



A SUMMARY OF OUR
RESPONSE TO OFWAT'S
DRAFT DETERMINATION
FOR PR19
AUGUST 2019

Executive summary

The Board of Wessex Water is profoundly concerned that the draft determination puts in jeopardy the financeability of the business and will not allow it to meet its legal obligations nor its broader responsibilities to the region's economy, the environment and the customers and communities it serves.

Consequently, it is clear that without significant change, the draft determination is not acceptable. Some of the changes are required so that the company receives reasonable and efficient allowances for expenditure and return on capital, while others are about ensuring that we are set stretching but realistic targets with appropriate incentives.

The most material are as follows:

- A return to calculating revenue allowances through "Pay as You Go" rates based on the natural rate derived from your cost assessment. Against the draft determination this would increase outturn revenues by c.£15m a year.
- Additional cost allowances that will close the gap of £238m in the assessment of costs, predominantly through acceptance of our representations on:
 - statutory environmental improvements to local rivers and watercourses where the modelling approach results in a funding shortfall of c.£100m (c.20%)
 - investment so that we can adequately serve new development and growth in our region, in particular requirements to increase wastewater capacity and reduce sewer flooding
 - investment to deliver significant improvements in leakage, and in pollutions and supply interruptions where we are already upper quartile performers
 - funding for partnership working which is essential to deliver public value through environmental resilience at least cost and is widely supported by stakeholder groups.
- Amended target levels and associated incentive rates for water quality events (ERI) and water mains repairs performance commitments. As currently constituted these ODIs will very likely lead to penalties of c.£6m per year.
- The reintroduction of the cashflow mechanism from the final methodology that lessens the short-term financial impact on either customers or the company of any remaining difference in views on efficient costs.
- The removal of the £10m adjustment for the sale price of biogas which is punitive and retrospective in nature and will therefore discourage innovative and market-based approaches.
- A revised approach to the calculation of the cost of capital that is grounded in long-run market evidence and is consistent with other economic parameters in the determination including the likely credit quality of the industry on a forward-looking basis, productivity assumptions and change to input prices.

These changes will be in the interests of customers, the environment and our employees by furthering resilience, including financial resilience and by safeguarding investment in government and customer priorities.

The resilience of the draft determination package

Resilience is a key government priority for the sector and Ofwat has pointed to financial resilience being a key part of that in the long-run interests of customers.

In much of this representation submission we set out, with further supporting evidence, where we believe the assumptions that underpin the draft determination are incorrect and will not leave us able to earn a reasonable return on capital. We understand that ultimately Ofwat will need to make a judgement on these issues which may or may not align precisely with our own.

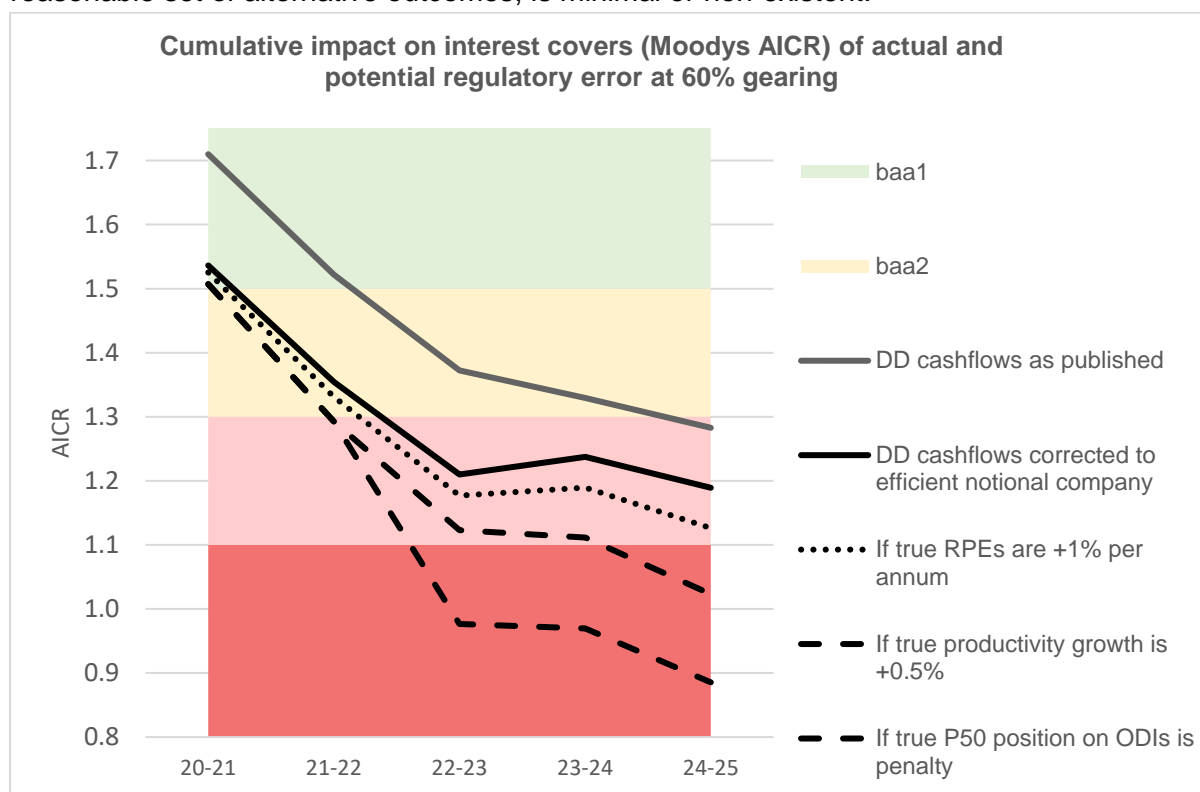
To deliver resilience however Ofwat also needs to consider the likelihood and consequence of the determination's assumptions being wrong, and to consider whether the cost and service package as a whole and the incentive regime surrounding it is likely to allow the company sufficient financial flexibility and headroom. We cannot see evidence of this. Resilience is reduced by the determination to the long-run detriment of customers in the following areas:

- The economic assumptions are not based on a coherent forecast view of the economy – those on productivity and input prices are inconsistent with each other and the view on the cost of capital, so they are very unlikely to occur at the same time – they also deliberately represent a material step-change in the level of stretch from regulatory precedent but without sufficient justification.
- The analysis underpinning the allowed cost of equity takes greater account of short-run market data than previous assessments increasing the risk that it may not reflect long-term economic realities, and again diverges from regulatory precedent despite an absence of sufficiently persuasive evidence to support such a material change.
- The interventions to disallow expenditure above the historical level to improve the required levels of service materially *beyond* the historical level means, all else equal, that the most likely outcome is an ODI penalty or a cost overrun. The draft determination assesses us as efficient on an historical basis and we consistently operate at the upper quartile levels on most key measures of service. Disallowing the expenditure required for further service improvements means that the determination requires a frontier efficiency improvement well above the headline rate of 1.5% per year.
- The interventions, in particular on ODIs, have introduced a skewness to returns that is not considered in the assessment of the cost of capital.
- In the event that the determination assumptions on efficient costs are wrong Wessex will then bear c.64% of any cost overruns, a material increase in the proportion suffered compared to previous determinations.
- Similarly, the negative consequence of an error in the setting of efficient service levels has increased, with the downside potential on ODIs in many cases penalising us above our customers' valuation of the service levels if the determination's view on what an efficient company can achieve is incorrect.

We have modelled the likely impact on key credit metrics against the notional company where we think the draft determination is either:

- demonstrably wrong, for instance in the way it has modelled opex and capex in its determination allowance of revenue (through the PAYG ratio), or
- plausibly wrong in its ex-ante determination assumption.

The chart below shows the level of financial headroom, for Wessex Water, under a very reasonable set of alternative outcomes, is minimal or non-existent.



Notably this is before considering any further cost or revenue shocks that equity should rightly be expected to bear. A substantial equity injection to reduce gearing well below 60% might help resolve these issues, but equity in this case would be bearing the costs of regulatory error not remunerated in the allowed cost of capital. If this pattern is repeated across the industry, that equity injection would need to be systemic.

Amending the balance of assumptions set-out above would improve financial resilience while also allowing sufficient returns, and we set-out in this representation documentation the evidence for making these changes.

The reinstatement of natural PAYG rates and the cashflow mitigation measure from the final methodology are simply changes to the timings of cashflow that Ofwat should make that would help restore financial resilience and therefore benefit all stakeholders. In its final determination Ofwat should also consider the long-term profile of bills post 2025 and consider whether to avoid future increases while delivering greater resilience in the short-term cashflows should be reprofiled.

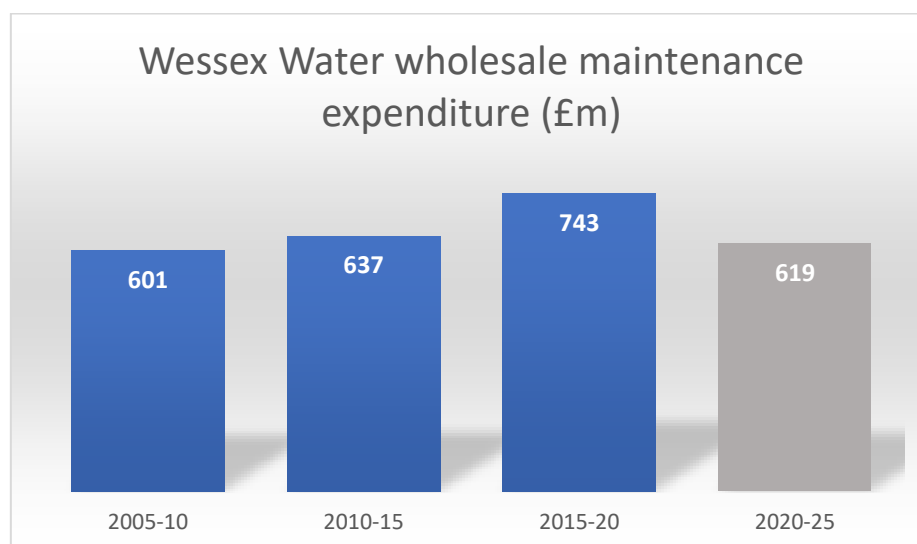
The context of our representations

Ofwat's base cost models show us as historically efficient¹ and we submitted very stretching cost efficiency challenges in our plan, so while the headline expenditure cuts made in the

¹ Totalling historical water wholesale base, wastewater wholesale base and retail expenditure against Ofwat's modelled base allowance shows Wessex as the most efficient WaSC in terms of expenditure

draft determination are not as great for us as for some other companies, they start from a lower base.

The following chart² shows what the draft determination implies for capital maintenance expenditure in comparison to previous periods demonstrating that, on a like-for-like basis, the allowance is less than that the amount spent in 2010-15. Given the step-changes in performance that we are targeting over the same period this is of considerable concern.



The water and sewerage sector is critically important to the health of the economy and the wellbeing of the population. Whilst we recognise that some parts of the water sector have performed poorly in recent years, we are proud of our record and the Board intends the company to continue in a leadership role.

The draft determination requires that the Wessex Water Board makes assurances about the financial resilience of the company under:

- this draft determination, and
- if it is amended for the potential further reductions to the allowed cost of capital that Ofwat has signalled.

For the avoidance of doubt, the Board is not able to provide these assurances. The Board is fully aware of the company's licence duties and obligations, both those that exist now and those proposed. As a responsible Board it is considering all the options it has available to it to secure financial resilience and is making all appropriate preparations, including the making of the representations set-out in this response, which if accepted will allow the Board to make such an assurance.

² This chart is presented in 2017-18 prices CPIH deflated using the indexation method applied by Ofwat. It calculates base costs allowed in the draft determination are the "base plus" allowance – implicit allowances for growth items. It assumes that the difference in allowed costs compared to submitted is then applied pro rata to opex and maintenance.

In summary

As a responsible company committed to adding wider public value, we have set out the changes that are required to our determination.

In our response to your initial draft methodology for PR19 the Board highlighted the risk of damage to public trust and confidence if the industry is deemed to be predominantly failing its targets each year. The wider context of improving performance and reducing bills will not be readily understood and the annual financial penalties that ensue may ultimately lead to a downward spiral in actual performance and reduced resilience. We considered that your final methodology had gone some way to addressing our concerns in this regard, but in its application we see far greater risk for the sector moving forwards.

We would of course be happy to provide additional information, if requested, before the final determination date of 11 December.

The structure of our representations

The remainder of this document sets out at a high level our concerns with the draft determination package and our reasoning.

For clarity we then include 42 individual representation documents where we set-out in detail and evidence the specific changes we request you make to your final determination, explaining in each case why a change is in customers' interests.

In a separate document we set out our responses to the actions required from us as set out in the determination.

We hope that a final determination will set-out clearly a response to each of these representations and, in the event that any are not accepted, gives the reasoning and evidence used in making that judgement.

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In addition to this document we are also submitting the following items:

- A covering letter from our chair and managing director to the Ofwat chief executive.
- 42 separate representation documents (with associated appendices) which set out the specific changes required along with the rationale.
- Updated data tables and an accompanying commentary.

We also provide:

- A document detailing our response to Ofwat's draft determination actions.
- A series of new data tables OC1-OC4 and RP1–RP4 that Ofwat has requested us to complete with associated commentary where required.
- A submission of developer services information

Note on financial values contained within this document

For consistency with the financial values stated in our original business plan that was submitted in September 2018 and Ofwat's draft determination of July 2019 the financial values in this document are stated in average year 2017-18 prices unless otherwise stated.

1. Financial resilience, risk and return

1.1 Summary

In its totality the draft determination:

- does not deliver reasonable returns on capital, and
- does not take sufficient account of financial resilience.

In later sections of this document we provide evidence on why the outcomes we are required to meet and the costs allowed to deliver them in the determination are unlikely to lead to an efficient company earning its allowed cost of capital. We also explain the changes that are needed to correct this.

In this section we focus on explaining how the determination package as a whole does not take sufficient account of financial resilience, and that as a consequence is contrary to the resilience objective.

We then explain the specific changes that we require that would mitigate this.

The key changes required that are explained in this section are:

- A return to calculating revenue allowances through PAYG rates based on the “natural” rate derived from your cost assessment. Increasing outturn revenues by c.£15m a year.
- The reintroduction of the cashflow mechanism from your final methodology that lessens the short-term financial impact on either customers or the company of any remaining difference in views on efficient costs.
- A revised approach to the calculation of the cost of capital that is more grounded in long-run market evidence and is consistent with other economic parameters in the determination including
 - the likely credit quality of the industry on a forward-looking basis,
 - productivity assumptions and change to input prices
 - the negative skewed distribution of likely returns

We also provide a further representation on capital allowances so that in the event that you continue to make cuts to our allowed totex that you can reflect this more accurately in reduced capital allowances.

1.2 Why the determination does not deliver financial resilience

To deliver resilience Ofwat should consider the likelihood and consequence if the determination’s ex ante assumptions are wrong and then consider whether the determination as a whole, including the cost and service package and the incentive regime surrounding them, is likely to allow the company sufficient financial flexibility and headroom. We cannot see any evidence that this has been done and this is to the long-run detriment of customers.

