

(63) In addition, and as set out in Chapter J: Financeability of Anglian's Statement of Case,[42] Fitch and Moody's have publicly stated that they do not consider PAYG advancement as credit-enhancing, and therefore do not take these cashflows into account when calculating credit ratings.

> *"[Ofwat] views the adjustment of PAYG and run-off rates as economically equivalent to the change in indexation measures, because they involve a trade-off between fast money (received through revenue through the detriment of RCV growth) and slow money (increased RCV growth with lower short-term revenue). However, we believe that there is a key difference: the switch to CPIH is a permanent change that applies to all companies in a similar way, while PAYG and run-off rates are partly within companies' control and can change between periods, distorting comparability between companies and over time. We will continue to remove the regulatory depreciation as well as excess PAYG to calculate company-specific AICR ratios."*[43]

(64) This position reflects the fact that these adjustments do not increase the cash available to service total debt interest and principal repayment; rather, they simply move cash flows from the future to today, weakening the coverage of principal repayment in exchange for improving interest coverage. Therefore, higher PAYG rates will increase gearing, which is another of the key metrics looked at by rating agencies.

(65) Even if a regulator does not agree with the economic merits of the credit rating agencies' position on PAYG adjustments, the mere fact that the credit rating agencies disregard these cash flow adjustments means that they do not have a positive impact on creditworthiness. Given that credit rating agencies decide creditworthiness, their views and guidance should inform the assessment of financeability for regulatory purposes.

(66) Ofwat has now suggested that, if the CMA is not minded to make a PAYG adjustment, a faster CPIH transition would be an alternative means of advancing revenues and enhancing credit metrics.[44] The transition to CPIH was raised as far back as 2015, with Ofwat initially proposing to fully transition to CPIH over the AMP7 period. This was followed by a period of significant engagement with industry and stakeholders, during which companies highlighted that it would take time to unwind the RPI-linked debt on their balance sheets (which had been promoted by Ofwat in earlier price control periods on the basis that it enhanced financeability) and that a full transition could undermine investor confidence in the sector. Companies noted that an earlier transition to CPIH would create a mis-match between RPI-indexed debt and CPIH-indexed RCV, and that there is not an established market for CPIH debt.[45] In light of the stakeholder engagement, Ofwat decided that a slower transition was warranted.

> "*Consistent with our strategy of trust and confidence, we recognised that maintaining investor confidence required us to allow for an unwinding of the embedded RPI-based debt over time and to ensure customer impacts could be maintained*."[46]

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[42] Anglian's SOC, Chapter J: Financeability, para. 1279.

[43] Moody's Ofwat Tightens the Screw Further, page 5 (SOC349). See also Fitch Ofwat Price Review Intensifies Pressure (SOC348).

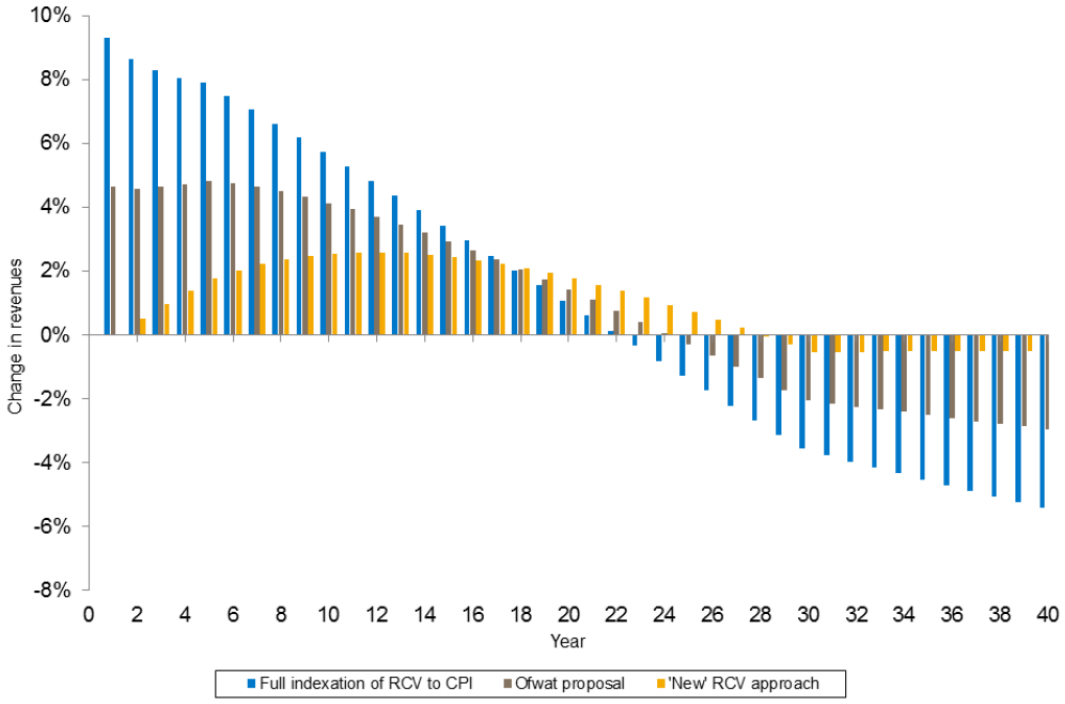
[44] Response to Anglian, para. 6.45.

[45] This was also recognised by the Civil Aviation Authority in its decision to retain RPI-indexation of Heathrow Airport's RAB for H7: "*We confirm our initial policy of retaining RPI to index the RAB and calculate the real WACC for H7…indexing the RAB and calculating the real WACC by using CPI would introduce an additional financing risk for HAL to manage…the absence of CPI-based financial instruments compounds this financing risk*." See CAA Economic regulation of capacity expansion at Heathrow, paras. 3.30-3.31 (REP29).

[46] Aligning Risk and Return Technical Appendix, page 95 (SOC242).

(67) Ultimately, Ofwat decided that for AMP7, 50% of RCV should remain linked to RPI. Figure 5 below shows the impact that the change in the rate of transition to RCV indexation has on the profile of forecast revenues in both the short- and long-term.

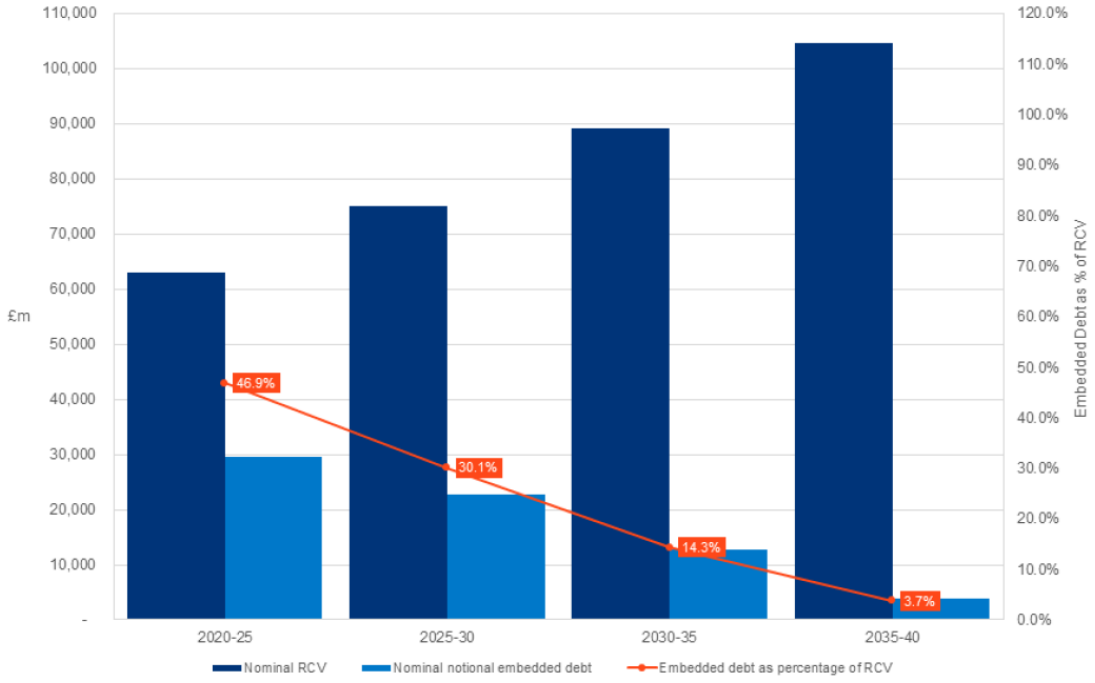
**Figure 5** **Impact of changes to RCV indexation on forecast revenues before the use of financial levers**




Source: Ofwat's regulatory approach (2016), Figure 8 (REP31).

