WONDERFUL ON TAP



2.1 Risk and return: WACC

The WACC plays a central role in the overall balance of risk and return. We very much welcomed the decision in 2017 to set out the early view and have consistently supported the range proposed at that time – one of the few companies to do so. The early confirmation of a range for the WACC was an important feature of PR19 because the degree of certainty we assumed it provided as part of the overall "package" helped support the submission of stretching totex and service plans – something that PR19 has achieved like no other previous price review.

Given Ofwat's long track record in setting the WACC and the view, justified at times, that companies overplay the impact of a reduction, we have been reticent in expressing our views on this topic at previous points in the price review process. However in light of the significant reduction put forward in the Draft Determination, accompanied by stretching service improvements and cost efficiencies we now strongly believe that Ofwat has not sufficiently considered the reasonableness of the WACC in the context of the overall package. This is important for the efficient delivery of outcomes that matter to our customers and the environment, including over the longer term. That is, the provision of a fair balance of risk and return is key to supporting stable and low cost financing conditions within which the substantial investments required for outcome improvements can be provided. This has therefore prompted our representation.

The proposal for a 21 basis point reduction in the WACC, and the suggestion of a further substantial reduction, would – if applied – represent a substantial shift in the balance of risk and return, on both an absolute and relative basis.

We have analysed the overall PR19 DD package against other regulatory decisions¹ to assess whether the ask, reflected by the cost and service improvements, is fair given the commensurate return. This is illustrated in the figure below, whereby we have plotted what we consider to be the four primary factors impacting returns: 1 – assumed productivity improvements, 2 – required service improvements, 3 - headroom on the cost of debt (using headroom on embedded debt specifically); and 4 - the allowed (base) cost of equity. In this diagram the more stretching the decision, the closer the line is to the centre.

¹ This analysis has been carried out for PR14, the CMA decision on Bristol Water, Ofgem RIIO ED-1 and PR19. We have also included more recent regulatory decisions from the CAA and Ofgem.

Figure 1 – Assessment of the package in the round



In forming a view on reasonableness, one would expect to see the regulatory decisions intersecting – for example one price review might have set more stretching service improvements but less demanding productivity improvements, and vice versa. However, as is illustrated by the chart, the sum of the PR19 decisions would seem to represent, by a significant margin, the most challenging review in recent history, for the lowest base return on equity. This is evident by:

- the extremely stretching service improvements for the comparative measures, which requires on average an 8% annual improvement (ie, reduction in incidents) otherwise penalties are incurred. This compares to the performance challenge of 2-4% set by the CMA, Ofgem and Ofwat in previous reviews;
- the most demanding productivity improvements compared to any other regulator in recent history, with the improvement being double what the CMA set and applying over and above the UQ efficiency challenge;
- no headroom, indeed a shortfall for the majority of companies on embedded debt , contrasting with PR14 and the CMA decision; and
- the DD proposed approach on beta and the risk free rate, which would result in the allowed cost of equity being lower than at any other time in UK regulatory history, as illustrated below. Only CCWater appears to have argued for a lower figure than in the DD, with the assessments in other consultant's reports, for example Frontier Economics and indeed Ofgem's May 2019 methodology document identifying a higher cost of equity estimate.



Figure 2 - Regulatory assessments of the cost of equity (RPI deflated)

We do not think that the resulting position on the WACC published in the slow track DD is reasonable when viewed in the round. We can understand why, given experience of financing cost outperformance at previous controls, there is such emphasis being put on pressing for a lower WACC. However, the introduction of cost of debt indexation addresses what has been the principle source of past financing cost gains, and – as was highlighted above – the cost of equity proposed in the DD lower is the lowest in UK regulatory history.

We think it critical that the final WACC decision – including any potential changes to the DD proposal that may be considered – forms part of a determination that is reasonable and balanced when viewed in the round. That is, the appropriateness of the levels of stretch in other areas should be considered alongside the final view on the WACC to ensure that consistent and reasonable overall approach is being adopted.

In making this representation, we recognise that some updating of the early view to take account of more recent market information is to be expected. But to maintain strong incentives for business plans (for PR19 and future reviews), it is important to ensure that subsequent changes to the early view of the WACC are balanced, given the subjective nature of many components, consistent with the early view methodology, and made as a component of the package in the round.

The assessment of the WACC in the Draft Determination appears to have been undertaken as a 'fresh' and independent exercise. It does not appear to pay sufficient regard to the "in the round" approach that companies took when developing plans and accepting IAP/DD decisions. Across each component within the CAPM framework Ofwat has considered in isolation and anew how each parameter should be assessed, which has led to a number of substantive changes.