The following sections show how resilience is reduced.

1.2.1 The determination's economic assumptions are not based on a coherent forecast view of the economy

The determination reduces the resilience of the sector because, in practice, its forecast values for productivity, input prices and cost of capital (WACC) are very unlikely to occur concurrently.

Ofwat's determination should assume a WACC at a level where it can be confident that it continues to meet its statutory duties between 2020 and 2025 when combined with each of the other economic parameters in its determination, including productivity growth and cost inflation. This requires the views taken on each of these parameters to be consistent and to take into account the relationships between them as do independent bodies such as the OBR when they derive their economic forecasts.

We explained in our response to the IAP that at that stage the assumptions on productivity and input prices were inconsistent with the early view on the cost of capital and we provided a report from Economic Insight on this subject.

While the draft determination has included a real price effect of c.CPIH+0.4% per annum into its cost allowances we continue to believe that this is an insufficiently high value given the productivity assumption of CPIH-1.5%. In effect this is suggesting that input prices will follow the path of a low growth economy while productivity improvements will follow the path of a high-growth economy. The net frontier shift of CPIH-1.1% deliberately represents a material step-change in the level of stretch from regulatory precedent but without sufficient justification that this is a reasonable level for an efficient company to achieve. We have provided updated evidence on our view of the likely RPEs in 'Securing cost efficiency' as part of representation C21.

At the same time draft determination's analysis of the WACC continues to retain a greater focus than in previous price reviews on short-run market data to derive its estimates, grounding it in a period of low productivity growth. It also makes assumptions on debt costs around a continued debt halo that are not consistent with the likely change in credit quality of the sector. Analysis shows that eight companies, including Wessex, under its notional geared structure have ratios consistent with a Baa2 rating which moves the relative position of the sector downwards compared to the index. The final determination risks exacerbating this, if a mechanistic approach is taken to adjusting the WACC for short-run point estimates leading to a further reduction.

1.2.2 The analysis underpinning the cost of equity through the PR19 process has not been consistent. The draft determination takes greater account of short-run market data than previous price reviews increasing the risk that it may not reflect long-term economic realities. It diverges from regulatory precedent despite an absence of evidence to support such a material change.

The comparatively low returns required by investors in the water sector are reflective of the stable regulatory environment, in particular the stable approach to the cost of capital applied by sector regulators and the CMA, not least as potential investors are having to consider time horizons of up to 30 years. We are concerned that, through the PR19 process, Ofwat has switched its fundamental approach to assessing the cost of equity having focused initially on a forward-looking assessment based on the Dividend Growth Model. The draft

determination discards that approach (which is now suggesting a higher value) and places weight on approaches that were previously discounted. Whichever is the preferable method we do not think that it is of benefit to customers in the long-run that there is such uncertainty in the calculation of this key parameter.

In this context it is important in our view, and in the interests of customers, to return to full consideration of the long-run (ex-post) view as the primary means of assessing total market returns. And we see here that the evidence on ex-post market returns has barely moved since Ofwat last assessed its cost of capital allowance at PR14. The one area where new information may be available relates to alternative datasets for long-term inflation. Given that these inflation datasets all have potential weaknesses we do not consider that there is a sound basis to apply the dataset that results in a material reduction compared to PR14.

1.2.3 *Interventions to disallow expenditure above the historical level to improve levels of service materially beyond the historical level mean, all else equal, that the most likely outcome for an efficient company is an ODI penalty or a cost overrun.*

In our response to the IAP, we explained why mathematically there was not a convincing case that the cost assessment modelling approach gave sufficient allowance for stretching future performance levels above the current upper quartile

Under the base cost modelling approach we continue overall to be the most efficient company on an historical basis. We calculate (somewhat conservatively) that the lack of additional cost allowance for delivering improvements to leakage, supply interruptions, pollutions, water quality events and mains repairs is the equivalent of an additional c.2.2% per year productivity challenge on top of the 1.5% baked into cost allowances. We discuss this further in 'Securing cost efficiency'.

Given the economic context this is unlikely to be achievable so we must conclude that the most likely outcome for an efficient company is either that the efficient company will suffer ODI penalties or it will suffer severe cost overruns.

1.2.4 *The interventions, in particular on ODIs, have introduced a skewness to returns that is not considered in the assessment of the cost of capital.*

A new analysis from Economic Insight (EI) and provided as an appendix to representation R3 evidences that Ofwat's interventions to ODIs mean that returns are likely to be negatively skewed and explains that the standard CAPM calculation does not account for this.

Ofwat has suggested that the range of ODI returns available was skewed to the downside at PR14 – however this was presented on a different additive basis which would tend to halve the quantum of the downwards skew relative to the more accurate probabilistic basis now used. Moreover, we do not recognise the analysis of ODIs published in the draft determination for Wessex and we have provided an updated version of this as part of our submission. This shows that (including a presumption for the purposes of this calculation only that cost allowances are sufficient) the range of equity returns from ODIs in our draft determination is +0.2% to -1.3%. This compares to a PR14 value of on a like for like basis of approximately +0.4% to -0.7%.

The analysis from EI shows that the interventions Ofwat has made in introducing a negative skew alone should add 5 to 7 basis points to the cost of equity. This is in addition to any additional return required should ODIs and other elements of the determination package mean that expected returns for an efficient company are considered to be negative.

1.2.5 *The likely negative consequences for the efficient company have become more severe, in the event that the determination assumptions are wrong.*

Under the draft determination, Wessex will then bear c.64% of any cost overruns, a material increase in the proportion suffered compared to previous determinations. The vast majority of the difference in the view on costs is on capex items. In PR14 the proportion of any cost overrun was c.50%. We note that the draft determination appears to have used our estimates on the potential for totex underperformance but not adjusted the downside for:

- cost adjustment claims that it has disallowed
- the higher frontier shift assumption it has imposed
- the implied totex penalty sharing rates that result.

In the event that the final determination continues to disallow expenditure we request that, for transparency, that the necessary changes in the RORE calculations and the reasoning for them are made and published.

The negative consequence of an error in the determination has also increased on performance commitments, with the downside potential on ODIs in many cases penalising us above our customer's valuation of the service levels if the determination's view on what an efficient company can achieve is incorrect. This includes the proposed ODIs on supply interruptions, mains repairs, sewer collapses and unplanned outage.

The analysis above shows that our negative ODI potential has almost doubled when compared to PR14. Adjusting for the lack of cost allowances for greater stretch in service improvements at PR19 would increase the downside again.

1.2.6 *A failure to reflect the natural PAYG rates in our revenue building blocks that are implied by a cut in totex from our plan*

The draft determination has made a cut in our allowed expenditure of £238m. This has almost entirely been in areas where the ratio of capex to opex is much higher than the average in our plan yet, when setting revenue allowances, the draft determination assumes that the cut will be made in accordance with the overall ratios in our business plan.

1.2.7 *Modelling the consequences of financial resilience*

We have modelled the likely impact on key credit metrics against the notional company where we think the draft determination is either:

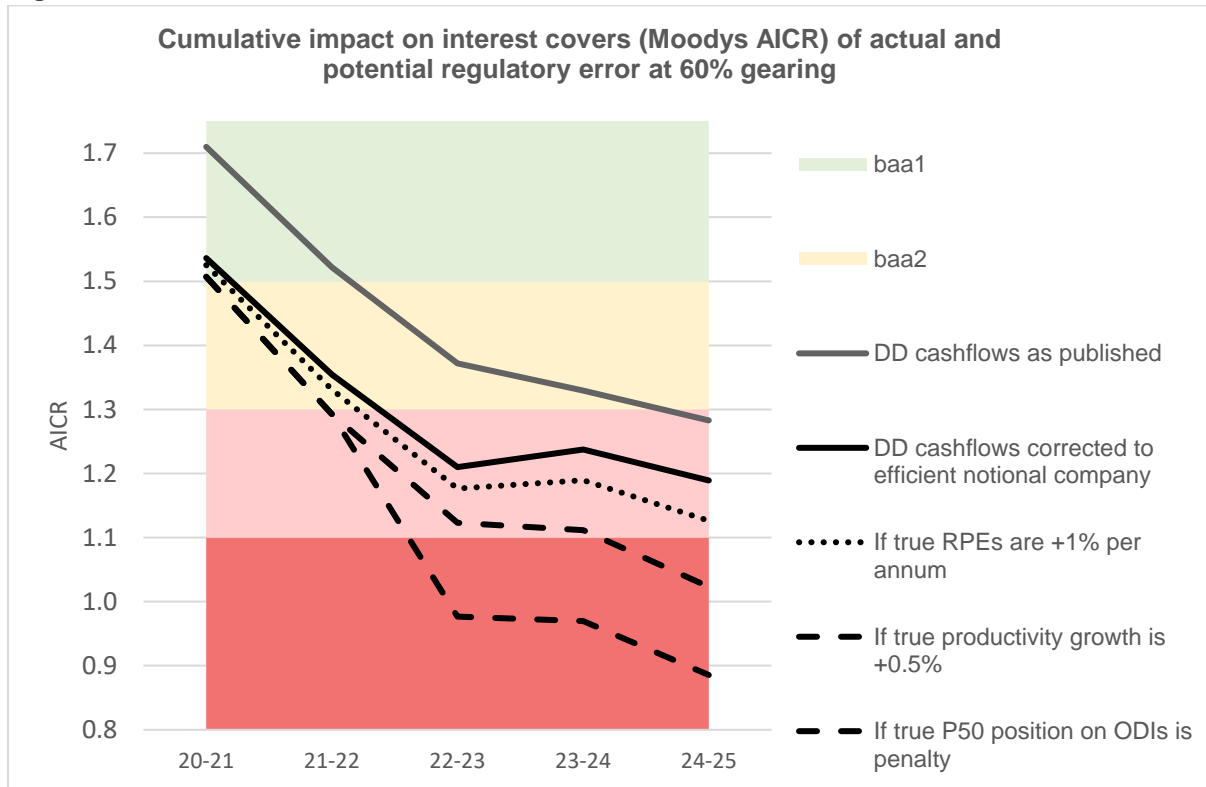
- demonstrably wrong, for instance in the way it has modelled opex and capex in its determination allowance of revenue (through the PAYG ratio), or
- plausibly wrong in its ex ante determination assumption.

The chart below shows the level of financial headroom, for Wessex geared at the notional level of 60%, under a very reasonable set of alternative outcomes, is minimal or non-

existent³. Ofwat’s draft determination strongly suggests that it considers a rating of Baa2 does not give companies sufficient headroom, yet the determination itself (once cashflows are correctly stated) pushes the notional company well below even this level in terms of the key interest cover metric.

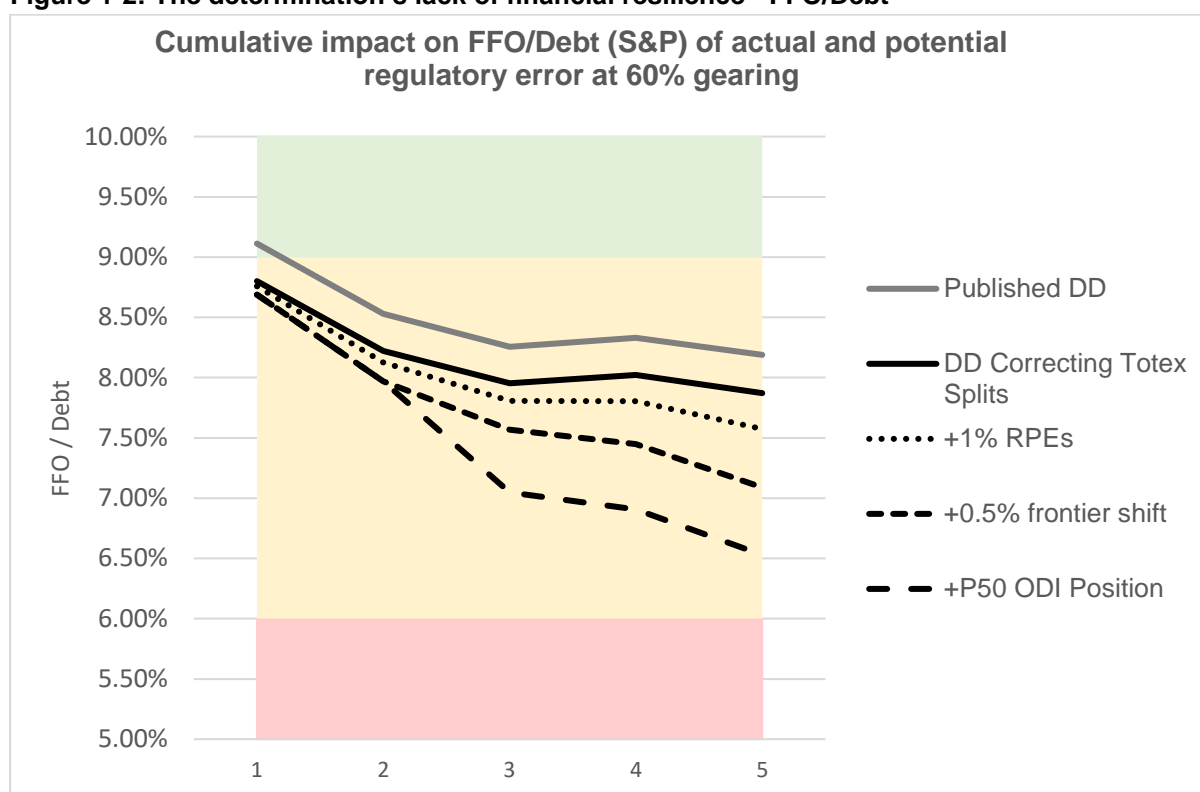
The consequence of this is then even more serious for the notional company if we overlay the potential that the draft determination’s ex ante assumptions do not come to pass in practice. The chart shows that this pushes the notional company to the edge of, or below, the level of interest cover consistent with the maintenance of investment grade status.

Figure 1-1: The determination’s lack of financial resilience - AICR



The problems are not restricted to a single metric. The following chart shows the same analysis for the FFO/Debt (“Alternative”) values which is used by S&P.

³ In this chart and the following similar charts, we equate Ofwat’s ACICR “Alternative” with the Moody’s AICR calculation. Note that the grey line matches the values stated in Ofwat’s draft determination spreadsheet model for ACICR “Alternative” except for the deduction of the pension deficit payments which Ofwat has included in the revenue allowance from FFO in years 1 to 3. Ofwat has been sent a query on this issue and we explain this further in representation R5.

Figure 1-2: The determination's lack of financial resilience - FFO/Debt

Notably this is before considering any further cost or revenue shocks that equity should rightly be expected to bear. A substantial equity injection to reduce gearing well below 60% might help resolve these issues but equity in this case would be bearing the costs of regulatory error not remunerated in the allowed cost of capital. If this pattern is repeated across the industry that equity injection would need to be systemic and this suggests that the draft determination is flawed.