(68) Despite consulting extensively on the rate of CPIH transition and deciding against a faster transition on the basis that this risked undermining investor confidence, Ofwat is now suggesting a faster transition as a solution to the financeability problems that the FD has created. In addition to being inconsistent with its previous statements and decisions on this subject, many of the same issues of adjusting PAYG rates also apply to a faster CPIH transition. The credit rating agencies have indicated that they would disregard an accelerated transition where it is not applied on a sector-wide basis. In addition, this would impose additional costs on companies of managing a mismatch between assets and liabilities – such as swapping RPI and CPIH exposure, when Ofwat has now decided that swap costs will be disallowed – as the rate of increase in RPI-linked debt obligations will be faster than the CPIH-indexation of the RCV. Figure 6 below indicates that this concern was a key factor in the policy decision to transition gradually towards full CPIH-indexation.

**Figure 6 Possible transition based on the maturity profile of nominal embedded debt**




Source: Ofwat's regulatory approach (2016), Figure 11 (REP31).

(69) Companies could seek to manage the increase in gearing that revenue advancements (PAYG or CPIH transition) trigger by making early debt repayments, or using the advanced revenue to reduce new debt issuances. However, each of these options would generate inefficiency and have an adverse impact on customers:

(i) Early repayment of debt would be inefficient as it would require (at minimum) paying the additional cost of the market value over and above the face value of debt.

(ii) Using the advanced revenue to reduce the amount of new debt that is raised would be an inefficient financing strategy given that the cost of new debt is low relative to the historical cost of debt. This would reduce the scope to lock-in the current low rates of debt, creating intergenerational equity as future customers would not benefit from the low rates available in the market today.

(70) Recognising that the notional company is not financeable, rather than acknowledging this is a consequence of underlying problems with the FD as a whole, Ofwat presents a number of alternative mitigations that involve changes to the definition of the notional company (by assuming a lower notional gearing or increasing the proportion of index-linked debt or assuming reduced dividend levels/equity injections). These changes effectively seek to make the notional company fit the FD, as opposed to making the FD financeable for the notional company that has underpinned the PR19 process. These are not effective means of addressing the recognised financeability problem for the following reasons:

(i) Adopting a slightly lower notional gearing (e.g. 56%) does not provide a material benefit to credit metrics where other components of the WACC are appropriately adjusted;

(ii) An increase in index-linked debt is not supported by the trends in the sector and is inconsistent with other aspects of Ofwat's methodology for PR19. The inconsistency stems from the fact that revenues are effectively CPIH linked whereas the debt and interest costs are RPI-linked. Companies are unlikely to issue RPI-linked debt in future; and

(iii) Dividend restrictions and equity injections may benefit debt metrics but would have negative implications for equity financeability. Equity investors will be less willing to commit long term capital to the business where dividend payments are constrained.

(71) In conclusion, Anglian makes two overarching submissions:

(72) First, Ofwat has mischaracterised Anglian's argument in terms of the relationship between the cost of capital and financeability. For clarity, Anglian's position is not that the allowed return on capital should be increased above the market-based cost of capital to hit ratios, but that the financeability test indicates a problem with the calibration of the allowed return on capital against the market-based cost of capital.

(73) Second, Ofwat's approach undermines the extent to which financeability tests are meaningful, binding and robust as a cross check on the calibration of a regulatory package. Instead, Ofwat has defined the financeability tests and proposed revenue advancement solutions such that no outcome could indicate that re-calibration of the required rate of return is required.

# Part I.3: Reply on Gearing Sharing

## 1 Overview

(i) This section addresses Ofwat's response to Chapter K: Gearing outperformance sharing mechanism of Anglian's Statement of Case in relation to the gearing outperformance sharing mechanism (the "**Mechanism**").

(ii) In the Statement of Case, Anglian puts forward four key grounds for why the Mechanism was not justified under the regulatory framework:

(a) There is no basis for Ofwat's assumption that gearing should be assessed in isolation of a company's governance structure, nor that a company with gearing above an arbitrary threshold, poses an inherently higher risk for customers and / or taxpayers.

(b) There is no basis for Ofwat's assumption that shareholders benefit from relatively higher levels of gearing.

(c) Customers of Aligned Companies have in fact benefitted, notably through protections afforded by Aligned Debt Programmes and Ofwat's tax sharing mechanism.

(d) The Mechanism breaches, in any case, Ofwat's duty to ensure that regulatory change is sufficiently sign-posted, targeted and proportionate.

(iii) As set out below, Ofwat's response has either failed to address these key issues at all or done so inadequately.

(iv) **Ofwat does not make a positive case for the introduction of the Mechanism.** The introduction of the Mechanism is based on Ofwat's purported "*challenge to the legitimacy of the regulatory regime*". However, Ofwat does not demonstrate the legitimacy challenges arising out of Anglian's capital structure. It also ignores evidence that suggests these structures have, in fact, benefitted customers by enabling efficient financing of the sector.

(v) **Ofwat has dramatically changed its position over the course of PR19.** In particular, Ofwat now dismisses the benefits of securitised structures when previously it recognised that these are "*viable and sustainable over the longer term*", and benefitted customers directly through "*lower tax costs*" and indirectly through "*increased scrutiny"* on management, both resulting in lower customer bills. In a similar vein, Ofwat introduces the Mechanism when previously it held that a sharing mechanism "*goes against the principles of the incentive-based regulatory framework"*.

(vi) **Ofwat fails to meet the evidential standard required for the introduction of the Mechanism.** Ofwat and, its consultants, Europe Economics, simply speculate that the key assumptions underpinning the introduction of the Mechanism may or may not be correct rather than concluding that the assumptions are sufficiently likely to justify an intervention of this magnitude. The use of conditional language falls far below the evidential standard required for regulatory intervention.

(vii) **Ofwat incorrectly assumes that a high gearing *per se* impacts financial resilience.** Ofwat fails to provide any additional theoretical or empirical basis to support its arbitrary conclusion that a gearing above 70% gives rise to unacceptable levels of risk compared to a gearing of 60%. Further, Ofwat incorrectly treats Aligned Companies on the same basis as unsecured structures. Ofwat fails to even engage with Anglian's submissions on the extensive de-risking

features of Aligned Debt Programmes, dismissing these on the ground that they "*are not perfect*".

(viii) **Ofwat incorrectly assumes that higher levels of gearing create a "benefit" to shareholders.** Ofwat mistakenly assumes that a higher gearing results in a 'risk transfer' from shareholders to customers because it increases the probability of default. Indeed, Ofwat's examples simply show the deleterious effects of a potential default on customers. Ofwat offers no evidence that shareholders have permitted higher levels of gearing safe in the knowledge that they would not bear the cost of the increased risk.

(ix) **Ofwat erred in its dismissal of the benefits that accrue to customers of Aligned Companies.** Ofwat's response dismisses the tax benefits of highly geared structures as well as those accruing from enhanced protections of Aligned Companies. As set out above, this is contrary to its previous position. Ofwat contends that securitisation arrangements "*are designed to protect lenders*" and fails to recognise that in reality the interests of lenders and customers are aligned in several ways – the most important being that the company does not default.

(x) **The Mechanism runs against Ofwat's procedural duties.** Ofwat's contention that the glidepath satisfies its procedural duties is untenable and unevidenced. This is proven by Anglian itself, which will have to significantly alter its capital structure in Year 1 of AMP7 and incur exorbitant break costs to benefit from the glidepath. Hence, Ofwat's glidepath does not mitigate the sudden and insufficiently signposted introduction of the Mechanism.

## 2 There is no positive case for the introduction of the Mechanism

(74) First, leaving aside the lack of any regulatory basis for the Mechanism, Anglian observes that there is no positive case for its introduction. Ofwat rests its justification on two points:

(i) the Mechanism *"aims to address a long held concern that the companies and their investors enjoy all the benefits of adopting financial structures … with **little evidence of benefits to customers**."*[47]

(ii) the Mechanism is a response to "*a **challenge to the legitimacy of the regulatory regime** that was linked, in part, to concerns raised about companies paying high dividends and adopting complicated and potentially risky financial structures*".[48]

(75) However, as set out below, Anglian's adoption of more highly geared structures has benefitted customers and poses no "*challenge to the legitimacy of the regulatory regime*". The Mechanism would in fact harm customer interests.