There are three changes which we believe should be reconsidered to ensure that the overall package remains stretching but fair. These relate to:

- beta focused on the timeframe over which the assessment is made;
- the risk free rate relating to what weighting is given to nominal versus RPI linked gilts; and
- the cost of debt relating to what forward looking assumptions about the halo effect are reasonable given the expected credit rating of the notional company.

We consider these points in turn below.

1. Beta should be derived using a longer-term view consistent with best practice

The estimation of beta is a key input into the cost of equity, to reflect the level of risk faced by investors in the water sector.

When estimating beta one of the most critical issues is the time period over which (listed utility) returns are assessed relative to the FTSE. This is because regulators are quite rightly concerned that temporal factors, such as the price review itself, can affect beta estimation. These factors can result in what is referred to as uninformative volatility. Observers of regulated utilities in the past two years will recognise two prime examples of such sources of volatility - the price review and the Labour policy of re-nationalisation.

In the DD a preference is expressed for using data over two years, on the basis that it captures more recent market evidence whilst mitigating the risk of uninformative volatility. However rather than mitigating this risk, we can observe that the use of the two-year data series makes the risk a reality. This is evident in the chart below, which shows: (i) there is significant volatility in beta using a 2-year data series, notably falling 10% in 4 months (0.29 to 0.26) and c~20% (0.32 to 0.26) since the early view; and (ii) there is significant divergence between the beta calculated using a 2-year data series and more medium and long term data series.



Figure 3 – Ofwat (unlevered) beta estimates

Divergence of the proposed two-year data series from the medium and long term view raises particular concerns. When the early-view WACC was presented, a key feature that supported the reasonableness of using a daily 2-year unlevered beta estimate of 0.32 was that it was broadly in line with the longer term daily 5-year unlevered beta estimate (0.33) and the average of a long-term range. That is not the case for the 28th February view of daily 2 year beta estimate of 0.29, or the 28th June 2019 estimate of 0.26, particularly since this beta would fall outside the long-term range – raising serious concerns of uninformative volatility.

We note that other regulators and academics have considered the measurement issue at length. Of particular relevance are the views of the CMA and the UKRN, both of whom have advocated calculating beta over a longer time period. More recently Ofgem has followed suit – which we highlight below.

In the Northern Ireland energy appeal the CMA initially considered a similar approach to Ofwat, calculating beta using both a 2-year window and a longer term data series (10 year). However the CMA ultimately decided to use the longer term view instead of the 2-year data set on the basis that:

Given that beta can vary over time we think that it is right to base our estimate on a relatively long run of data. ² Central Markets Authority, 2014.

More recently the issue of how to measure beta was considered in the UKRN cost of equity report on behalf of other regulators. Its 2018 report noted that:

There is 'a quite strong prima facie case to use all available data to estimate, beta, **not** just a relatively short recent sample.' **UK Regulators Network, 2018**

Recommendation 2 of the UKRN report is also relevant here in that it sets out that the authors of the report are, on balance, in favour of choosing a relatively long time period, for example, 10 years, when estimating the WACC, but that more important than the choice of horizon per se is that all components of the CAPM-WACC are estimated using a methodology that is consistent with that chosen horizon. Furthermore, we note the comment by Burns that the extent of judgement and discretion required for beta estimation "…reinforces the obligation on regulators to examine the evidence as a whole, not rely solely on outlying estimates…" (p53-4). This point is highly relevant in a context where (as shown above) the 2 year beta can be seen to be diverging markedly from longer term estimates.

Finally whilst Ofgem is yet to publish its draft determination, in its Sector Methodology (May 2019) it has set out an expectation that it will not place any material value on using a short term equity beta:

We remain unconvinced that we should place material weight on short-term equity beta results....Our strong view is that the noise to signal ratio is particularly high within short-term is that results. **Ofgem, 2019.**

We understand the need to take into account more recent market evidence. But given the issues associated with using a short term 2-year data set, we believe the beta is better estimated using the daily 5-year beta. Such an approach would also appear to be more strongly aligned to the views of the UKRN study on beta, the CMA's decisions and other regulatory views.

2. The risk free rate should be based on nominal gilts, consistent with the early view, not on gilts linked to the discredited RPI index

The PR19 methodology marked an important shift in terms of how the effects of inflation should be taken into account, with Ofwat becoming the first regulator to move away from using RPI. In making the decision to abandon RPI and index prices using CPIH, Ofwat emphasised that the continued use of RPI lacks legitimacy with customers and stakeholders.