The negative consequences for consumers in the long run could include:

- materially higher bills through increased debt servicing costs
- under investment in maintenance of services in the long-run
- an implicit cap on future environmental improvements

1.3 Changes that can improve financial resilience

Having shown that there is a lack of overall financial resilience in the determination we highlight here some simple changes, outside of the core price control parameters and assumptions, that could be made to the determination that would improve financial resilience.

1.3.1 *A return to calculating revenue allowances through PAYG rates based on the "natural" rate derived from your cost assessment. This would increase outturn revenues by c.£15m a year.*

This is of paramount importance to us in the event that we are not able to reach an agreed view on the level of efficient totex.

We have queried this, given that the approach applied is not that which is set-out in Ofwat's documentation. We explain in detail the issue and the changes required in representation R1 and provide the evidence needed to make these adjustments more accurately and in line with the natural PAYG rates in the event that cuts in allowed totex continue to be made in the final determination.

1.3.2 *The reintroduction of the cashflow mechanism from your final methodology that lessens the short-term financial impact on either customers or the company of any remaining difference in views on efficient costs.*

Again, this is of paramount importance to us in the event that we are not able to reach an agreed view on the level of efficient totex. We explain in detail the issue and the changes required in representation R2.

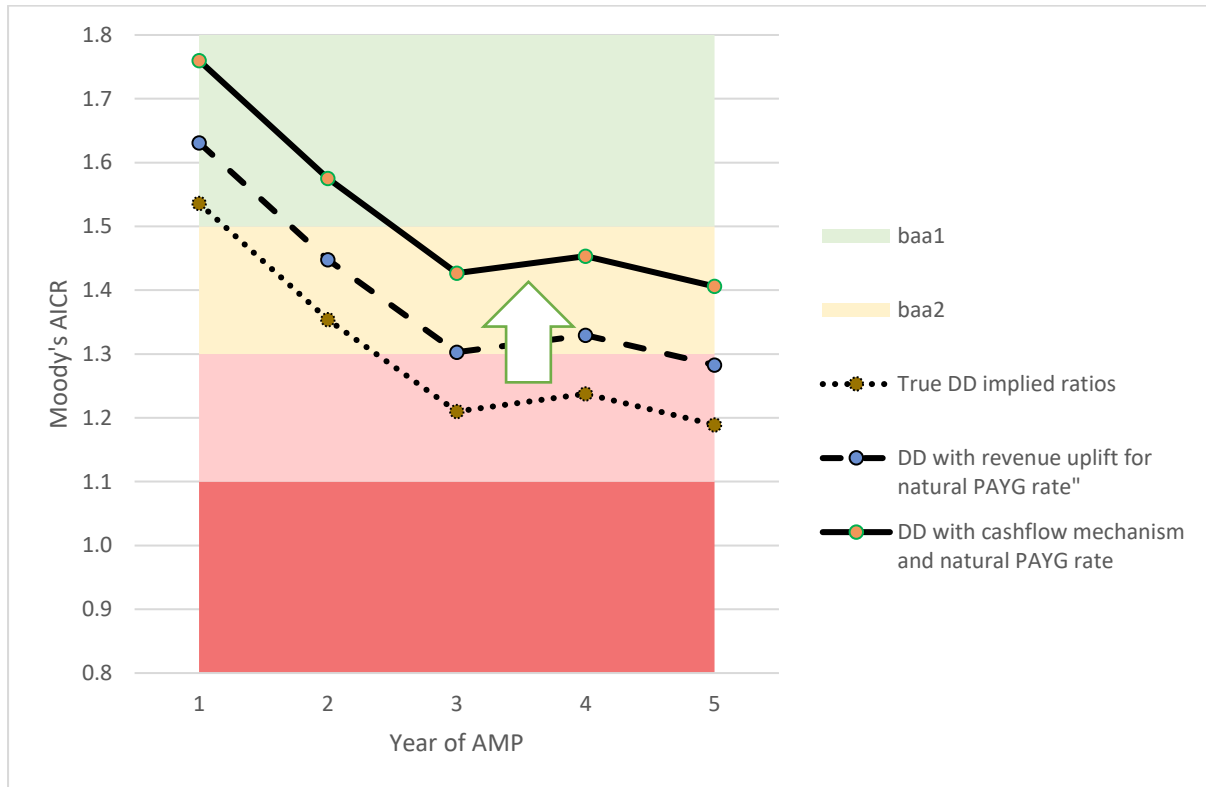
The draft determination's justification for removing this mechanism from the final methodology is that on average companies have outperformed the allowed totex values at PR14. We argue that:

- Average outperformance is not as relevant as the distribution of out and underperformance, and we note that 6 (i.e. more than one-third of companies) have underperformed on wholesale totex between 2015 and 2019 and eleven have underperformed in the most reporting recent year according to table 1F of the regulatory accounts, and which is notably the first year of the full upper quartile ODI challenge.
- In our own analysis PR14 wholesale cost allowances themselves are generally higher than the Ofwat PR14 view of efficient costs because Ofwat moved c.25% of the way towards the company estimates when setting these.
- Ofwat has said itself that at PR19 companies will need to be delivering "a step-change in efficiency" and has strongly implied that the level of efficiency challenge is greater at PR19 than that at PR14. The introduction of a frontier shift assumption of CPIH-1.1% from Ofwat's view of the efficient upper quartile compared to simple RPI cost escalation at PR14 is prima facie evidence of that.
- The step-change in performance commitment targets to achieve forward looking upper quartiles is again more stretching than at PR14 where targets were set in relation to current upper quartiles and is more likely to lead to cost over-runs to avoid higher penalties.

1.3.3 *The impact of the changes*

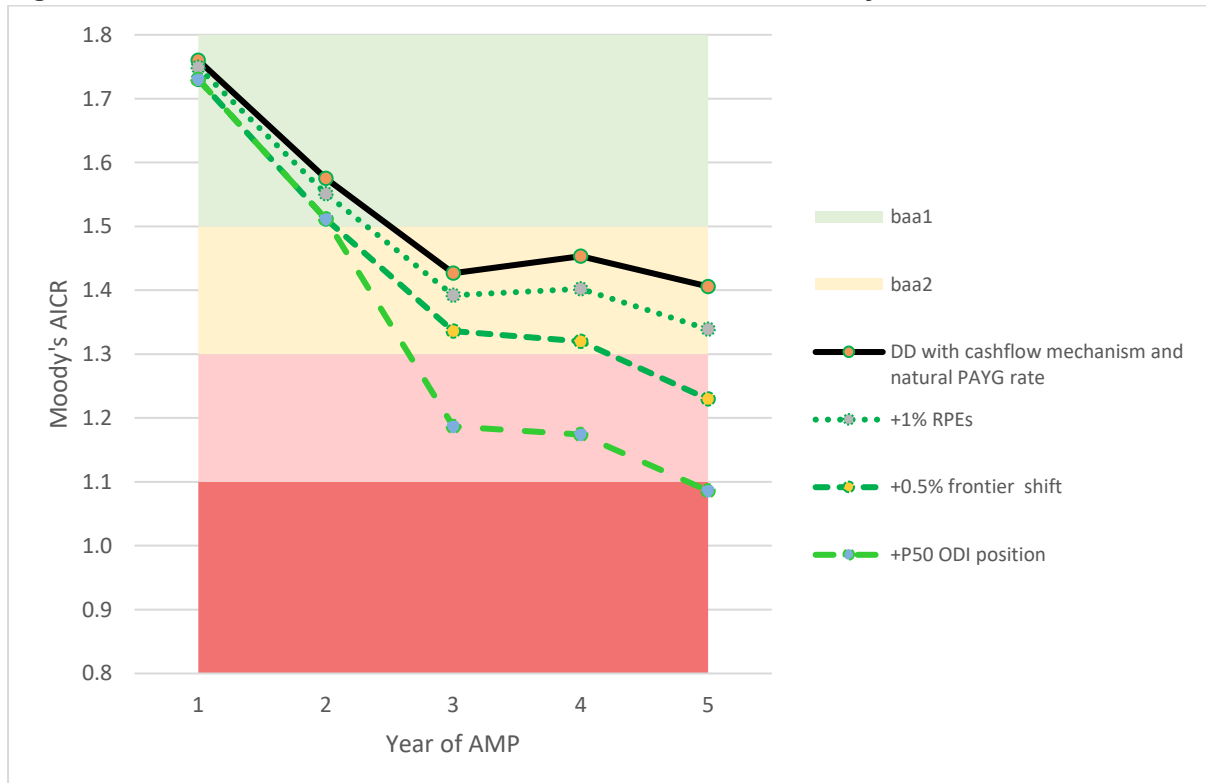
We present in the chart below the positive consequences for the draft determination that result from these two changes.

Figure 1-3: Impact on Moody's AICR of reinstating the PR19 methodology for cashflow mechanism and natural PAYG



Running the same set of alternative outcomes against the revised set of starting credit metrics, while it still leaves marginal headroom leads to a far improved position as can be seen below.

Figure 1-4: Financial resilience of an amended determination: Moody's AICR



Notably, both of the changes above are adjustments simply to the timing of cashflows. There is no value transfer of value from customers to the company, and customers are likely to benefit from paying for lower financing costs in their bills over the long-term and by avoiding the potential negative consequences outlined above.

1.3.4 Reprofiting of cash flows

We note that the draft determination did not model the likely profile of bills post 2025. In the final determination we recommend that Ofwat should also consider the long-term profile of bills post 2025.

Having done so it should consider whether in order to avoid future step-change increase in bills while delivering greater resilience in the short-term, there is a case for cashflows to be reprofiled across five-year periods. We would be happy to engage further on this issue before a final determination.

1.4 Reassessing the allowed cost of capital

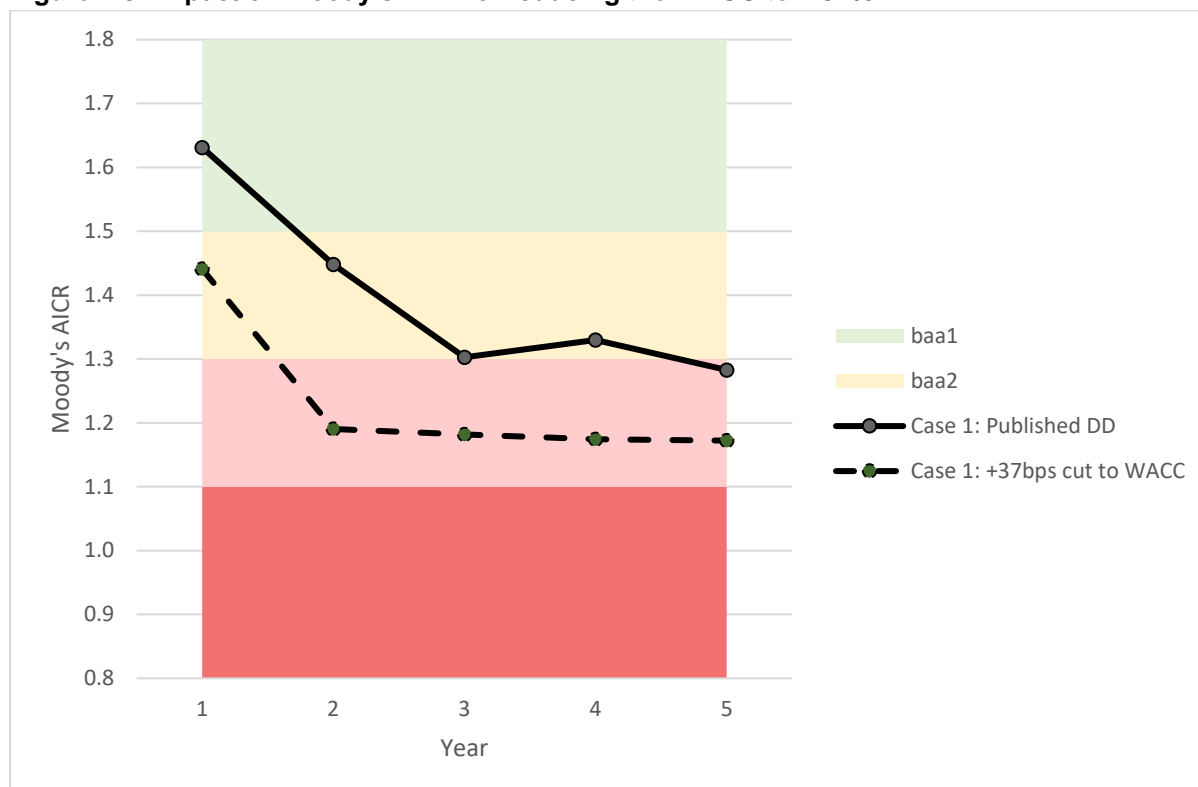
Ofwat's draft determination has used an allowed cost of capital of 2.19%. It has also suggested that market evidence since its cut-off date in February 2019 may lead to a further reduction in the allowed cost of capital to 1.82% at its final determination.

1.4.1 The allowed WACC's impact on financial resilience

Up to this point we have discussed the allowed cost of capital in the context of resilience, showing how that its calculation does not lead to financial resilience by:

- being inconsistent with the frontier-shift assumptions
- not allowing any addition for the introduction of skewed returns
- not taking into account the change in credit-worthiness of the notionally efficient company
- being inherently a more unstable view, given the additional reliance on short-run market data and a more mechanistic approach to its calculation.

It is self-evident that by mechanistically applying updates to market data to achieve a lower cost of capital that financial resilience will reduce, nevertheless we show below the impact on the notionally efficient company were Ofwat to reduce the allowed WACC to 1.82% against Ofwat's published approach. In this chart we have not adjusted for the misaligned PAYG ratios so in practice this overstates the resilience of the draft determination if adjusted for a lower WACC.

Figure 1-5: Impact on Moody's AICR of reducing the WACC to 1.82%

We note that this outcome, while modelled against Wessex Water's investment plan, is consistent with industry-wide analysis published by Moody's in July 2019.

1.4.2 Reassessing the allowed WACC

Our view is that both Ofwat's current and potential future view on the WACC are inappropriate as they are inconsistent with:

- other parameters in the determination, therefore threatening the long-term resilience of the sector, as explained above
- regulatory precedent without sufficient new evidence to warrant this material change
- reasonable cross checks on the cost of equity that would support a value at the upper end of a range calculated on a bottom-up basis.

We do not agree that updated market evidence between February and July supports a lower cost of capital allowance.

We set out in more detail our evidence and reasoning in representation R3, and we draw on reports prepared for Wessex Water by Frontier Economics and Economic Insight that are provided as appendices to it. We summarise our views as follows:

1.4.3 Inconsistency with the determination as a whole

In its totality we find that Ofwat's assessment of the cost of capital is inconsistent with the other elements of its price determination.