### 2.1 More highly geared structures have benefitted customers

(76) In the first instance, the DTI Report cited by Ofwat outlines that more highly geared structures were, in part, a device by water companies to overcome their difficulties in efficiently raising equity financing (i.e. the structures enabled efficient financing of the sector). As such, Ofwat's own evidence suggests that these structures provided customer benefits by enabling efficient financing of the sector.

(77) The DTI Report explains that: "*where the public equity markets are unwilling to deliver new capital for water businesses, the large ongoing investment requirements of the businesses may only be funded by retained profits or debt. Many water businesses may have turned to debt as retained profits were*

[47] Response on Risk and Return, para. 5.4.

[48] Response on Risk and Return, para. 5.9.

*insufficient*".[49] Put simply, once the operational efficiencies reaped in the years following privatisation had been exhausted, water companies had difficulties attracting sufficient equity financing to maintain their capital investment programmes. The use of more highly geared structures enabled the water companies to attract capital investments more efficiently than would have otherwise been the case.

(78) The importance of attracting financing on efficient terms to fund water companies' capital investment means that it is not credible for Ofwat to ignore the customer benefits of giving companies the freedom to determine their own capital structures. Indeed, restricting companies' ability to determine their capital structures may harm customer interests by impairing water companies' ability to raise financing on the most advantageous terms.

### 2.2 No challenge of legitimacy to Anglian's structure

(79) In addition, Ofwat's contention that the Mechanism is needed to address "legitimacy" issues concerning more highly geared structures does not withstand scrutiny. Ofwat's Back in Balance Consultation contended that "*Trust and confidence in the water sector has been eroded through concerns around corporate behaviour of some companies*"[50] and reiterated several times the need to rebuild the trust and confidence of customers and wider society in the water sector.

(80) However, Ofwat does not appear to be reflecting customer concerns: rather, it appears to be primarily motivated by an exchange of letters with the Secretary of State.[51] Further, it is not obvious why there are concerns arising from companies' capital structures. Ofwat's only argument is: "*to rebuild trust and confidence, we consider there is a strong case for customers to share benefits from gearing levels that are high*"[52] and that currently investors benefit from higher levels of gearing. But this claim has no basis. As set out in Section 5, shareholders do not "benefit" from higher levels of gearing.

### 2.3 The Mechanism harms consumer interests

(81) Finally, the introduction of the Mechanism in fact actively *harms* customer interests by undermining the stable, predictable and transparent regulatory environment; a parameter that, as stressed by the CMA, is decisive for long-term investment decisions.[53]

(82) In particular, the increased regulatory risk posed by the introduction of the Mechanism is evidenced from Moody's downgrade of the water industry's outlook to Aa from Aaa as well as from the individual companies' downgrades. Moody's observed that the introduction of the Mechanism evidenced a deterioration in the "*stability and predictability of the regulatory regime*" as well as an increased risk of "*future political interference in the design of the regulatory framework"*. This *"shift in the regulatory approach*", as stressed by Moody's is "*driven by a very public and political debate around the sector's legitimacy*' rather than by Ofwat's purported lack of public trust.[54]

## 3 Ofwat has performed a remarkable U-turn in its position on the Mechanism

(83) Furthermore, Anglian observes that Ofwat itself had recognised the benefits of more highly geared structures at the outset of PR19 only to perform a remarkable u-turn nearly six months after publication of its Final Methodology for PR19.

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[49] Department of Trade and Industry (DTI) and HM Treasury, The drivers and public policy consequences of increased gearing, (October 2004) ("**DTI Report**"), page 18.

[50] Back in Balance Consultation, page 3 (SOC464).

[51] Exchange of letters between Ofwat and Defra (SOC274, SOC474, SOC475, SOC476).

[52] Back in Balance Consultation, page 14 (SOC464).

[53] *Phoenix Gas (2012)*, para. 8.85 (SOC352).

[54] Moody's Proposals Undermine Stability and Predictability of the Regime, page 4 (SOC457).

(84) In its response, Ofwat has reiterated its position that "*[c]ompanies with high levels of gearing have potentially lower levels of financial resilience.*"[55] However, in 2017 Ofwat stated that: *"in terms of risks to customers from securitised structures, previous work undertaken by PWC for Ofwat in 2013 found evidence that* ***securitised structures were viable and sustainable over the longer term and did not necessarily present a higher risk for customers****.*"[56] Ofwat had added that: "*Should there be any evidence that securitised companies were less resilient than more traditionally geared companies then we would be able to use the powers available to us to intervene to protect customers.*"[57] However, so far, no such evidence has been forthcoming.

(85) In a similar vein, Ofwat now denies that any benefits arise out of higher gearing and contends that the "*lower tax allowances should not be seen as a direct benefit against which the [Mechanism] should be assessed.*"[58] However, it previously observed that: "*there is a direct financial benefit to customers from highly geared arrangements. This is because we currently set tax allowances on the basis of a company's actual level of gearing, so customers benefit from the lower tax costs from highly geared companies.*"[59] Ofwat also noted that "*there may also be indirect benefits to customers from investors in highly geared structures putting company management under increased scrutiny, promoting more efficient delivery of services by companies and so resulting in lower customer bills*".[60]

(86) Ofwat had also previously found that introduction of a sharing mechanism: *"[m]ight be seen as reducing cost of equity below efficient level for highly geared structures*"; *"[c]ould blur responsibility for who bears costs of operating or modifying a securitised structure, as customers have shared benefit*"; and, would "*introduce additional complexity into the regulatory framework" and* "*could be perceived as increasing regulatory uncertainty"*.[61]

(87) Yet, despite Ofwat's *volte face* and the compelling nature of Ofwat's own case for why the Mechanism is not justified, Ofwat has offered no justification for why its factual findings have changed so significantly.

## 4 Response fails to meet any appropriate regulatory standard to justify introduction of the Mechanism

(88) In a similar vein, Ofwat's response fails, on its own terms, to meet a sufficient regulatory standard to justify the introduction of the Mechanism.

(89) To justify a change in long-held policy that companies should be free to choose their own capital structures, Ofwat's does not conclude that the key assumptions underpinning the Mechanism are sufficiently likely to justify intervention. Instead, Ofwat speculates that its assumptions may or may not be correct. For example:

(i) Ofwat observes that "***some commentators*** *have suggested that the failure of one or more highly geared company* ***could impact*** *on investor sentiment for the sector, which* ***could manifest*** *in a higher cost of capital and higher bills for customers*" and that "*it* ***could be argued*** *that [its] policy on capital structure has been inefficient*."[62]

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55 Response on Risk and Return, para. 5.10.

56 Ofwat PR19 Cost of Debt Consultation, page 20 (SOC473).

57 Ofwat PR19 Cost of Debt Consultation, page 19 (SOC473).

58 Response on Risk and Return, para. 5.23.

59 Ofwat PR19 Cost of Debt Consultation, page 19 (SOC473).

60 Ofwat PR19 Cost of Debt Consultation, page 19 (SOC473).

61 Ofwat PR19 Cost of Debt Consultation, page 20 (SOC473).

62 Response on Risk and Return, pages 140-141.

(ii) In relation to potential risk to customers and/or taxpayers, Ofwat reiterates that *"[c]ompanies with high levels of gearing have **potentially lower levels** of financial resilience."*[63], and posits that higher levels of gearing mean that "***it is possible** that service to customers and wider society is put at risk*".[64]

(iii) When considering the potential transfer of risk, Ofwat argues that "*where risks are passed to customers, these costs **can be large***" and that "*long term planning and investment **can be disrupted***" during special administration and therefore "*even if customers do not bear much of the risk of immediate business failure, **some costs may ultimately fall on customers***".[65]

(iv) Europe Economics' accompanying paper similarly draws conclusions such as "*we note that **some potential** benefits to firms **(albeit not all) might** accrue from the ways high gearing leaves firms more exposed to certain large cost shocks' and 'benefits sharing in the case of high gearing **could also be an important mechanism** to deter firms from artificially high gearing."*[66] Similarly, when considering whether there is, in fact, a benefit to shareholders from higher levels of gearing, Europe Economics acknowledges that the relevance of Modigliani-Miller theorem and other corporate finance theories but goes on to state: *"We do not need to choose which of those theories, if any, is correct for us to conclude that there may well be benefits to certain firms in choosing a particular level or range of gearing."*[67]

(90) Ofwat, in short, has failed both to rebut the challenges to the Mechanism and make its case for introduction of the Mechanism. Indeed, Anglian observes that Europe Economics does not even seem convinced that the Mechanism would be particularly likely to address the alleged customer harm identified by Ofwat, which would render the Mechanism a bad solution to a non-existent problem.