- The draft determination continues to place strong reliance on short-term estimates of asset beta and the debt halo and only placing partial weight on the long-term estimates of TMR, therefore firmly anchoring the cost of capital assessment to a period of low growth and low productivity – while projecting productivity gains well ahead of historic averages.
- Secondly, the negative outlook, warning on the regulatory regime and analysis on financial metrics by Moody's poses a risk for an increased cost of debt, decreasing the likelihood of any future halo effect, if one even exists now. We note that an analysis of Ofwat's determination shows that eight companies under Ofwat's notional structure have Moody's ratios consistent with Baa2 rating or below, and this assessment is before Ofwat's mix of capex and opex is amended to reflect the efficient notional company implied by its cost models which in our case reduces interest covers further.
- Thirdly, the draft determination suggests that at an industry level the proportion of new debt that is likely to be raised compared to embedded is less than the 20% assumed. Analysis by FE suggests a ratio of 16%: 84% and this should be applied.
- Fourthly, an additional analysis from EI commissioned by us and provided as an appendix to this document evidences that Ofwat's interventions to ODIs mean that returns are likely to be negatively skewed and that the standard CAPM calculation does not account for this. The analysis from EI shows that the negative skew alone should add 5 to 7 basis points to the cost of equity.

1.4.4 Inconsistency with regulatory precedent

The comparatively low returns required by investors in the water sector are reflective of the stable regulatory environment, in particular the stable approach to the cost of capital applied by sector regulators and the CMA. We think that some of Ofwat's approach is inconsistent with this, without the necessary new evidence that would warrant material changes.

- We note that the evidence on ex-post market returns has barely moved since Ofwat last assessed its cost of capital allowance at PR14. The one area where new information may be available relates to alternative datasets for long-term inflation. Given that these inflation datasets all have potential weaknesses we do not consider that there is a sound basis to apply the dataset that results in a material reduction compared to PR14. We consider that the different approaches to indexation create a range of potential estimates for TMR on which a judgement should be formed.
- Ofwat's approach to estimating the asset beta departs from its approach in recent price controls (and the approach advocated in the recent UKRN report) by using a single point estimate that may be distorted by short-term events. We agree with FE that a range of calculation methodologies should be considered for beta and note that Ofwat's estimate is towards the bottom of that range.

There is a wider sense that Ofwat is taking a more mechanistic approach to its cost of capital allowance and allowing less regulatory judgement. Because of that, we also note FE's view

that there is good reason to choose a value in water that is at the higher end of both of these parameters. These includes the overall balance of risk and reward in the incentive package as a whole, the current economic uncertainty which may see a flight to safety outside of the UK and Ofwat's commitment to switch to CPIH indexation in an NPV neutral manner.

1.4.5 Inconsistency of the allowed WACC with reasonable cross-checks

Finally, we consider that the determination's estimate of the WACC takes insufficient account of alternative cross-checks.

FE's analysis of the following cross-checks on the cost of equity shows that, in one case, there is no evidence of a reduction in the cost of capital since Ofwat's view in December 2017, and in all the other cases that the cost of equity may have been estimated too low. In addition to an analysis of the credit metrics referred to above these include:

1. DGM analysis of traded water companies
2. Analysis of the implied premium on equity over debt in a 100% equity funded company
3. Market Asset Ratios.

Related to the above while none of this evidence is without its own drawbacks, some weight should be placed on it as regulators make judgements on uncertain items such as asset betas. The fact that the determination's mechanistic application of CAPM has diverged from all of these cross-checks is highly relevant to the assessment of a reasonable WACC.

1.4.6 Updating the WACC for more recent data

Ofwat states that market evidence since February could lead to a significantly lower WACC. FE's analysis does not suggest the same outcome. The primary reason for this is that the FE analysis of asset beta is based on a wider range of evidence over two-year, five-year and ten-year periods and this range of evidence does not show a reduction over the recent months. The fact that the determination's analysis, based on a narrower evidence base of short-term data, shows a material reduction of this period serves to highlight the inherent volatility in its approach and the lack of robust cross-checks in its method.

Further details of our analysis on the cost of capital is included in Representation R3 and the FE and EI reports are included as appendices to this document.

1.4.7 Summary of WACC information

The table below shows for comparison the differing estimates made of the cost of capital. It shows that while the Wessex Water business plan uses a higher cost of capital than both Ofwat's draft determination and illustrative view it sits close to the bottom of FE's range using updated market data.

We also note that FE considers the credible range for the wholesale WACC in this water price review to be in the upper-half of its range with a value for the wholesale WACC of 2.5%-2.8%.

Table 1-1: Appointee WACC estimates (Real RPI based)

	Ofwat (DD)	Ofwat (illustrative view - 28 June)	Frontier Economics – point estimate (August 2019)	Frontier Economics range including market updates	Wessex Water business plan - March 2019
TMR	5.47%		6.16%		
RFR	-1.42%		-1.05%		
ERP	6.89%		7.21%		
Asset beta	0.36		0.39		
Cost of equity	3.46%		4.63%		
Ration of embedded to new debt	80:20		84:16		
Embedded debt	1.46%		1.61%		
New debt	0.35%		0.63%		
Issuance	0.1%		0.1%		
Appointee WACC	2.19%	1.82%	2.78%		2.40%
Wholesale WACC	2.08%	1.71%	2.67%	2.20%-2.90%	2.29%

1.5 Capital allowances

The draft determination makes substantial cuts to our plan capital expenditure without making equivalent reductions to the capital allowances that we would then claim, which understates our likely tax charge.

We provide evidence in Representation R4 to allow Ofwat to make these adjustments should the difference in view between the company and Ofwat remain at the final determination. We would be happy to provide additional information through the query process to ensure that the final determination capital allowances are consistent with the final determination cost allowances.

1.6 Bill profiles

We note that Ofwat has sought to smooth household bills at a dual service level in the determination across the five-year period. We support the intention of this approach which is in line with our customers' preferences. We do however have c.50% of customers who are supplied for only one service. We therefore request that in the final determination Ofwat considers smoothing bills at a service level in its determination to avoid large incidence effects. Please see representation R6.

Table of representations directly related to this section (1. Financial resilience, risk and return)

Representation Reference	Title
R1	PAYG ratios
R2	Removal of cost sharing cash flow benefit
R3	Cost of capital
R4	Capital allowances
R5	PDRC on one side of the AICR calculation
R6	Bill profile and incidence effects
	Appendices
R1.1	PAYG ratio calcs
R3.1	Frontier Economics WACC
R3.2	EI skewness WACC
R4.1	App29 DD allowances
R4.2	App29 corrected DD allowances

2. Delivering outcomes for customers

2.1 Summary

The draft determination will not be acceptable to the Wessex Water Board without significant changes in this area. The changes required on outcomes are required so that that we are set stretching but realistic targets, that give an efficient company the ability to earn its cost of capital, with appropriate incentives.

We have calculated that, taken as a whole, the P50 position of Ofwat's draft determination would lead to a reduction in our notional equity returns of -1.1%. Were we to assume that Ofwat accepted our separate representations on cost allowances the P50 position remains negative at -0.5%.

We are a high performing company that in 2018-19 were upper quartile performers on the key measures of sewer flooding, supply interruptions, water quality (CRI), per capita consumption, sewage treatment compliance and pollutions. A comparatively high performing and efficient company should not have a negative P50.

The most material changes we require are:

- An amended target, incentive rates, and underperformance collar for water quality events (ERI - Wessex)
- An amended target level for mains repairs

Left unchanged, we consider that the most likely outturn position under these two PCs alone is an annual £6m penalty. This assumes we continue to perform well above the industry average for ERI and that we are able to meet our plan commitment to keep the total number of mains repairs at a stable level despite cutting leakage by 15%.

The Board is therefore unable to accept the change in risk profile associated with these draft determination interventions.

We also make representations on the following PCs and associated ODIs:

- Sewer flooding
- Water quality customer contacts
- Total bill reduction on social tariffs and its interaction with applications for assistance from third parties
- Sewer collapses
- Unplanned outage
- Population at risk of flooding in a storm.

Predominantly these representations identify where Ofwat's interventions have created misaligned and inappropriate incentives that do not correspond with our customers' valuations or engineering/operational realities in our region and will therefore lead to inappropriate and/or inefficient outcomes.

We also request minor changes to the definitions of the following in order to better facilitate opportunities for innovation through the Wessex Water Marketplace:

- Volume of water saved by water efficiency engagement.
- Lead communication pipes.

We propose one new Performance Commitment on Security non-SEMD which is a penalty only measure to protect customers in the event that we fail to deliver our planned work in this area.

More generally we consider that Ofwat has not accurately reflected the true P10/P90 RORE ranges in its Draft Determination document in the light of its interventions. It is important that in the final determination that a fair view of the balance of risk and reward is presented that will allow stakeholders to judge the likely outcomes. We provide evidence in this resubmission that should assist in that process.

2.2 The draft determination has made some fundamental mistakes regarding outcomes

In making arbitrary and inconsistent adjustments based on industry comparisons that do not reflect our own customer evidence, the draft determination incentivises us to do the wrong things.

The consequences of this will be a reduction in trust and confidence, not just in Wessex Water but in the industry as a whole as companies are unable to deliver arbitrary targets that are not in customers' interests, with insufficient cost allowances.

Specifically, there are three areas where we need change.

1. The RoRE analysis is not accurate and should be updated
2. The cost allowances are insufficient to deliver the required performance
3. The determination has set arbitrary and inconsistent parameters for performance commitment levels and incentive rates that do not align with customer preferences

We explain each of these in turn and set out a solution to each that Ofwat should implement.

2.3 The draft determination RoRE is inaccurate and should be updated

Contrary to the position Ofwat has set out in our draft determination, we calculate that our overall return on regulated equity (RoRE) range for ODIs is now significantly skewed to the downside at -1.3% to +0.2%. Such a negative skew is misaligned with Ofwat's methodology.

This compares to our business plan submission of -1.1% to +1.3%.

Importantly, the overall changes to the PCs and ODIs seem not to have been considered across the outcomes piece as a whole, but only as specific adjustments to individual PCs and ODIs. This makes it impossible for companies to achieve the broadly symmetrical RoRE ranges at $\pm 3\%$ that Ofwat signalled might be appropriate in its methodology. See section XX for further detail on our risk and return representations.

Ofwat's approach to calculating the RoRE range is not at all transparent as it has not disclosed the P10 values it has used or a detailed methodology for calculating them. We can

infer however, given the approach taken for P90 values and the P10 downside it has calculated for us, that it is not appropriate. The error in its application of P10 and P90 positions arises because it seemingly assumes that the probability of achieving a certain value changes when it intervenes to set a new target.

Companies submitted business plans with a target, a P10 and a P90 for each performance commitment. Each of these values is the result of an investment plan that is also set out in the business plan. If the level of funding allowed changes from that proposed in the business plan, it is clear that the P10 and P90 will change as less investment is likely to make it harder to achieve a specific performance level and more investment is likely to make it easier to achieve a specific performance.

The target levels proposed are required to be stretching. That is not to say that they must all have equal chance of being achieved, nor that they should even necessarily be achievable. For example, a company that is a poor performer on supply interruptions might set a stretching target to bring itself in line with the industry upper quartile. With the investment proposed, it may not expect to reach this target but understands that customers want it to try to reach it. The likelihood of achieving the target may only be 10%, which would therefore make the P10 and the target the same.

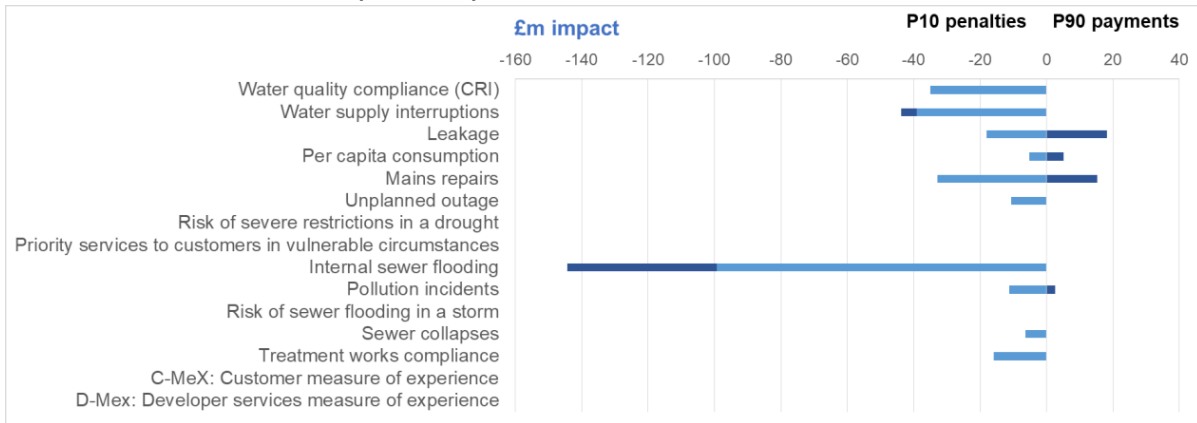
Now, let's say that the investment allowed in the draft determination is kept the same, but the target is reduced by an extra minute through an Ofwat intervention. The likelihood of the company hitting the P10 value has not changed as it will still deliver its business plan proposals – it remains the P10.

Ofwat has ignored this point and seems to have moved companies' P10 and P90 values relative to any imposed changes to targets and irrespective of any changes to allowed investment.

The impact of this on Wessex Water's ODI RoRE range in the draft determination is to keep it broadly symmetrical.

Further, Ofwat has seemingly ignored the fact that the target levels it has set are not P50 values when calculating RoRE ranges. It stated in its Outcomes webinar that "*We think all of the performance commitment levels we set are achievable and are at the centre of the P90-P10 range*". However, this is not always the case and is not consistent with the way Ofwat has represented RoRE ranges in draft determinations. We use United Utilities' draft determination as an example. Here, we note that Ofwat seems to imply that the company will end up in penalty at both its P10 and P90 values for supply interruptions and internal sewer flooding. We agree that this is likely to be the case for some PCs for some companies.

Figure 2-1 United Utilities projected P10 penalties and P90 payments for common performance commitments over 2020-25 (£ million)



When this is translated to the overall RoRE range, Ofwat appears to have ignored this fact as the baseline position for UU does not seem to reflect the scale of the penalties shown in the figure above. It appears that the overall RoRE is based on the assumption Ofwat made in its webinar mentioned above. This inconsistency highlights that Ofwat is not reflecting penalties that are expected at the target level of performance in its overall RoRE baseline. This is a major shortcoming that needs to be addressed. The impact of the individual changes on PCs and ODIs together with the cost allowance means that, we would expect our P50 position to be in the region of -0.5%.

We expect Ofwat to reflect this in both the ODI RoRE range and the overall RoRE range.

Whilst we disagree with some of the changes Ofwat has made to targets, incentive rates, caps and collars, we have updated the Ofwat analysis to reflect the original P10 and P90 values, keeping all other draft determination values stable.

Our analysis shows that, applying Ofwat’s interventions in this way (assuming, for now, that our cost allowance also ends up aligned to our business plan proposals), our RoRE range should have been calculated at -1.3% to +0.2%. This is shown in figure 2-2.

Figure 2-2: RoRE range comparison – Business plan submission, Ofwat view of draft determination, our view of draft determination with corrected P10 and P90 values



Moreover, Ofwat has assumed that a change in allowed expenditure does not impact the probability of achieving any given level of service. For example, on supply interruptions, we stated in our business plan that our investment proposal would result in a P10 of 9.5 minutes in 2020/21. With a significant cut in allowance in this area at the draft determination, the likelihood of us reaching 9.5 minutes has reduced. The same applies to our P90. Funding does not, however, need to impact on the target level. It simply changes the probability of achieving it.

We have therefore updated our analysis further still to account for the reduced levels of funding allowed in the draft determination compared to our business plan. We have adjusted our P10 and P90 estimates by considering our cost benefit analyses and engineering expertise. The impact of this is to change the RoRE range from -1.3% / +0.2% to -2.4% / -0.3%, with a P50 of -1.1%.

Figure 2-3: RoRE range comparison – Business plan submission, Ofwat view of draft determination, our view of draft determination with corrected P10 and P90 values, our view of draft determination with P10 and P90 updated for cost allowance



We expect Ofwat to reflect this in both the ODI RoRE range and the overall RoRE range.

2.4 Cost allowances are insufficient to deliver the required performance

Ofwat's regulatory framework is intended to reward and encourage efficiency and innovation. This policy intention is undermined by the way in which the draft determination cost assessment has responded to companies' proposals for the enhancement expenditure associated with delivering increases in service quality.

This is most prevalent in reducing leakage, supply interruptions and reducing pollutions, where companies have signed up to unprecedented improvements alongside associated investment plans, which have been disallowed by Ofwat. This is referred to by Ofwat as an efficiency challenge but is triple counted with those applied more explicitly in the form of upper quartile cost efficiency benchmarking, annual efficiency improvements and stretching performance levels. We, and most other companies have made this point on several occasions previously and evidence is available in our business plan submission, IAP response and in the cost allowance section of this document.

In the absence of allowing additional funding for improvements, which we still believe is the most appropriate position to take, we request that Ofwat updates the RoRE position. An alternative position would be to adjust performance commitment levels such that they are aligned with historical industry average performance levels. Incentive rates could then be set at a level that would encourage outperformance.

2.5 The determination has set arbitrary and inconsistent parameters for performance commitment levels and incentive rates that do not align with customer preferences, particularly ERI and mains repairs

There are some specific PCs and ODIs where Ofwat has intervened inappropriately to the disbenefit of customers and, importantly, against their preferences. This includes on Event Risk Index (ERI) and mains repairs, which we discuss in more detail below.

We have further representations on a number of individual PCs and ODIs that we make separately and summarise the affected PCs below.

2.5.1 Event Risk Index (ERI) overview

We discuss this issue in detail in representation O1. However, drinking water quality is consistently rated as the most important outcome by our customers. The updated proposals in this representation are aligned to our extensive customer research and best practice implementation. They are based on evidence and consistent approaches used elsewhere in the PR19 process.

The draft determination has made a number of inappropriate interventions to our performance commitment for ERI that have little basis in evidence or customer research. These include a reduction in our PC target, a reduction in our outperformance rate that is not supported by customers and an increase in our underperformance rate that would imply maximum penalty at a level better than the industry average – again, unsupported by customer evidence.

As it stands, if the PC had been in place during this AMP period we would have incurred maximum penalty (£4.4m each year which is the equivalent of a c.0.3% reduction to the allowed equity return) for all of 2015, 2016, 2017, 2018 and 2019 (based only on YTD incidents) while during this time being considered a high performing company by the DWI.

Our board is therefore of the opinion that we would be extremely likely to incur maximum penalty in each year of PR19. In this context it is of note that to date in this year, 18.5 points of our 19.5 has been through events caused by third parties. We are prepared to take this risk as part of the performance commitment but not to such an extent that it is able to cause maximum penalty for what would still be well above industry average performance.

Should Ofwat not be able to accept the updated proposals set out in this representation, we request that this PC is changed to a non-financial ODI.

We request that Ofwat:

- Sets the PC target level at the average of 2017 (10.1) and 2018 (15.4) upper quartiles – i.e. at 12.8.

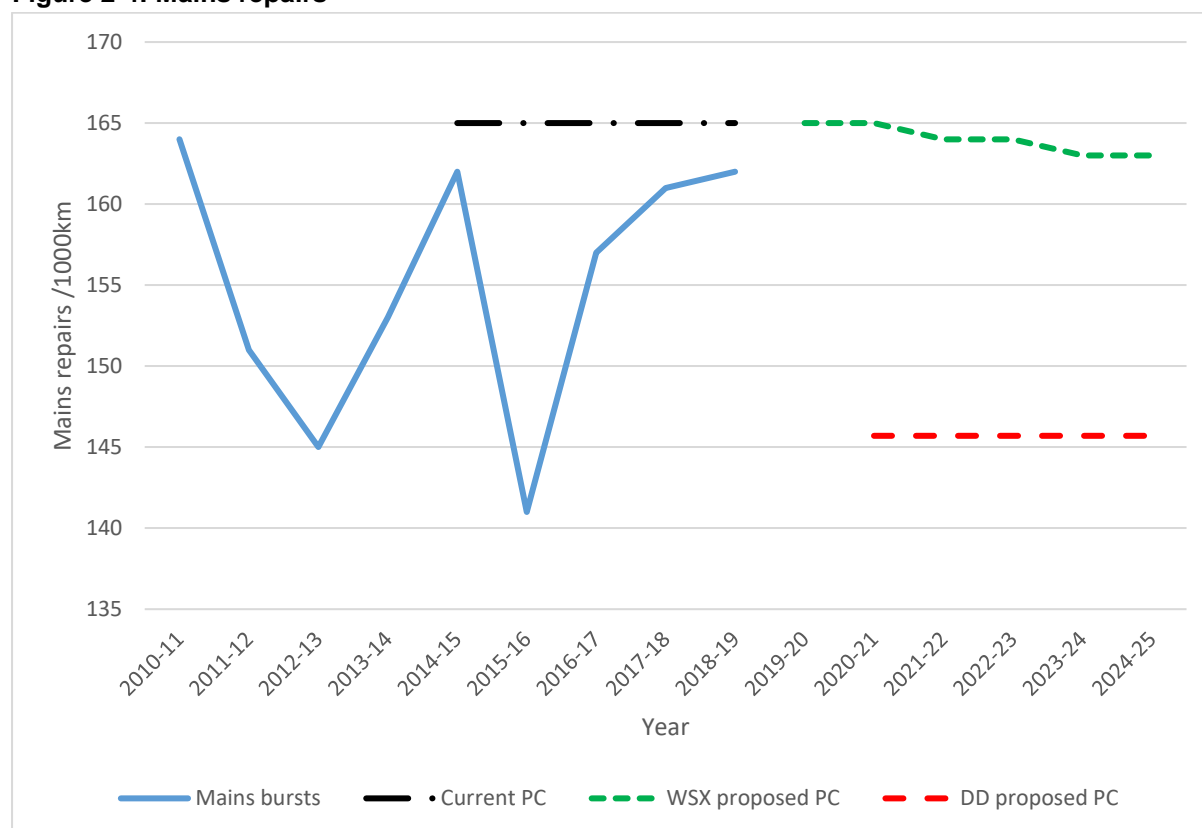
- Sets the outperformance incentive rate at £0.754m, as supported by customers.
- Sets the collar at the industry average of 402.
- Sets the underperformance incentive rate at £26,594.
- Should the above package of changes not be implemented, we request that the ODI is non-financial.

2.5.2 Mains repairs overview

We discuss this issue in detail in representation O2. However, in summary the target set in the draft determination for mains repairs is not credibly achievable, and our board cannot accept this.

Our historical performance has consistently been better than our serviceability performance commitment, although it has varied year-on-year primarily due to weather conditions as demonstrated in the following chart.

Figure 2-4: Mains repairs



At both PR09 and PR14, companies were funded to deliver stable serviceability, based on their own long-run metrics rather than on a comparative basis. To the extent that that has been achieved, forward looking cost allowances based on models of historical costs can therefore be expected to deliver stable asset health on an individual company basis rather than improving asset health.

If we were to maintain our stable performance and meet our proposed target of 163-165 repairs per 1000km of main, the draft determination would however lead to a penalty of c.£8m across PR19.

In our plan we committed to invest to maintain stable asset health at a level that is acceptable to customers. This is despite a commitment to reduce leakage, which, all else equal, will increase the number of mains repairs made.

We note that Ofwat does not accept research from several companies, including that submitted by Wessex, demonstrating that reducing leakage will require more repairs to mains. Ofwat fails to understand that most leaks come from broken mains. To stop leaks, we repair the mains. As a result, repairing more leaks will lead to more mains repairs.

In the 'Delivering outcomes for customers policy appendix', Ofwat states that

“We are concerned that the approach proposed by some companies to reduce leakage by significantly increasing the number of temporary repairs on pipes may not improve the health of the assets over the long-term.”

It goes on to say

“The number of mains repairs is an indicator of mains asset health or condition. An increase in the number of mains needing to be repaired may indicate the worsening health of the assets.”

Clearly, these statements are both true. They do not, however, recognise that the clear linkage evidenced in many companies' research between finding leaks and needing to repair mains does not exist. This is supported by practical, real-life expertise that shows the main method of reducing leakage is, and will continue to be, “find and fix”, which requires us to repair mains.

The draft determination intervention has set our performance commitment target level at 145.7. This compares to our business plan submission of 165, reducing to 163. The draft determination does not tie this to evidence that customers are willing to pay for the necessary investment to reduce the number of mains repairs.

Moreover, in engineering terms, a step-change of this scale in asset performance by April 2020 is not possible and could only be achieved over the very long-run through significant increased mains replacement programmes.

We request that Ofwat sets our target at the stretching but achievable values we proposed in our business plan, which are supported by sound engineering judgements.

We request that Ofwat sets our incentive rates at the values we proposed in our business plan, which are supported by customers and based on research and triangulation that Ofwat has called 'high quality' and has been assured by a respected and independent third party.

The target set in the draft determination is not in customers' interest. We note that in the PR14 CMA Appeal by Bristol Water, the CMA came to the view that:

- Customer research is important, and CCG's views need to be taken into account;

- Horizontal targets (which were based on the historical upper quartile at PR14) are not likely to be equal to the economic level of performance.

Specifically, the CMA stated that “Although the extent to which this is true will differ between metrics, we were not convinced that a blanket use of the industry upper quartile target was a superior method”.⁴ The economic level of mains repairs is evidenced by our own cost-benefit analysis which reflects our customer views. Our PR19 target level should reflect the economically optimal level.

We provide more detail in Representation O2.

2.5.3 Summary table of other PC/ODI representations

We also make individual representations on the following performance commitments:

Performance Commitment	Nature of representation
Internal sewer flooding	Incentive rates
Water quality customer contacts	Incentive rates
Total bill reduction to customers on social tariffs per 10,000 households / Successful applications for assistance	Incentive type
Sewer collapses	Incentive rates
Unplanned outage	Incentive rates
Volume of water saved by water efficiency engagement	PC definition to allow innovation
Lead communication pipes replaced	PC definition to allow innovation
Population at risk of flooding in a storm	PC level

We also include a representation to introduce a new PC and ODI that will provide extra customer protection against our Security (non-SEMD) delivery programme.

⁴ CMA, Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991, 2015, Appendix 9.1, page A9(1)-8, paragraph 15

Table of representations directly related to this section (2. Delivering outcomes for customers)

Representation Reference	Title
O1	Event risk index (WW)
O2	Mains repairs
O3	Internal sewer flooding
O4	Water quality customer contacts
O5	Total bill reduction to customers on social tariffs & successful applications for assistance
O6	Sewer collapses
O7	Unplanned outage
O8	Volume of water saved by water efficiency engagement
O9	Lead communication pipes replaced
O10	Population at risk of flooding in a storm
O11	Security non-SEMD
	Appendices
	None

3. Securing long-term resilience

3.1 Summary

Our business plan 'For you, for life' recognises the important responsibility we have in providing essential public services to customers and in managing the natural environment, both now and for future generations. Our activities are fundamental to the health and well-being of our communities, environment and economy. As such, maintaining and strengthening our resilience is critical to ensuring we can continue to deliver high-quality and reliable services to customers and enhance the environment, particularly in the face of acute shocks and chronic stresses.

This section explains how our systems-based resilience approach was used to pinpoint specific areas for investment required in 2020-2025.

3.2 Our representations

Our systems-based resilience approach was used in the assessment of our investment proposals for our PR19 business plan. As part of our submission, we identified a number of specific resilience mitigation proposals required for implementation in 2020-2025. Our Cost Benefit assessment was applied across each of these proposals before inclusion in our business plan. Our representations on our resilience proposals are included in representation C15.

We understand the existing and future challenges we face cannot be tackled in isolation. We aim to develop collaborative mitigation measures which offer responses to multiple risks and realise wider social and environmental benefits. Our approach aligns with Defra guidance included in the 25 Year Environment Plan and the Catchment Based Approach. These activities relate to three performance commitments:

- Working in partnership to improve Sites of Special Scientific Interest
- Working in partnership to deliver natural capital benefits
- Community projects to deliver bathing water amenity.