## 5 No customer harm from Anglian's Aligned Debt Programme

(91) More specifically, Ofwat has failed to provide any justification for its assumption that there is an inherently increased risk from water companies employing more highly geared structures irrespective of the protections nor provided any basis to justify its assumption that a gearing level above 70% exposes customers to *"unacceptable"* levels of risk, thereto, justifying introduction of the Mechanism.

### 5.1 No basis for treating Aligned Companies on same basis as unsecured structures

(92) Ofwat largely ignores Anglian's submissions in Chapter K: Gearing outperformance sharing mechanism of its Statement of Case and Aligned Debt Programmes Paper[68] and seemingly dismisses the issue in short order on the grounds that the covenants contained in the programmes:

(i) "*are not perfect"* and thus, presumably, do not offer a sufficient level of protection for bondholders and, ultimately customers; and

(ii) *"remain under the control of companies and their investors"*, and thus presumably expose customers to the risk that they may be revoked.[69]

(93) The absence of perfection is not, however, an appropriate standard for assessing regulatory intervention. The salient question is rather whether the covenants provide sufficient protection such that

[63] Response on Risk and Return, para. 5.10.

[64] Response on Risk and Return, para. 5.10.

[65] Response on Risk and Return, para. 5.21.

[66] Europe Economics Report, page 9, submitted by Ofwat as annex RO33 to the Response on Risk and Return.

[67] Europe Economics Report, page 9, submitted by Ofwat as annex RO33 to the Response on Risk and Return.

[68] Aligned Debt Programmes Paper (SOC446).

[69] Response on Risk and Return, para. 5.19.

the risk profile of companies with Aligned Debt Programmes is similar to companies with lower levels of gearing. Ofwat has not, however, even engaged with Anglian's submissions on the ring-fencing and credit enhancing features of the programmes which de-risk companies from operational, regulatory, financial and administrative perspectives.[70] Indeed, Ofwat's statement that such protections may not be "*perfect*" seemingly implies that they recognise that there could indeed be significant protection from such covenants.

(94) Equally, Ofwat dismissal of the efficacy of the protective covenants on the grounds that they are under the control of the companies and their investors is not credible and shows a lack of insight into debt investors' incentives. An amendment of Anglian's Aligned Debt Programme would require the consent of the majority of the bondholders who would have no incentive to do so. They would merely be exposing themselves to greater risks without any counterbalancing consideration. Furthermore, Ofwat's argument rests on the flawed assumptions that the interests of bondholders are at odds with the customers. This is not the case: bondholders and customers have aligned interests in several ways, not least in ensuring that the company does not default.

### 5.2 No theoretical or empirical basis for Mechanism's 70% gearing threshold

(95) Ofwat has also failed to provide any further theoretical or empirical basis to support its assumption that a gearing above 70% gives rise to "unacceptable" levels of risk for customers. The only additional evidence adduced is a selective quotation of the DTI Report which outlines the potential risk that regulated companies could "*game*" the regulatory framework *"by gearing up as higher debt ratios are associated with greater levels of financial distress"*.[71]

(96) The Response on Risk and Return and the DTI Report cited both fail to address the regulatory challenge: what means that gearing at 60% does not pose any material risk for customers whereas gearing at 70% is so unacceptable as to justify a fundamental change in regulatory policy? The DTI Report does not address the point. And Ofwat's statement that gearing *"materially above"*[72] the notional gearing level is problematic is simply that: a statement with no empirical underpinnings. As Anglian has demonstrated in Chapter K: Gearing outperformance sharing mechanism of its Statement of Case,[73] gearing at 70% does not necessarily expose customers to *any* material increase in risk particularly where companies employ Aligned Debt Programmes. Nothing which Ofwat provided in its response called into question that conclusion.

(97) Furthermore, Ofwat and the CC have already dealt with the concern identified in the DTI Report by determining financeability based on the notional company rather than the actual company. In *Bristol (2010)*, the CC agreed with Ofwat that it was appropriate to base financeability on a notional company rather than the actual company because: *"[a] system that took a company 'as is', without regard to its efficiency, past dividend policy, or gearing … would not be able to provide financial incentives … to improve … performance."*[74] Applying this principle, the CC went on to hold that Bristol Water's use of *"increased gearing"* to release equity for shareholders was a reason why it was appropriate that companies decide their own financial structure at their own risk.[75] In short, the regulatory framework adapted long ago to address the concern raised by the DTI Report. Indeed, it is telling that the best support Ofwat can adduce in favour of the Mechanism is a sixteen-year old paper.

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[70] *See* Aligned Debt Programmes Paper (SOC446); Moody's Covenanted Financing Structures Help Mitigate Growing Risks (SOC137).

[71] DTI Report, page 8.

[72] Response on Risk and Return, para. 5.22.

[73] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3.

[74] *Bristol (2010)*, para. 2.25 (SOC345).

[75] *Bristol (2010)*, para. 10.22 (SOC345).

## 6 There is no “benefit” for shareholders from higher gearing

(98) Equally, Ofwat’s contention that there is a “*transfer of risk*” from shareholders to customers rendering the Mechanism compatible with the financeability duty is not tenable.[76]

(99) The gist of Ofwat’s argument is that “higher” levels of gearing result in “risk transfers” from shareholders to customers and / or taxpayers. The Response on Risk and Return contends that these transfers benefit shareholders who do not bear all of the risk, notably from default, that would otherwise fall on them. Ofwat is thus alleging a problem of moral hazard where companies can increase gearing safe in the knowledge that customers and taxpayers will bear (some) of the risk in the event of financial distress. To support its case, Ofwat makes two broad points which draw on the accompanying Europe Economics Report and the DTI Report:

(i) Ofwat contends that “*risk transfer*” occurs because an increase in gearing results in an increased *“probability of default”* which, in turn, increases the *"risk of to consumers of service interruption and/ or increase pressure from bondholders to restrict future cash outlays"*. Furthermore, an increased probability of default may also *"increase the perceived likelihood of companies triggering re-opening mechanisms"*.[77]

(ii) Ofwat also contends that where these risks are passed to customers *"[e]xperience indicates that where risks are passed to customers, these costs can be large".*[78] In support it cites that the overall cost of the government's decision to put Railtrack into administration was £11-14 billion; and that the failure and entry into administration of Metronet in 2007 led to a direct loss to the taxpayer of £170-£410 million.[79]

(100) In the first instance, Ofwat seems to have misconstrued the concept of “*risk transfer*” given that the two examples cited illustrate the effects of potential default on customers, rather than a "*transfer*" of risk from the shareholders to customers. The shareholders (and potentially debt holders) still face the same consequences in the event of default. Ofwat’s misconception is well-illustrated by the selection of Railtrack and Metronet which are, in fact, good examples of cases where shareholders bore the costs associated with default. The NAO estimates that investors lost £540 million in the collapse of Metronet while Railtrack’s shareholders famously challenged the nationalisation of Railtrack.[80][81] Put simply, the mere fact that customers and suppliers stand to lose out in the event of default does not “*transfer risk*” from shareholders to customers. Consistent with Modigliani-Miller theorem, the question is instead whether there is moral hazard such that shareholders have permitted higher levels of gearing safe in the knowledge that they would not bear (all of) the increased risk. However, Ofwat adduces no evidence to support this position.

(101) Furthermore, Ofwat’s continues to contradict established theory on the effect on capital structures on overall cost of capital as well as ignore alternative explanations for the use of more highly geared structures.

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[76] Response on Risk and Return, para. 5.16.

[77] DTI Report, page 11; Response on Risk and Return, para. 5.16.

[78] Response on Risk and Return, para. 5.21.

[79] Response on Risk and Return, footnote 336.

[80] NAO, The Failure of Metronet, page 41 available at https://www.nao.org.uk/wp-content/uploads/2009/06/0809512.pdf.