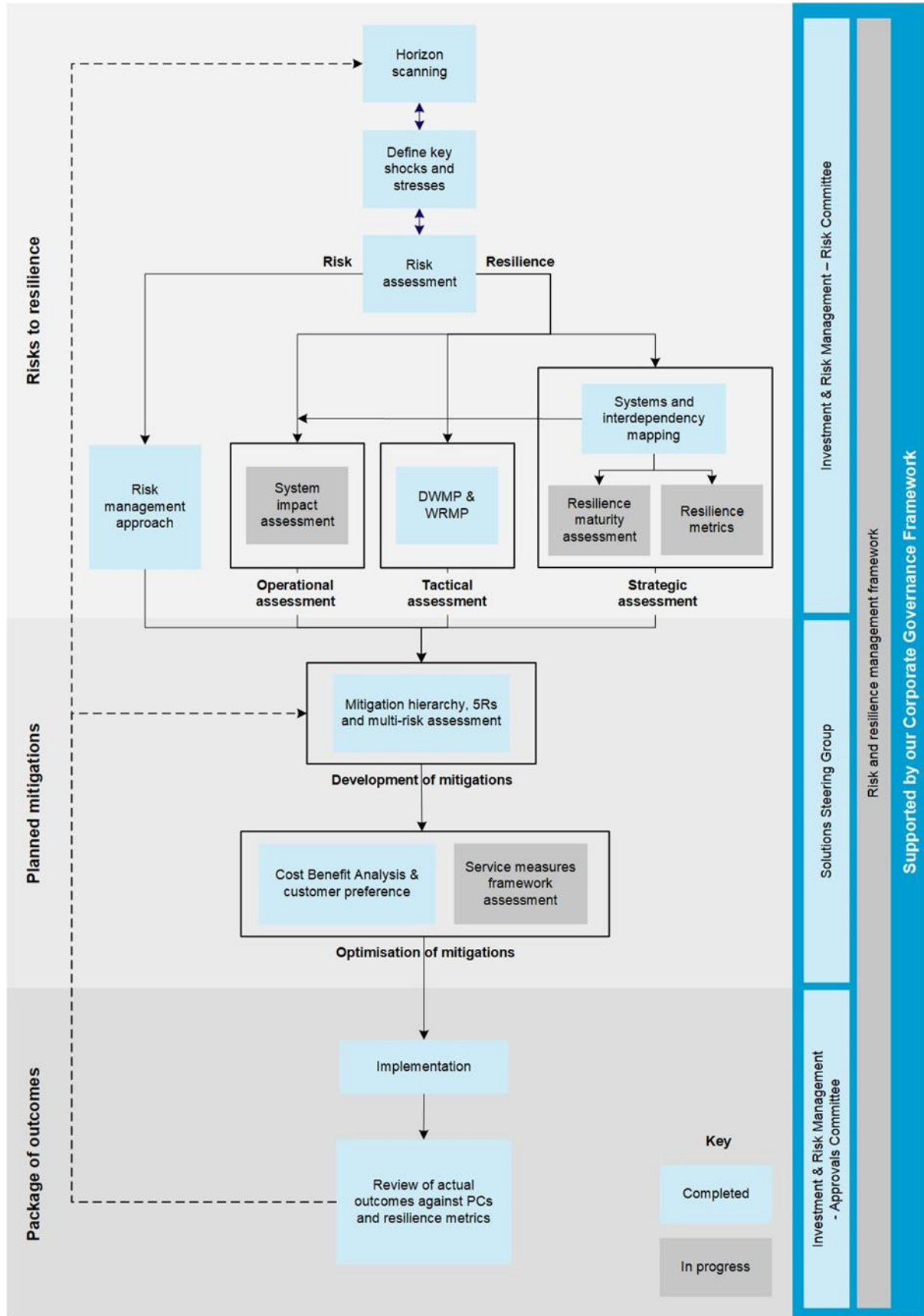
In our response to Ofwat's Initial Assessment of Plans we included £2.85m for partnership working. While recognising the importance of such partnerships this expenditure has not been included in the draft determination, with Ofwat requesting detailed descriptions of the activities and confirmation that there is not an overlap. Our evidence supporting our partnership working proposals is included in representation C9.

The draft determination asked us to propose a scheme specific performance commitment related to our cyber resilience proposals to ensure our customers are protected in case of non-delivery. The proposed new performance commitment, called Security (non-SEMD), is detailed in representation O11, and additional evidence for the associated investment is included in representation C16.

3.3 Our approach to resilience

The following diagram shows our overall approach to resilience, which brings together our existing (blue) and ongoing activities (grey) into a system-based resilience framework.

Figure 3-1: Our system resilience framework



This approach looks to embed 'resilience thinking' into our operations and governance ensuring line of sight from risk to our package of outcomes. Our approach aligns with Ofwat's concept of 'Resilience in the Round' and holistically considers our operational, corporate and financial resilience.

Our approach to resilience is focused on responding to shocks and anticipating trends, whilst delivering value for the long-term and in the round, creating societal and environmental value whilst driving industry excellence and innovation. We have invested in our infrastructure, processes, and people over the years to improve our ability to withstand, respond to and recover from the impact of sudden disruptions and long-term trends.

3.4 How our resilience approach informed our Business Plan

We are proud of our record, and we have seen in recent years our continued ability to maintain uninterrupted services in the face of extreme cold in the "beast from the east" and in the driest summer since 1976 as well as continued industry leading environmental stewardship. We have had to deal with various shocks and stresses and our success has been as a result of forward planning, appropriate investment (such as in our water grid and in metering), working with the community and always focusing on protecting the environment. Recognising this, we are now planning for our next 25 to 50 years, focusing on strategic and holistic solutions to the challenges we face.

Our integrated resilience strategy pulls together three of the core facets of our business:

- Forward planning and development of multi-AMP overlap programmes to achieve long-term improvements;
- Working in partnership with our community and environmental stakeholders to find the lowest impact solutions such as catchment management and catchment nutrient balancing; and
- Providing industry leading services to our customers while protecting the natural environment for the future. We have set ourselves one of the most challenging packages of performance commitments aimed at environmental improvement.

Our Resilience Action Plan, which we submitted to Ofwat on 21st August, outlines our approach to risk-management and how we are developing and embedding a systems-based approach to resilience, and an integrated resilience framework, into our existing risk management procedures.

Table of representations directly related to this section (3. Securing long-term resilience)

Representation Reference	Title
	None
	Appendices
	None

4. Fostering markets and innovation

4.1 Summary

We have one key representation to make in this area. The intervention made in the draft determination is in opposition to the government's priority for the greater use of markets where they are in the interests of customers because it penalises Wessex for having taken an innovative, market-based approach. Moreover, it is an unnecessary intervention given Ofwat's price control methodology which already sufficiently protects customers.

4.2 Adjustment to bioresources control for income from biogas

The draft determination makes a negative adjustment of £10m to our allowed price control revenues by assuming that the company can gain more income from sales of biogas to third parties.

Given the determination's approach to protecting customers through setting allowed revenues based on benchmarks of efficient bioresources costs at the upper quartile efficiency level (with no cost sharing mechanism) this is an unnecessary intervention. It unnecessarily and excessively penalises Wessex for having taken a different approach to investing in energy generation.

Wessex Water's benchmarked allowance already reflects, and is offset by, the "income treated as negative expenditure" reported for other companies across the industry. The effect of the benchmarking approach is that the allowance for one company is largely determined by the costs and income of other companies, rather than by its own costs and income. It is internally inconsistent to make a £10m downward adjustment to the benchmarked allowance for one company because Ofwat thinks that its net costs should be £10m lower.

We are also concerned that intervening in this manner would set a worrying precedent, effectively eroding unregulated reward long after the risk has been taken by the unregulated business. Your suggested approach is not only unnecessary, it is counterproductive in that it will act to reduce incentives to innovate that ultimately benefit regulated customers.

Finally, we note that the adjustment itself is not correctly calculated and does not therefore deliver Ofwat's stated intention.

Reversing the intervention here will continue to incentivise innovation and the development of markets, which are to the long-term benefit of customers. Meanwhile Wessex Water's customers will continue to enjoy the general protections afforded to customers of all regulates WaSCs that is afforded by the upper quartile benchmarking approach.

We give further details in representation M1.

Table of representations directly related to this section (4. Fostering markets and innovation)

Representation Reference	Title
M1	Bioresources energy adjustment
	Appendices
	None

5. Securing cost efficiency

5.1 Summary

In the light of the draft determination, we are making representations that close the totex cost gap of £238m predominantly through new or renewed evidence and revised cost adjustment claims for the following:

- Statutory environmental improvements where your modelling approach results in a funding shortfall of c.£100m - a huge amount for us, and larger than our total environmental expenditure between 2015 and 2020. We provide evidence to show that this gap represents model error and a possible lack of appropriate quality control in the cost assessment approach rather than inefficiency.
- c.£55m of investment to deliver significant improvements in leakage, and in pollutions and supply interruptions where we are already upper quartile performers. Your view is that the draft determination contains sufficient expenditure on base costs to deliver all of the performance commitments, including some that you have tightened in comparison to our plan values. We disagree with this on mathematical, operational and engineering grounds and as a result we estimate that the true efficiency assumption contained in your determination is close to 4% per year. This contributes to an imbalanced determination that lacks financial resilience.
- Investment to adequately serve new development and growth in our region, in particular requirements to increase wastewater capacity and reduce sewer flooding that are not adequately accounted for in the new base plus modelling approach.
- Funding for partnership working which is essential to deliver public value through environmental resilience at least cost and is widely supported by stakeholder groups.
- Drinking water quality, resilience and security improvements supported by the DWI and our customers.

Within base costs we are particularly concerned that you take account of the following items:

- That your models of costs should be updated for 2018-19 reported performance, in line with regulatory precedent and good practice.
- That your late change to a base “plus” modelling approach does not adequately allow for growth and has been accompanied by a reduction in the robustness of the models themselves. In our case this has led to a like-for-like reduction in cost allowances of c.£65m compared to the IAP that is unjustified. We provide some potential ways to better account for this.
- That your frontier shift assumption of CPIH-1.1% is out of line with regulatory precedent without sufficient or robust evidence to justify this departure. And that the constituent parts are inconsistent with one another and with the way that the cost of capital has been set, contributing to a determination that lacks resilience. We give evidence that supports a higher level of RPEs.

- In retail, where the draft determination shows us as historically efficient yet still requires us to reduce bad debt costs by c.33% from 1st April 2020, so we propose that the final determination:
 - should revert to including the two models excluded from the models use at the IAP stage
 - should use bills projected in outturn prices rather than real terms to assess costs
 - should include the impact of forward looking RPEs on the historical cost challenge, and
 - should allow for our updated expectation of new meters in line with our now published final WRMP,

In the event that cost differences remain at the final determination it is essential that these are reflected appropriately in revenue allowances and that mitigations set out in Ofwat's methodology are applied in practice. We cover our representations on these items under section one of this document.

5.2 Delivering our wastewater statutory obligations

In this section we provide our views on Ofwat's modelling of wastewater enhancement drivers at a summary level, followed by our comments and requests about the programme wide efficiency challenge that Ofwat introduced without notice at the draft determination.

5.2.1 Modelling and our representations

While Ofwat has transparently set out its approach to modelling wastewater enhancement investment, there is a risk that prolonged exposure to the econometric models developed to assess costs in a number of the enhancement categories unduly softens the criticism that one might have of such models were one to come across them fresh.

There are inevitably shortcomings in the approach the draft determination has taken, given the data that it has available to it, including:

- The small sample size for wastewater and the implications of this for modelling error
- Use of totex as a dependent variable, with no consideration given to difference in the nature between opex and capex expenditure
- The sole use of forecast data on costs
- Ofwat offers little intuitive grounding for the specification of the models or for the results implied by the estimated models (e.g. implications regarding economies of scale)
- Large differences between companies' forecasts and benchmarks which seem indicative of modelling error rather than efficiency.

Given this we strongly recommend that Ofwat considers each of our representations in this area carefully. In doing so it should consider the engineering realities of delivering our statutory obligations at particular sites, where the distribution of projects that Wessex Water is required to deliver is likely to be very different to the average company implied by the models, and where we can show that the costs and scope we are proposing is efficient.

Our view is that the existing work on capital enhancement benchmarking also suggests a potential lack of quality control which has large financial consequences for Wessex Water in the draft determination. Most materially in:

- the use of Hafren as a benchmark company despite the very small size and very narrow scope of its programme
- the implied and implausible economies of scale on the Full Flow to Treatment model
- the apparent inconsistencies between the way companies have entered the details of the WINEP compared to their expenditure requirements.

We therefore recommend that between now and the final determination there is full review of these items.

We make separate representations on:

- Bristol Sewage Treatment Works – Here the increase in full flow to treatment capacity (FFT) requirement at this single works (1,228 l/s) is greater than the total FFT programme for six out of 11 of the other WaSCs, making it a significant outlier. The cost assessment model does not take sufficient account of the size of this project as it only allows 51% of the estimated cost for the project which is a statutory obligation. Therefore we submit a cost adjustment claim so that this unique project can be considered separately. See representation C1.
- Sewage Treatment Capacity – Ofwat’s own calculation of the implicit model allowance for Wessex Water per unit of population equivalent provided is one third of the value Ofwat allowed at PR09 which does not seem credible - moreover our own calculation of the implicit allowance suggests an even lower number. Investment at this level would significantly jeopardise our ability to target 100% compliance, as required in the draft determination outcomes and as expected by the Environment Agency. See representation C2 and representation C18 for a more general assessment of issues in cost allowances for growth.
- Phosphorus removal. We worked very hard in advance of the business plan submission and well in advance of most other companies to identify and agree changes to the WINEP with the EA that have enabled us to incorporate savings through innovation into our original plan of c.£50m in this area. We remain perplexed therefore that the determination model places us well above the average modelled costs.

Our strong fear is that continued discrepancies in the model input parameters from companies for population, number of sites and expenditure make this model unreliable. One major company’s cost estimates are c.70% below the modelled allowance and this does not seem plausible.

Given that there is a significant chance of customers being required to contribute to the costs of all the amber WINEP schemes that are carried out during the 2020-25 period, the costs of these schemes should form part of the benchmarking analysis

across companies, regardless of whether they are funded upfront or via a special bespoke mechanism. This is in the interests of consistency and like-for-like comparisons. It is not clear to us whether companies have submitted their plans on the same basis and the final determination should ensure this is the case.

The draft determination has currently omitted the investment at Berry Hill to cater for the increased sludge production at our Holdenhurst STW. Work to the sludge plant at Berry Hill is an unavoidable consequence of the phosphorus removal programme and therefore a cost allowance is required.

For further details see representation C3.

- Sanitary Parameters and Full Flow to Treatment (FFT), where the Ofwat models cannot account for the complexities in scope of the projects we are required to deliver. We provide additional evidence on the optioneering, including a third-party report to confirm that the scope of works is efficient, and updates to input data for numbers of sites and population. See representations C4 and C5.
- Investigations where, in response to the query in the draft determination, we now provide a breakdown of the cost per investigation and the scopes of work. See representation C6.

Within each of the representations we provide further comments on the models, additional evidence of optioneering and cost estimating to show how the cost models do not allow sufficient costs.

In addition to comments and requests for changes to the individual driver by driver cost assessment models, we propose that the WINEP upper quartile challenge is removed or if it continues to be applied is revised as set out in the following sections.

5.2.2 The WINEP “upper quartile” challenge is not sufficiently justified and calculated incorrectly

The determination has applied an “upper quartile” challenge to all wastewater WINEP expenditure. Our view is that this challenge is unjustified and unwise because it is an overlay to models that are already very weak and therefore already likely to have underfunded some companies, including Wessex. The imposition of the “upper quartile” challenge magnifies any error for these companies.

We recognise that Ofwat will want to ensure that its cost challenges are sufficiently stretching. After accounting for the dynamic efficiencies gained by our work with the EA to find different solutions to statutory outcomes, our PR19 cost estimates for enhancement expenditure then included ongoing productivity improvements of 1% per annum. Those assumed by other companies will also be visible to Ofwat. It will therefore be possible for Ofwat to calculate the average productivity assumption that is baked into its forward-looking models. If Ofwat takes a different view on productivity improvements to the industry it could overlay the output of its models with this different view.

If however Ofwat persists with an upper quartile challenge we would point out that its calculation in the draft determination is not correct. A corrected upper quartile challenge would result in a higher c.13.7% challenge, however there are very good reasons for this to be adjusted downwards as we set out below.

5.2.3 Remove Hafren Dyfrdwy (HDD) from any estimate of the upper quartile efficiency calculation for wastewater and from the cost models more generally

The inclusion of HDD in the enhancement modelling exercise seems unreasonable especially in the light of implausible results in terms of its efficiency of forecast enhancement spend. HDD is deemed an upper quartile company and is also potentially polluting the results for other companies. HDD should be excluded because:

- First, it is not appropriate to benchmark 10 wastewater companies with one that is 50 to 250 times smaller (in terms of planned WINEP totex).
- Second, Ofwat's cost assessment predicts that that HDD's totex for WINEP enhancements is over three times what the company itself put forward in its business plan. The extent of this discrepancy raises questions on the robustness of such assessments or on the applicability of such assessment to the case of HDD, or both.
- The source of HDD's outstanding relative efficiency is almost entirely driven by FFT. It is not reasonable for HDD's relative performance on one enhancement category to carry such weight in setting the upper quartile adjustment that is applied across companies' WINEP enhancement expenditure.
- Fourth, this is exacerbated by noting the very wide gap in the modelled allowances for HDD on FFT. The modelled allowance of £6.8 million put forward by Ofwat is the average of the £9.9 million produced by one of its models, and of £3.7 million produced by the second of its models once corrected for a minor error in Ofwat's spreadsheet.

5.2.4 Consider removing Severn Trent Water (ST) from the estimate of upper quartile efficiency or otherwise include the costs of the WINEP schemes that the company has decided not to include in its plan, but has included a mechanism for funding elsewhere in the event that they are required.

Our understanding is that ST has taken a different approach to other companies in putting its plan expenditure together. We believe it has removed the costs of the comparatively less beneficial schemes that did not have multiple statutory drivers attached to them, while incorporating those that did into the plan, which we would assume means that the projects in its plan would have comparatively lower costs on a unit cost basis. This is a perfectly reasonable approach to take and we imply no criticism of Severn Trent for it. However, it risks polluting the estimates of modelled costs for the industry more generally.

We are also not clear that Severn Trent has included like-for-like explanatory factors used in the models with the costs, i.e. it may have included all the WINEP explanatory factors (including all Amber schemes) but not all of the costs, and if this is the case this would have

a further impact on the models. We provide some analysis of this in representation C3 and note that this may not just be an issue for ST but for other companies.

The potential problem here is compounded in the draft determination though by ST also being identified as within the efficient upper quartile and setting the benchmark.

Our solution to this would be, in order of preference:

- Update all models for ST's cost estimates for its full WINEP green and amber schemes (and likewise for any other companies that have taken a similar approach)
- Remove ST's costs and explanatory factors from the calculation of the models

And also to discount ST from the calculation of the upper quartile WINEP challenge if Ofwat continues to apply this.

We provide more details of our analysis in Representation C8.

5.3 Partnership working

The draft determination acknowledges the importance of partnership working, such as bathing water groups and biodiversity action groups, and the opportunities they present to deliver more for customers than a company can in isolation.

We confirm that the proposed costs are those required to achieve the target levels (rather than generate outperformance) in the two relevant bespoke performance commitments: 'Community Partnership Working to Improve Bathing Water Amenity (E6)' and 'Working with Partners at a Catchment Scale to Deliver Natural Capital Benefits (E7)' and are above the level of expenditure that would be incorporated within a companies' base costs.

To resolve the confusion about which driver to allocate this work to, we have moved the costs to a freeform line titled Partnership Working. We also provide more detailed descriptions of the activities in our Representation C9.

5.4 Delivering a step-change in performance levels

In our response to Ofwat's IAP, we explained why mathematically there was not a convincing case that Ofwat's base cost assessment modelling approach gave sufficient allowances for stretching future performance levels above the current upper quartile. For brevity we do not repeat those arguments here. We have however commissioned a report from Reckon LLP (provided as an appendix to representation C11) which includes additional simulation analysis, leading Reckon to state that:

"Ofwat builds up wholesale controls based on allowances derived from econometric models of base costs which overlook the way that differences in service quality and environmental performance may affect companies' costs. This leads to a policy concern that companies that provide relatively high-quality services and/or relatively good environmental performance will tend to be under-remunerated.

Meanwhile, those companies which provide relatively poor service quality and relatively poor environmental performance may be over-remunerated, with customers of these companies paying for levels of performance that are not delivered".

As Wessex Water is a company that consistently delivers comparatively high performance on the key service quality measures this is concerning to us.

In our IAP response we acknowledged that, at the time, there might be some level of correlation between current upper quartile performance in wastewater and upper quartile (i.e. low) costs through the base models. We have reviewed this analysis against the base-plus modelling and analysed this against the most recently reported performance levels. The lack of correlation remains for the water service. We can no longer conclude that there is any correlation between low cost and high product quality in the wastewater service as can be seen below⁵.

Table 5-1: Product quality for upper quartile (low) cost wholesale wastewater companies

	Wessex	Severn Trent	Yorkshire
Sewer flooding (internal)	Upper quartile	Above average	Bottom quartile
Sewer flooding (external)	Above average	Upper quartile	Below average
Pollutions	Upper quartile	Below average	Bottom quartile
Treatment work compliance	Upper quartile	Bottom quartile	Bottom quartile
EA's Environmental Performance Assessment	Above average	Above average	Below average

Table 5-2: Product quality for upper quartile (low) cost wholesale water companies

	Portsmouth	Yorkshire	Dee Valley	Southern	South Staffs
Water quality (CRI)	Above average	Above average	Above average	Bottom quartile	Bottom quartile
Supply interruptions	Upper quartile	Above average	Bottom quartile	Upper quartile	Upper quartile
Leakage (per km of pipe)	Below average	Bottom quartile	Upper quartile	Below average	Below average
Leakage (per property)	Upper quartile	Below average	Bottom quartile	Upper quartile	Above average
Per capita use	Below average	Upper quartile	Above average	Upper quartile	Upper quartile

Therefore, while we were willing to concede that under Ofwat's IAP base modelling approach that there may have been some allowance for historical upper quartile performance in some areas, having analysed the revised data we are no longer of the same

⁵ We make a reasonable presumption here that the companies identified as upper quartile efficient once 2018-19 values are incorporated into the base cost modelling are unchanged.

view for Ofwat's new base plus modelling approach. Our view is that the models should be considered as only making allowance for average levels of performance.

On the basis of the points made above, we consider that the level of performance funded from the base plus models is no greater than the average performance across the industry over the historical data period.

Our current position on supply interruptions, leakage and pollutions at 1 April 2020 is significantly better than the industry average, and our business plan is to make substantial further improvements in all of these measures by March 2025.

It follows that none of the performance improvement we plan to make over the 2020-25 period is funded through the allowances from the base plus models (in the absence of further efficiency improvements).

Under Ofwat's base cost modelling approach we continue overall to be the most efficient⁶ company on an historical basis. We calculate (somewhat conservatively) that the lack of additional cost allowance for delivering improvements to leakage, supply interruptions, pollutions, water quality events and mains repairs is the equivalent of an additional c.2.2% per year productivity challenge on top of the 1.5% baked into cost allowances, but Ofwat has no accompanying rationale for this additional efficiency challenge.

Clearly in our view Ofwat should allow for our additional leakage expenditure in full. Ofwat's approach at its draft determination for leakage expenditure suggests that it itself acknowledges that where a company is performing at the historical upper quartile that it may be appropriate to allow additional funding above the base cost models to improve further. We would therefore propose that, as a minimum, Ofwat extends this upper quartile concept to the other key areas for us of supply interruptions and pollutions and reassesses our representations for costs on this basis. In both of these cases Wessex currently performs at the historical upper quartile level but is committed to making step-change improvements.

The following table summarises these key service areas and shows the implicit additional efficiency challenge the draft determination has applied (based on draft determination base plus totex) by not accepting these costs. For a more holistic view it also includes the impact of the ERI ODI and shows the implicit efficiency challenge generated by the penalty of £4.5m which we consider to be very likely.

⁶ Totalling historical water wholesale base, wastewater wholesale base and retail expenditure against Ofwat's modelled base allowance shows Wessex as the most efficient WaSC overall in terms of expenditure

Table 5-3: Performance in key service-level metrics where step-change in performance level is required in relation to cost adjustment claims

	2018-19 performance	Step-change improvement to 2025 required in DD	Representation on costs	Implicit efficiency challenge to deduct from 1.5% (at service level)
Supply Interruptions	Upper Quartile	c.50%	Accept cost adjustment claim – see representation C12	0.7% p.a.
Pollutions	Upper Quartile	c.20%	Accept cost adjustment claim – see representation C11	0.5% p.a.
CRI	Upper Quartile	To 100% but dead band to protect from penalties	None	-
Leakage per length of main	Better than average	15%	Accept cost adjustment claim – see representation C13	1.3% p.a.
ERI (Wessex)	Median	c.70%	None - but representation on target level	1.2% p.a. ⁷

5.5 Strategic water resource development

The draft determination includes an additional enhancement allowance for the evaluation of potential strategic regional water resources solutions, in partnership with other companies.

We are pleased that we have now been included in the group of companies that could potentially contribute to securing long-term resilience at a regional and national level. Our primary focus is exploring the opportunities to provide a bulk transfer to Southern Water's Hampshire zone to help meet the very significant deficits that they face in their area. In turn, meeting this objective would reduce Southern Water's need to draw on other schemes which have the potential to meet forecast deficits in London and the South East. We confirm that we are committed to playing our part in the development of potential solutions.

On 8 August 2019 we received an email from Ofwat stating that they were willing to consider further requests in this area from companies. With our partners in the West Country Water Resources Group (South West Water, Bristol Water and Wessex Water) we have developed an ambitious joint proposal for Ofwat's consideration, with the aim of maximising the opportunities to trade water with Southern Water. In our proposals we have expanded the capacity of sources and transfers by 70 MI/d compared with the draft determination, by

⁷ Based on penalty of £4.5m per year from ODI

including other strategic options from across the whole of the south west and additional partners (Bristol Water).

Representation C14 describes our proposals in more detail and appends the joint proposal developed by the water company partners of the West Country Water Resources Group. On the basis of some corrections to the draft determination assessment and the additional capacity proposed, we have increased our share of the development costs to £4.23m. We also provide comments on the gateway process and reconciliation mechanism. The proposal includes a recommendation that we follow the standard gateways' timings rather than the accelerated timetable proposed for some Southern Water schemes, given that we start the development process from a different position to the companies in the south east of England.

5.6 Resilience (water)

Please note that for reasons of national security the following information, representation C15 and Appendix C15.1 should not be published.

On the basis of new criteria included in the draft determination Ofwat has disallowed the majority of the costs related to improvements in the resilience of [REDACTED].

In response we provide additional information in individual representation C15, as summarised below:

- **Need.** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] The specific service failure to be mitigated is [REDACTED] that cannot be recovered within eight hours resulting in [REDACTED]
[REDACTED] - which is a low probability / high consequence event. The need for this investment was identified through our resilience framework on which we have provided more detail in our submission earlier this month.
- **Management control.** In parallel with the PR19 process we have progressed a major project to tackle issues that are within management control. Between September 2018 and May 2019 there have been [REDACTED] to complete the short-term measures, which has significantly improved the immediate reliability [REDACTED], but hasn't removed the major single points of failure or mitigated the consequences of failure.
- **Options.** Contrary to the statement in the deep dive, cost benefit analysis was provided in our business plan submission, which showed that resilience improvements at the site were cost beneficial. We have now completed the detailed design of [REDACTED] and other medium-term measures.
- **Robustness and efficiency of costs.** Detail cost estimates have been prepared for all the medium-term measures. The cost of [REDACTED] has

increased to £4.1m and the other measures add up £5.6m, giving a total of £9.7m which exceeds the amount included in our plan, although our request remains as per the original business plan (£5.3m).

More information is shown in Representation C15.

5.7 Security

In the draft determination Ofwat passed the SEMD expenditure and gave three partial passes for the Non-SEMD proposals, which resulted in a 20% reduction for the Non-SEMD investment.

We have provided additional evidence in our representation C16, including further detail on the projects and how the costs have been established.

As explained in our business plan *Supporting document 4.1 – Providing resilient services* there is an increasing cyber security threat to the water sector. The cyber security threats are constantly changing and adapting meaning that we must adapt to counter the threats. There is a need for additional investment in resilient infrastructure beyond the historical levels of investment on both our information technology and our operational technology at treatment sites. In response to the comments in the draft determination deep dive we have established a set of deliverables that can be assured annually.

As requested, we have added a new performance commitment to hold us to account and protect customers from non-delivery, as described in Representation O11.

5.8 Ofwat's approach to base plus cost modelling

We are very concerned about Ofwat's revised approach to modelling "growth" items now within the base cost models.

Notwithstanding the fact that it has taken a considerable amount of time to understand the impacts of this change we are concerned that Ofwat's draft determination has resulted in a significantly poorer set of models, notably through a reduction in the intuitive explanatory power of the variables and associated coefficients.

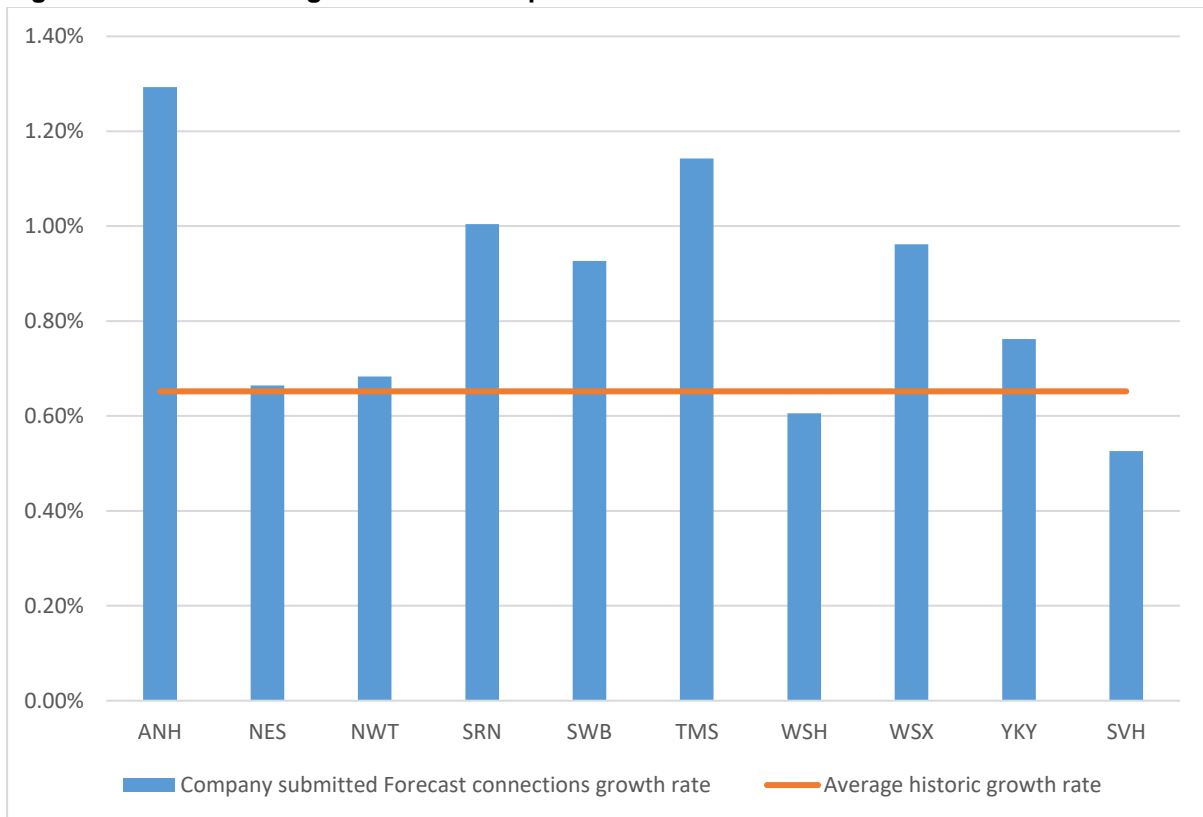
There are many different ways of calculating the financial impact on our cost allowances of the change in the draft determination. Our estimate is that the incorporation of the growth elements into our base cost allowances has reduced our total cost allowance by c.£65m compared to the IAP on a like-for-like basis, but depending on the method of calculation this could be as high as £80m. At an industry level Reckon has separately calculated the total cost reduction from the revised approach is c.£0.8bn.