[81] House of Commons, Railways: Railtrack administration and the private shareholders (August 2010) available at https://researchbriefings.files.parliament.uk/documents/SN01076/SN01076.pdf. Railtrack had about 256,000 shareholders holding c.520 million shares. Shareholders claimed that they were due 360p per share but the final package after special administration saw them receive c.260p per share. This was subject to an unsuccessful appeal.

(102) Indeed, the CMA's recent preliminary findings for the NATS price control recognises that there is a potential U-relationship where cost of capital actually **increases** above the optimum level.[82] If this holds, companies with more highly geared structures may thus have *higher* costs of capital than would otherwise be the case. Given the weight of evidence and existing theory against Ofwat's approach, Europe Economics' position that Ofwat need not "*choose which of those theories, if any, is correct for us to conclude that there may well be benefits to certain firms in choosing a particular level or range of gearing"* is simply not a credible regulatory position.[83]

(103) Finally, Ofwat relies on the DTI Report that states that companies possibly increase gearing to "*game*" the system and mitigate the consequences of unfavourable regulation. As set out above, Ofwat has addressed this risk by setting price determinations on the basis of a notional company for this very reason.[84] There is, furthermore, no example of Ofwat re-opening its price control to address financeability issues and, as the CC made clear in *Bristol (2010)*, it falls on a water company's shareholders to address any such risks.

## 7 There remain customer benefits from Aligned Companies

(104) Ofwat has also erred in its dismissal of the benefits that accrue to customers of Aligned Companies. The Response on Risk and Return dismisses "tax" benefits and those accruing from the enhanced protections of Aligned Debt Programmes on the following basis:

(i) the tax advantages are limited and, in any case, are not relevant because, pursuant to the Green Book, tax is a transfer payment where *"costs are set off exactly by benefits".*

(ii) the additional protections offered by companies with Aligned Debt Programmes cannot be presented as a customer benefit when *"they are really mitigations to risks associated with different structures".* [85]

(105) Addressing the benefits from Ofwat's tax sharing mechanism first, Ofwat has misconstrued the nature of the benefit and has erred in ruling it out on the basis of the Green Book. The customer benefit stems from Ofwat's tax shield sharing mechanism – which applies to companies with more highly geared structures – not the tax shield itself (the advantage of which accrues solely to the companies themselves). Ofwat's primary duty in this regard is to further the customers objective. So, in this context, Ofwat should consider this benefit accruing from the tax sharing mechanism when this indeed results in lower costs and in turn in lower customer bills.

(106) Turning to the benefits from the additional contractual protections, Ofwat has similarly erred in dismissing the additional protections offered by Aligned Companies as merely "*mitigations to risks associated with different structures*".[86] In particular, as described in detail in Chapter K: Gearing outperformance sharing mechanism of Anglian's Statement of Case and the Aligned Debt Programme Paper,[87] Aligned Companies have various protective features and credit enhancement measures that have delivered significant benefits for customers, in particular driving regulatory innovations and providing for increased financial resilience. In practice, these features transfer the risk from lenders and customers to shareholders.

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[82] Provisional Findings in *NATS (2020)* Appendix 4 (SOC440).

[83] Europe Economics Report, page 13, submitted by Ofwat as annex RO33 to the Response on Risk and Return.

[84] Ofwat, Back in Balance Position Paper, page 49 (SOC465); Financing Networks paper, page 63 (SOC477).

[85] Response on Risk and Return, para. 5.23.

[86] Response on Risk and Return, para. 5.24.

[87] Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism, Section 3; Aligned Debt Programmes Paper (SOC446).

(107) Nonetheless, in the Response on Risk and Return, Ofwat contends that these features "*are designed to protect lenders"*[88] only failing in that way to recognise that in reality the interests of lenders and customers are highly aligned in several ways – the most important being that the company does not default. This is in fact achieved through the securitisation arrangements which de-risk Aligned Companies from an operational, regulatory, financial and administrative perspective compared to a company with lower levels of Corporate Debt.

### 8 Ofwat has failed to provide any meaningful justification for why introduction of the Mechanism is compatible with its procedural duties

(108) Finally, while Anglian does not consider that the Mechanism is justifiable for the reasons set out in Chapter K: Gearing outperformance sharing mechanism of its Statement of Case and above, it also notes that Ofwat's contention that the Mechanism satisfies Ofwat's procedural duties is likewise flawed and untenable.

(109) While the Response on Risk and Return acknowledges that the introduction of the Mechanism represents "*a change from the established set of regulatory incentives affecting company gearing decisions*", it contends that the glidepath satisfies its procedural duties as it *"provides companies with significant time to respond to the mechanism to mitigate the risk of any sharing payments."*[89] In sum, Ofwat acknowledges that the Mechanism represents a significant regulatory change and contends that the glidepath discharges the need to mitigate the introduction of the Mechanism (not least because the public consultation for the Mechanism was held four months later than the adoption of the PR19 Final Methodology).

(110) The glidepath does not, however, mitigate the sudden and insufficiently signposted introduction of the Mechanism for Anglian.[90] As a starting point, the gearing threshold for the glidepath, 74%, is below Anglian's current gearing of 78%. Anglian would thus have to incur significant cost to even meet the starting threshold. Furthermore, to satisfy the glidepath Anglian would incur break costs (i.e. a "make whole" payment for fixed rate bonds or debt, and a "make to market" costs for swaps), which are exorbitant in the current low interest rate environment. Accordingly, to say the obvious, the glidepath does not account for the impracticality and disproportionate costs that Anglian will have to incur.

## Part I.4: Reply on Dividends

### 1 Overview

(i) In its Response on Risk and Return, and its presentation to the CMA, Ofwat has sought to portray Anglian's historic dividends as excessive and used this to suggest that Anglian's aims for PR19 are not to promote investment to benefit customers and the environment, but rather to fund future dividends. This section shows that Ofwat's claims have no basis.

In particular:

(ii) Ofwat's claim of Anglian's excessive dividends is based on a mischaracterisation of Anglian's true position.

[88] Response on Risk and Return, para. 5.24.

[89] Response on Risk and Return, paras.5.6 and 5.9.

[90] *NIE (2014)*, para. 13.191, (SOC424); *Bristol (2015)*, para. 8.31 (SOC275).

| | |
|---|---|
| (iii) | Ofwat has failed to distinguish between inter-company payments and actual dividends paid to investors. |
| (iv) | Anglian's actual dividend payments over the last 10 years are in line with Ofwat's allowance and reflect the industry average. |
| (v) | Anglian has taken measures to improve transparency of its financing group, and Anglian's Board has approved a business plan that pays no dividends to shareholders over AMP7. |
| (vi) | KPMG has also undertaken its own review of Anglian's dividends, which is included as an annex to Anglian's Reply.[91] KPMG's assessment supports the conclusions of Anglian's review. |

## 2 Ofwat wrongly claims that Anglian has paid excessive dividends

(111) Ofwat has highlighted "*high gearing, high dividends and legitimacy issues*" as one of the key justifications for its interventions outlined in Ofwat's Back in Balance April 2018 consultation.[92] This consultation came mid-way through the PR19 price control and after the Final Methodology had been published. Following this consultation, rating agencies downgraded their assessment of "*stability and predictability*" of the regulatory regime.[93]

(112) In the Response on Risk and Return, and at various points during the PR19 process, Ofwat has misrepresented the actual dividends and dividend yield to shareholders of water companies, including those of Anglian. Most recently, at its presentation to the CMA on 20 May 2020, Ofwat claimed that Anglian: "*has paid extraordinarily high dividends over the last 10 years, with an average gross annual nominal dividend return on actual equity of around 35%. This is well in excess of any other company in the sector or a return commensurate with operating a low risk utility business. The allowed return on equity was 7.1% and 5.65% over the same period*".[94]

(113) Ofwat also asserted during its presentation to the CMA that Anglian's dividend yield was 25% average over ten years even after removing the intercompany loan and that this was 500% higher than may be expected. Ofwat produces similar figures in its Response on Risk and Return. These statements do not reflect the economic reality.

(114) It is therefore important for the CMA's consideration of the issues in relation to the disputed Back in Balance proposals, and indeed the redetermination as a whole, that Ofwat's mischaracterisation is corrected.

(115) This **Part I.4: Reply on Dividends** provides the facts around dividends, going back to 2008-09, and shows the correct position in comparison to that presented by Ofwat. It goes on to show how, on a corrected dividend series basis, Anglian's dividends compare to Ofwat's price determination assumptions and to other water companies.

[91] KPMG Analysis of dividends (REP47).

[92] Ofwat Back in Balance April Consultation (SOC464).

[93] See Moody's Proposals Undermine Stability and Predictability of the Regime, pages 4 to 5 (SOC457); Fitch Revises Outlook on 3 UK Water Holding Companies (July 2018) (SOC459).

[94] Ofwat presentation to the CMA of its Response to Statements of Case, (20 May 2020).

## 3 The need to distinguish between inter-company payments and genuine economic dividends

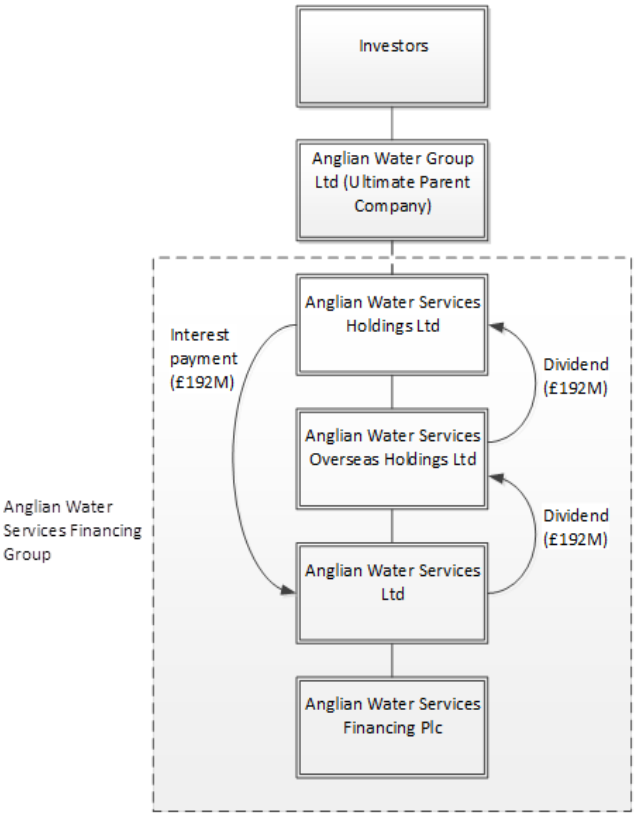
(116) Ofwat has characterised inter-company payments (accounting adjustments) as dividends, to conclude that Anglian has paid "*extraordinarily high dividends*" which comprise 35% of dividend return on actual equity. These amounts do not reflect genuine dividends paid out to investors. As explained below, the majority of cash that forms the claimed dividend was not made available to the shareholders in Anglian Water Group Ltd ("**AWG**"), the ultimate parent company.

(117) Rather, these accounting payments were paid within, and remain within, the Anglian Water Services Financing Group (the "**Financing Group**") as set out in AWS audited statutory accounts and illustrated below in Figure 7. This figure reflects the composition of the group before the removal of Anglian Water Overseas Holdings Limited in March 2018 which is relevant for the understanding of Anglian's past dividend payments.

(118) As explained in its audited statutory accounts, AWS has previously made payments (although they are called dividends in the accounts) each year to an intermediate parent company within the Financing Group, Anglian Water Services Holdings Ltd ("**AWSH**") – these payments were not available for onward distribution to the AWG shareholders. Rather, they enabled AWSH to immediately pay interest on an intercompany loan (equivalent to the payment up) back to AWS. This loan was put in place when Anglian established its ring-fenced Aligned Debt Programme in 2002.[95] In short, this had no economic impact outside of the Financing Group and no money left the group to flow to AWG or its shareholders.

[95] See Anglian's SOC, Chapter K: Gearing outperformance sharing mechanism for details on the benefits arising from the Aligned Debt Programme.

**Figure 7 Structure of the Financing Group**




Source: Anglian

(119) The companies within the Financing Group operate together so that cash within the group is always available to the regulated entity, AWS. Ofwat recognised this in a letter dated 11 April 2002, when it confirmed that it would not treat inter-company loans within the Financing Group as being in breach of the licence conditions around the regulatory ring fence.[96]

(120) To accurately assess the dividend yield to AWG shareholders, therefore, all inter-company dividends that stayed wholly within the Financing Group must be excluded. Anglian has made clear to Ofwat on multiple occasions that the accounting dividends shown in its accounts include these inter-company payments that have no bearing on the economic position of Anglian.

(121) Despite various explanations, Ofwat has continued to misrepresent these figures, sometimes in a public forum such as the Water UK City Conference.

(122) In its externally audited Annual Performance Report, Anglian shows the correct figures for the level of dividends available for distribution to AWG shareholders.

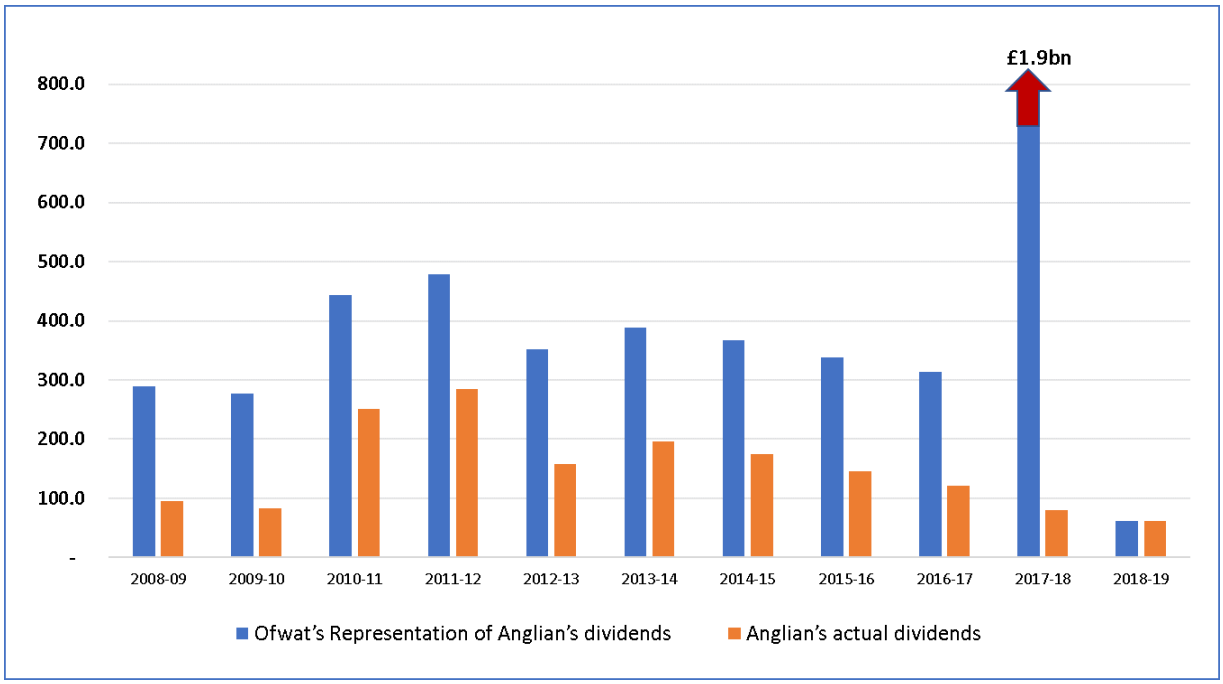
(123) Figure 8 below shows the actual level of dividends available for distribution to AWG shareholders (orange bar) since 2008-09, compared to the figures presented in Ofwat's Response on Risk and Return[97] ("Ofwat's Representation of Anglian's dividends" that form the blue bar in Figure 8). The difference between the blue and orange bars illustrates the £192 million intercompany payments, and a one-off £1.6 billion in 2017-18 to repay the intercompany loan, these amounts did not leave the Financing Group.

[96] Ofwat Project Redbull Consent (11 April 2002) (REP46).

[97] Response on Risk and Return, Figure 2.1

(124) The intercompany loan was repaid in full in 2017/18. This explains why, for 2018/19, Ofwat's representation of Anglian's dividends (blue bar) and the actual dividends (orange bar) are identical.