The proposed base plus modelling approach does not accurately account for growth costs, the marginal cost of a single new connection is significantly lower than would be expected and out of line with the proposed DSRA.

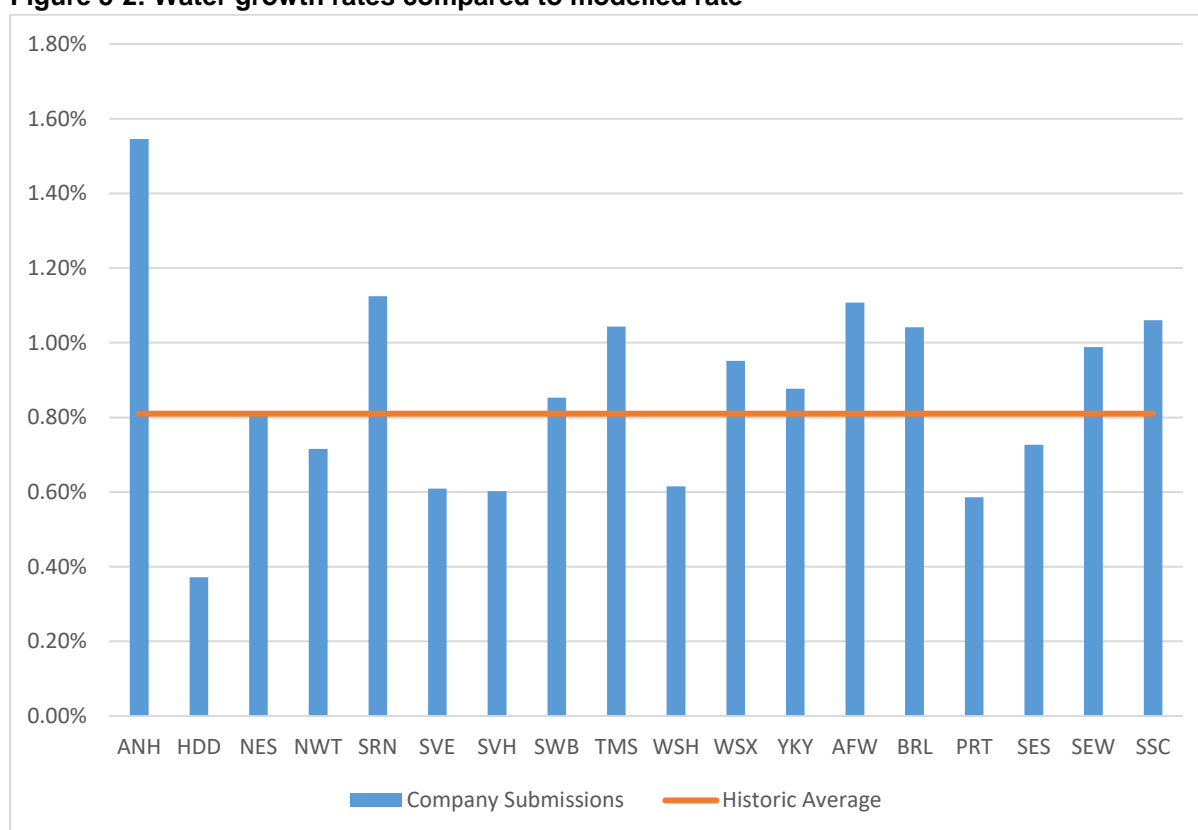
Due to this the models implicitly fund new connections only at the historical average rate of the industry, c0.65% per annum. Wessex Water is disproportionately impacted by this on both supply and waste.

On wastewater the modelled rate of 0.65% per annum is significantly lower than our proposed rate of c0.94% and will result in underfunding our growth totex by c43%.

Figure 5-1: Wastewater growth rates compared to modelled rate



On water supply the modelled rate of 0.81% per annum is below the proposed average rate of 0.95% per annum and will result in underfunding our growth totex by c17%.

Figure 5-2: Water growth rates compared to modelled rate

This should be rectified in the final suite of models used to set cost allowances. If this is not possible then adjustments to the implicit allowances for growth should be made to correct for this and applied symmetrically, increasing cost allowances for companies with forecast growth rates greater than the historical average and reducing allowances for companies with growth rates lower than the historical average.

We provide more detail in representation C18 together with a report from Reckon as an appendix.

5.9 Retail

Ofwat's modelling approach identifies us as upper quartile efficient on an historical basis⁸. Furthermore, our business plan incorporated an initial 6% step-change reduction in bad debt costs on top of additional productivity improvements of 0.5% each year across the whole retail control.

Ofwat's draft determination represents, in total, a £21m nominal reduction to our plan expenditure and makes no separate allowance for inflationary cost increases. It requires an

⁸ Ofwat's draft determination models show Wessex's costs to be 87.6% of the average level. The boundary for the upper quartile sits at 0.8811 so the company is in the upper quartile for cost efficiency.

immediate 33% reduction in our most recently reported costs of bad debt and debt collection. This can be seen in the table below.

We do not consider this to be credibly deliverable for a company already assessed to be efficient overall and where there is no current prospect of legislative change that could cause such a step-change in debt recovery expenditure and in cash collections.

Table 5-4: Annual retail costs (At outturn)

	Wessex (2018-19) (£m)	Ofwat DD – 2020 onwards (£m)	% Change
Bad debt costs	14.4	9.6	-33%
Non-bad debt costs	19.6	19.0	-2%
Total	34.0	28.6	-16%

We suggest a number of changes and improvements to Ofwat's modelling approach that could help bridge this credibility gap.

5.9.1 The draft determination incorrectly uses real terms bills in its modelling approach and this should be amended to outturn bill values

The inclusion of a 'bill size' variable within the retail model suite rightly recognises the fact that it materially impacts costs in ways that are clearly outside of efficient (retail) management control.

It is also plain that it is the 'nominal' measure that: (a) accurately reflects the 'value foregone' (efficient cost incurred) by companies, if customers default / enter into arrears; and (b) would be the relevant determinant of any additional impact via increased default probability (i.e. customer behaviour is affected by the size of the bill they face, not its value in 'real terms'). Put simply, if a customer defaults on a £100 bill, the cost to an efficient company is £100, not £100 less the impact of inflation (i.e. the cost impact occurs in nominal terms). Adjusting the average bill size for inflation is, therefore, erroneous - as it understates the true efficient cost impact.

We agree that one would ideally adopt an internally consistent approach to model estimation and cost forecasting. In this case, however, because for the reasons outlined above, it is clearly the 'nominal' values that drive the efficient costs incurred by retailers, the appropriate solution to that is obviously to re-estimate the models using the nominal bad debt figure.

5.9.2 The draft determination should reinstate the two models that have been excluded since the IAP

Although statistical significance is desirable in econometric cost models, it is not an absolute requirement. What is equally (if not more) important is that intuitively valid drivers, which impact costs in ways that are outside of management control, are included – so that the explanatory power of the model is appropriate. Although some variables in these models are not statistically significant, they all have the sign that we would expect (positive for proportion of metered customers and average bill size; negative for council tax collection rate). Therefore, the coefficients are all having the desired effect when the cost projections

are made. As such, the lack of statistical significance should not have any distortionary impact on cost allowances.

We recognise that the two excluded models appear to be the most “generous” in terms of cost allowances. This goes to the issue of ‘balance’ and the need for the determination to weigh up the risk of setting: (i) ‘too high’ prices on one hand; against (ii) ‘too low’ prices on the other. Both of these risks are detrimental to customers where they manifest. The draft determination’s approach should reflect an ‘even-handed’ weighing up of evidence. In this case, the decision to exclude two models on the grounds of one variable performing less strongly statistically, yet to include other models where the same issue occurs, does not appear to be consistent with this principle.

5.9.3 The draft determination incorrectly excludes forward looking cost changes from the historical cost assessment of the efficient upper quartile

Ofwat is correct to take account of historical assessments of cost and relative efficiency in its forward-looking benchmarking and this is an improvement from the IAP.

Having done so however the draft determination has then ignored that, all else equal, the upper quartile position will move in comparison to the historical position against a fixed model because of input cost inflation that is not captured by the model variables themselves.

Using as an example the values in our plan we projected that input cost increases would be c.2% per annum in retail and that it was reasonable to achieve 0.5% productivity from the efficiency frontier leading to an annual frontier shift in costs of +1.5% per annum.

Applied to the historical upper quartile it would increase from 0.8961 in 2020 to 0.9599 by 2025 (i.e. 0.8811×1.015^5). Taking an average of these two figures, would give a more accurate historical efficiency challenge of 0.9280.

5.9.4 Metering numbers

Following permission from the Secretary of State we have now published our final water resources management plan (WRMP).

We have therefore now provided an updated dataset for you to use in this regard which we confirm is consistent with the WRMP. Our original submission erroneously contained our draft baseline metering estimates from the draft WRMP rather than our preferred plan.

We provide more detail on the analysis underpinning our retail representations in Representation C19.

5.10 Using 2018-19 data in the models

The draft determination does not use the most up to date cost and explanatory factor information Ofwat now has available to it.

It would be good practice to include data related to 2018-19 in Ofwat's cost models unless this requires a substantial reworking of model form to which companies would not credibly be able to consider or respond.

5.11 Frontier shift

Our IAP response explained that a 1.5% productivity assumption could be acceptable as part of an "in the round" assessment of the financeability of the plan and the other economic parameters, including the view of input cost increases at the efficiency frontier. Although allowing wholesale RPEs of c0.4% per annum in relation to CPIH is a step forwards compared to the IAP position, it is still not a true reflection of what we would expect in the context of a productivity improvement assumption of -1.5% per annum.

At the time of the IAP we provided a report from Economic Insight that explained why it was important to understand that the productivity, input price and cost of capital assumptions in the determination need to be consistent with each other and that at the time of Ofwat's initial assessment this was not the case.

In our September 2018 submission we submitted a report by Economic Insight outlining its view on RPEs as they would apply to Wessex. Economic Insight has updated this report in line with more recent market data and we submit it as an appendix to this representation.

If high productivity assumptions are maintained, the final determination should use the high case RPEs implied by the evidence we have commissioned from Economic Insight (attached as appendix 1 to our representation C21).

Table 5-5: Proposed RPEs per year under Ofwat's 1.5% productivity assumption

	20-21	21-22	22-23	23-24	24-25	Avg.
Water resources	1.1%	1.0%	0.9%	0.8%	0.9%	0.9%
Water Network+	0.9%	0.7%	0.9%	0.8%	0.7%	0.8%
Wastewater network+	1.5%	1.3%	1.3%	1.3%	1.3%	1.4%
Bio resources	0.7%	0.5%	0.6%	0.5%	0.7%	0.6%

This will improve the financial resilience of the draft determination by making two of its key economic assumptions more consistent with each other.

5.12 Business rates

In Representation C22 we explain why you should make an adjustment to our cost allowance to take into account one-off releases of provisions.

5.13 Cost sharing ratio

In Representation C23 we explain that we have removed some costs that were included in our business plan because Ofwat has applied slightly less demanding targets across the

industry than those that we originally proposed for pollutions and sewer flooding. Our original targets were cost beneficial and we think these costs should be deducted before calculating our final totex sharing rate. This would otherwise act as a disincentive for companies to propose stretching targets in future.

Table of representations directly related to this section (5. Securing cost efficiency)

Representation Reference	Title
C1	Cost adjustment claim for Bristol STW
C2	STW Capacity
C3	WINEP: Phosphorus removal
C4	WINEP: Sanitary parameters
C5	WINEP: Flow to full treatment (FFT) increase
C6	WINEP: Investigations
C7	WINEP: Event duration monitoring
C8	WINEP: In-the-round 8.6% efficiency challenge
C9	Partnership working
C10	Sewer flooding
C11	Pollution reduction strategy
C12	Enhanced supply interruptions
C13	Enhanced leakage reduction
C14	Strategic regional water resource solutions
C15	Resilience
C16	Security (non-SEMD)
C17	Raw water deterioration
C18	The move to base+ modelling
C19	Retail costs
C20	Using 2018-19 data in the models
C21	Frontier shift and RPEs
C22	Business rates
C23	Totex sharing rate
	Appendices
C1.1	Third party report - Stantec
C11.1	Third party report - Reckon
C14.1	Strategic water resources
C15.1	Maundown electrical improvements
C18.1	Reckon growth
C21.1	EI parameter consistency
C21.2	EI RPEs

6. Accounting for past delivery

6.1 Summary

We have one representation to make in this area which is the unexpected way that Ofwat has applied the SIM rewards.

6.2 SIM rewards and their application

The final methodology for PR14 stated that:

We proposed that SIM scores for 2015-20 should be calculated using data from household customers only, and that we would apply financial incentives to household retail prices in a way that delivers a similar financial outcome to the current SIM.

The current proposal represents a material change in the overall quantum of reward /penalty which is at odds with this statement.

At PR14 the net SIM adjustment was -£79.3m @12-13 prices, or £89.1m @2017-18 prices. The proposed adjustment of -£128.2m represents a step change in the overall financial outcome, the overall penalty being 43% higher.

The approach we propose in our representation P1 mimics that of PR14: if the average SIM score is greater than 1 standard deviation from the mean then the company earns 6% of household retail revenues, otherwise we extrapolate linearly between the mean and one standard deviation above it, rounding down to the nearest 0.1%. We treat the penalty similarly, with two standard deviations below the mean resulting in a penalty of 12% of retail revenues. This approach results in an overall adjustment of a more similar magnitude (-£73.7m or 16% less) to that at PR14.

This ensures a strong incentive for companies to continuously improve customer service. Under the current proposal if a company is a significant way off of the industry leader the incentive to continue to improve is reduced, however by opening up the maximum level of reward to multiple companies, as was the case at the PR14 determination, this retains the strength of the incentive.

Table of representations directly related to this section (6. Accounting for past delivery)

Representation Reference	Title
P1	SIM
	Appendices
P1.1	SIM calcs