**Figure 8 Ofwat's Representation of Anglian's dividends versus Anglian's actual dividends**




Source: Anglian analysis

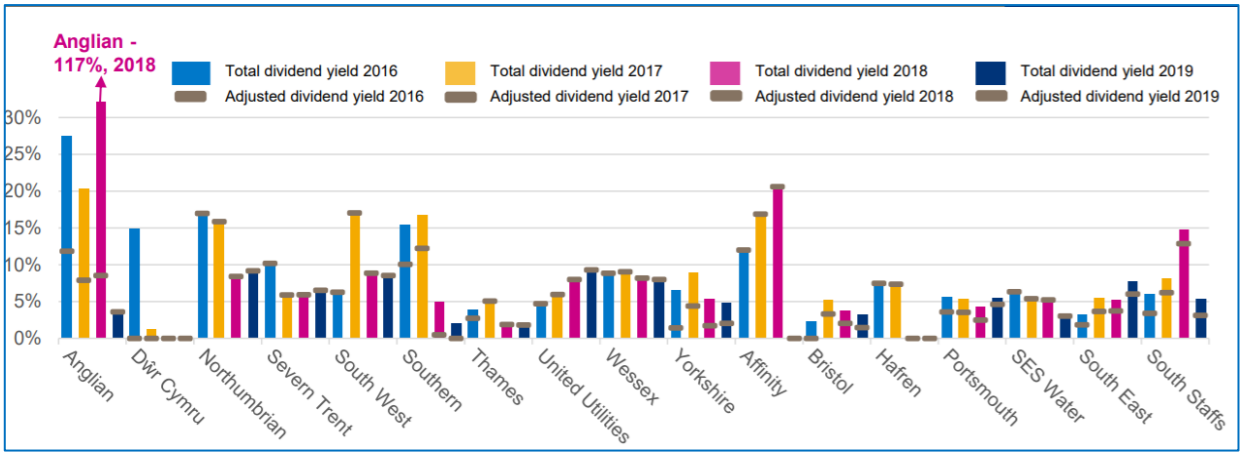
(125) Ofwat has previously suggested the total "gross yield" on Anglian's dividends in 2019 was in excess of 117%. This percentage "gross yield" is obtained by Ofwat including the intercompany payments as explained above. In the same document (see Figure 9 below) Ofwat also published "adjusted yield" which reflects figures published by companies in the Annual Performance Report. Adjusted yield in the Ofwat document identifies inter-company payments separately from the dividend yield reflecting the actual distribution to shareholders. Ofwat noted:

> *"Adjusted appointee dividend is the total appointee dividend less dividends paid to a holding company to enable that company to pay interest on and/or make a repayment on intra-group loan from the appointee. Companies who have paid dividends for such purposes, and therefore show an adjusted dividend yield and total dividend yield in the chart include; Anglian, Bristol, Portsmouth, South East, Southern, South Staffs, Thames and Yorkshire."*[98]

(126) This shows that Ofwat is aware of the difference between the "gross dividend yield" and "adjusted dividend yield", and that the difference is driven by the intercompany payments explained above. In what follows, the actual dividends paid to shareholders are used as the basis for comparing Anglian's dividend policy over time and with other companies in the sector.

[98] Ofwat Monitoring Financial Resilience (January 2020), slide 12 (REP45).

**Figure 9 Dividend yield**




Source: Ofwat Monitoring Financial Resilience (January 2020) (REP45).

## 4 Anglian's actual dividend payments are in line with Ofwat's assumed dividend payments and reflect the industry average

(127) This section provides evidence that disproves Ofwat's claims that Anglian's dividend payments have been excessive. Data is presented for the past decade to show that:

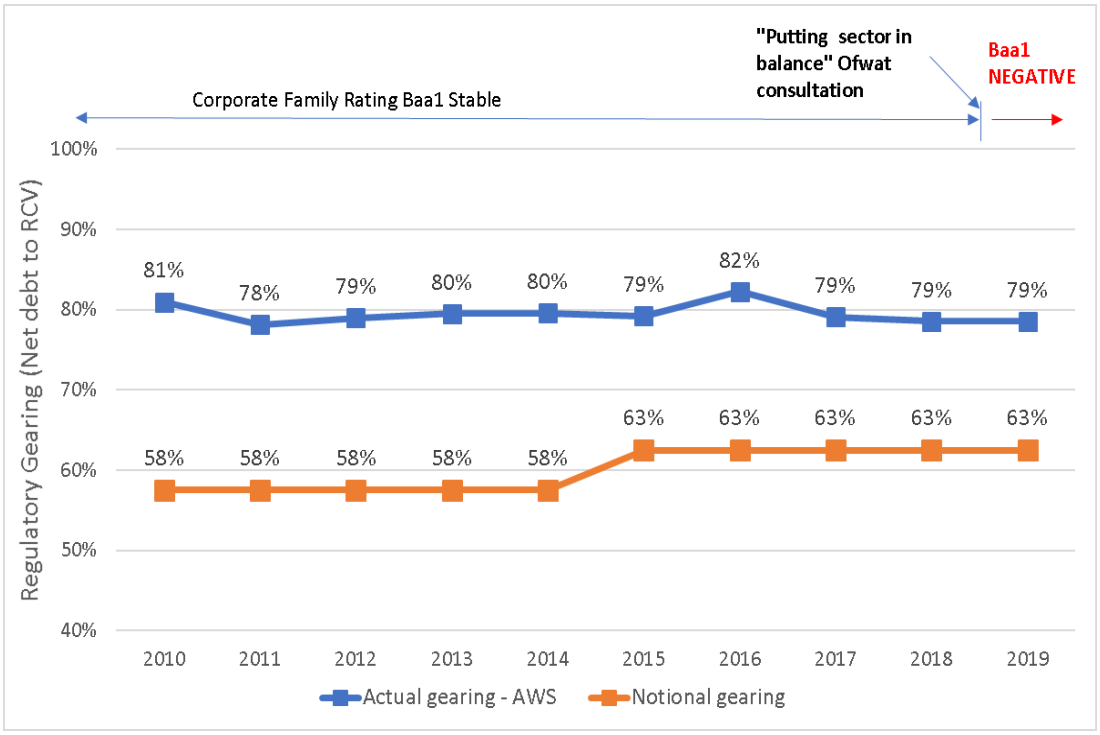
(i) dividend levels are in line with other companies in the sector; and

(ii) actual dividends paid to shareholders are c.6% of the notional equity of Anglian, rather than the c.35% level claimed by Ofwat.

(128) Ofwat has failed to consider that Anglian has delivered strong operational performance over the last decade, which has enabled it to pay dividends to its shareholders, in line with the regulatory system. The actual levels of dividends paid, when adjusted for performance, is close to Ofwat's allowed levels.

(129) Further, Anglian's gearing has remained relatively stable over the last decade (see Figure 10). Anglian has not "*geared up and paid dividends*" as Ofwat suggests. The figure also shows that Anglian's gearing is at a sustainable level, as evidenced by its stable and strong credit rating for over 15 years, including through the Global Financial Crisis.

**Figure 10 Anglian's Gearing and Credit Ratings**




Source: Anglian analysis

(130) Anglian's credit rating was only challenged in 2018, which was a direct result of Ofwat's Back in Balance April 2018 consultation,[99] which rating agencies judged as creating increased regulatory risk and undermining regulatory stability. Moody's reacted by downgrading its assessment of the stability and predictability of the UK water regulatory regime from Aaa to Aa, specifically highlighting the "*increasing risk of future political interference in the design of the regulatory framework*".[100]

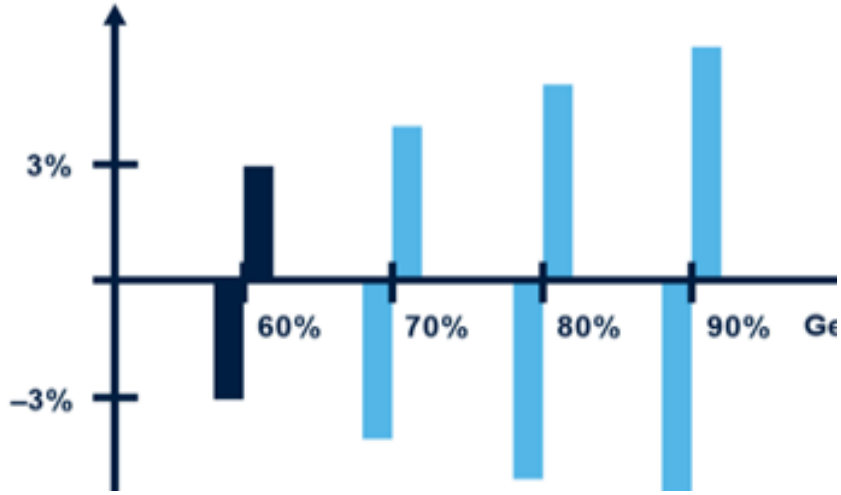
(131) The notional company is the appropriate basis for comparing dividend yields: to make like-for-like comparisons of dividend yields, it is appropriate to normalise for a consistent level of gearing, just as Ofwat does for the calculation and presentation of Return on Regulated Equity (RORE). As Figure 11 illustrates, the level of risk an equity holder bears increases symmetrically with the level of gearing. As gearing increases, the risk to equity holders increases, and therefore the return on equity commensurate with the risk also increases. Ofwat has also been clear that companies can choose their own capital structures. This has resulted in a variety of capital structures across the sector, which Ofwat noted in its May 2020 presentation to the CMA as being a beneficial aspect of the sector's structure.[101]

[99] Ofwat Back in Balance April Consultation (SOC464).

[100] Moody's Proposals Undermine Stability and Predictability of the Regime, pages 4 to 5 (SOC457).

[101] Ofwat presentation to the CMA of its Response to Statements of Case, (20 May 2020).

**Figure 11 Impact of gearing on RoRE**

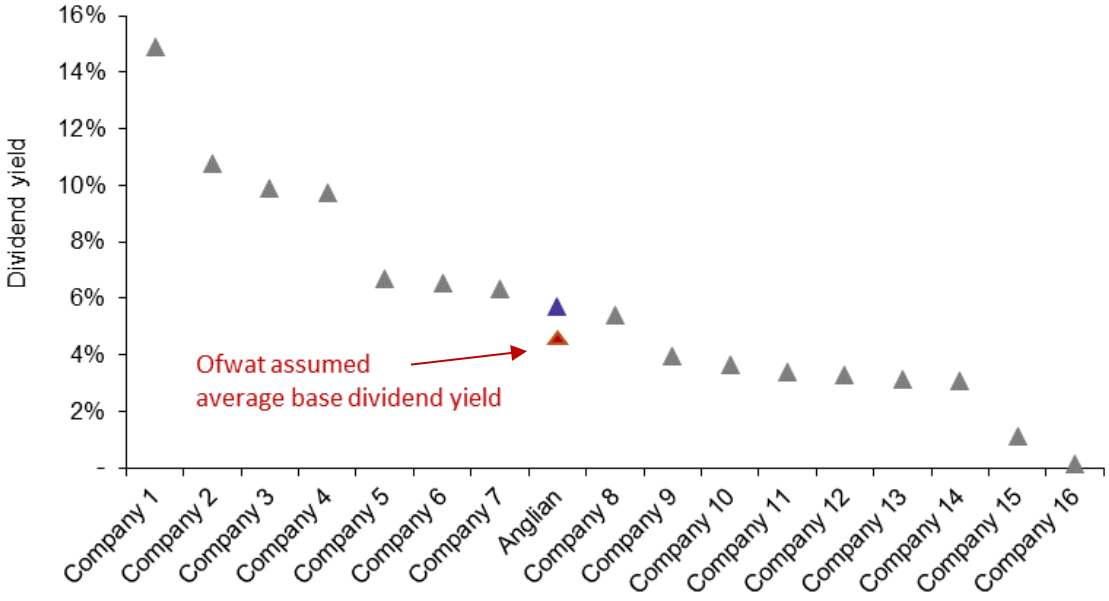



Source: Oxera

(132) Normalised comparisons across the water sector show that Anglian is aligned with industry averages, not an outlier. As seen in Figure 12 below, Anglian's average dividend yield over the last decade has been consistent with the industry average and only slightly higher than the dividend levels allowed by Ofwat in FDs, resulting from strong operational performance.

(133) Figure 12 shows dividend yield on a comparable basis (actual dividends paid/notional equity) across the industry for the period of 2010-2019.

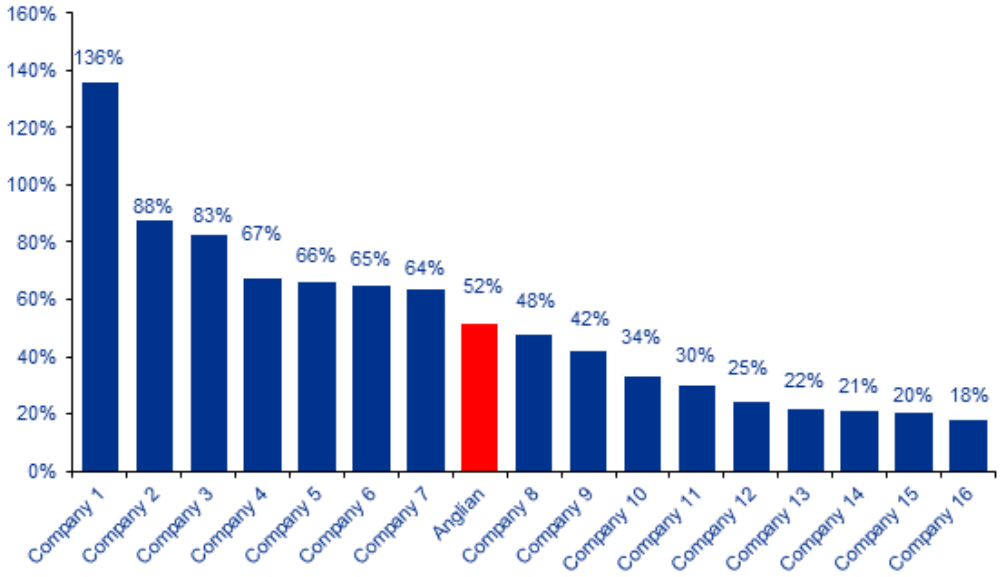
**Figure 12 Average dividend yield (2010-2019)**




Source: Anglian analysis

(134) Another way of comparing against the industry average, is to consider the payout ratio, which is the percentage of earnings that are paid out to shareholders. Figure 13 shows that Anglian has a payout ratio in line with the industry, at around 50% of its earnings.

**Figure 13 Payout ratio (2015-2019)**




Source: Anglian analysis

## 5 Recent developments and projected AMP7 dividends

(135) In order to improve the transparency of the Financing Group and, in line with the commitments given to Ofwat in March 2018, Anglian Water Overseas Holdings Limited was wound up in May 2018 and Anglian Water Services UK Parent Co Ltd was inserted into the Financing Group in its place. Anglian's Board also agreed to take the following steps:

(i) significantly reduce dividends for the rest of AMP6, instead reinvesting a further £165 million in resilience schemes to improve the region's ability to cope with drought and flood risk; and

(ii) repay in full an inter-company loan put in place at the time of securitisation to allow for a simpler presentation of its accounts, particularly in relation to the actual distributions to shareholders in the form of dividends.[102]

(136) Further, for the actual capital structure, Anglian's Board has approved a business plan that pays no dividends to shareholders over AMP7.[103] This contradicts Ofwat's claim that Anglian is seeking an uplift in allowed costs not to deliver investment for the benefit of customers and the environment but to remunerate shareholders.

## 6 Conclusion

(137) Ofwat has mischaracterised Anglian's historical dividends – failing to distinguish between inter-company loan payments and actual dividends paid to shareholders. The reality of a 6% dividend yield on the notional company basis is a far cry from the picture Ofwat is painting which seeks to suggest that shareholders have received dividends of 35% on actual equity and 500% more than would be expected.

(138) Anglian's historical dividends are in line with the industry average and Ofwat's allowances. Dividends have been paid from outperformance achieved as a result of positive management action in areas such

[102] September 2018 Business Plan, page 4 (SOC001).

[103] DD Representation, page 160 (SOC168).

as reduced leakage, reduced incidence of supply interruptions, and Anglian's success in driving down embodied carbon and reducing costs (which has seen a c.60% reduction in embedded carbon achieved during AMP6 from a 2010 baseline). All of these examples create efficiencies which are then shared with customers, and all of them demonstrate the success of incentive-based regulation.

(139) Additionally, when significant achievements have been realised, shareholders have reinvested funds back into the business to deliver additional benefits for customers, with £165 million being reinvested during AMP6.

(140) Finally, the fact that projections within Anglian's Business Plan are for no dividends to be paid during AMP7 contradicts Ofwat's claim that Anglian is seeking an uplift in costs merely to remunerate shareholders.