The reasons for abandoning RPI have been clearly and extensively set out by Ofwat and others:

UK Statistics Authority (UKSA): *RPI is a flawed statistical measure of inflation ... taxes, benefits and regulated prices should not be linked to RPI ... government and regulators should work towards ending the use of the RPI as soon as practicable. (January 2015)*

² CMA,

https://assets.publishing.service.gov.uk/media/535a5768ed915d0fdb000003/NIE_Final_determination.pdf

Ofwat: *RPI is losing its legitimacy: it is statistically flawed, is discredited and has been discontinued as a national statistic (May 2016).*

Office National Statistics: Our position on the RPI is clear: we do not think it is a good measure of inflation and discourage its use (May 2019).

Ofwat's assessment of the risk-free rate in December 2017 was consistent with this position. Evidence on RPI-linked gilt yields was not used, and instead the assessment was based on nominal gilt yields. This ensured consistency across the different aspects of the price review and enhanced the legitimacy of the PR19 framework.

For the slow-track DDs, however, Ofwat chose to depart from this approach when calculating the risk free rate, by using gilts linked to the discredited RPI, as illustrated below.

	Gilt Weighting		
	Early view	DD	
Nominal 10 yr gilts	50%	0%	
Nominal 20 yr gilts	50%	0%	
RPI-linked 10-year gilts	0%		
RPI-linked 20 year gilts	0%	50%	

Table 1 - Weighting placed on nominal v RPI gilts

This reliance on RPI gilts is also contrary to the views of Ofwat's own cost of capital advisers, Europe Economics, who noted that: As RPI diverges more and more from CPIH and does so in ways that have not been stable over time (as was discussed at length in our 2017 report), the case for placing sole reliance upon RPI-linked gilts as versus nominal gilts, has become weaker.

In practice, the case for not using evidence from RPI-linked gilts is even stronger than that presented by EE, because the extent of RPI's flaws can also be expected to generate risks over how indexation will actually be applied to existing RPI-linked gilts in the future. It is notable in this respect that the **House of Lords Economic Affairs Committee January 2019 report 'Measuring Inflation'³ expressed major concerns over the continued use of RPI to index existing index-linked gilts**. The report recommended that the government decide whether RPI should continue to be published in its existing form for the purposes of existing RPI-linked gilts, or whether a process of adjustments should be made to RPI so that it converges with the single general measure (i.e. CPI or CPIH).

The case for moving away from RPI has been well made by different experts across the field – including the ONS, the Bank of England, the House of Lords and Ofwat itself. We think it important to the credibility of the regulatory framework that the methodology decision to stop using RPI is upheld, as was done in the early view WACC. This would ensure consistency across different aspects of the regulatory building blocks. For this reason our strongly held view is that the estimate of the risk-free rate should be based on nominal gilt yields – as proposed in the early view – and not based on gilts linked to the discredited RPI index.

³ https://publications.parliament.uk/pa/ld201719/ldselect/ldeconaf/246/246.pdf

3. The assumed levels of future debt out-performance are not consistent with Ofwat's own assessment of credit ratings

Ofwat's proposals assume that new debt will be funded in line with the average of A/BBB nonfinancials (with a tenor of 10 year or more), less a deduction to reflect a 'halo effect' that water companies have when raising debt.

This halo effect assumption is based on historic performance data, when companies were able to operate at a higher and more secure credit ratings. We do not believe it is reasonable to expect companies to achieve the same credit ratings and debt pricing as they have previously, given the increasingly challenging nature of the review. This point is emphasised by the Draft Determination outputs. As illustrated below, every company is targeting a Baa1 rating with Moody's **under the notional structure.**

Company	Moody's	Company	Moody's
Anglian	Baa1	United Utilities	Baa1
Dwr Cymru	Baa1	Yorkshire	Baa1
Hafren Dyfrdwy	Baa1	Affinity	Baa1
Northumbrian	Baa1	Bristol	Baa1
Southern	Baa1	Portsmouth	Baa1
Severn Trent	Baa1	SES	Baa1
Thames	Baa1	South East	Baa1
Wessex	Baa1	South Staffs	Baa1

Table 2 – Target credit ratings under the notional structure

We do not believe the historic evidence on out-performance provides a reliable basis for the proposed increase in the 'halo effect' given the extent of pressures on company credit ratings, and believe the assumed level of out-performance should be kept consistent with the early view of the WACC, which already included a significant level of stretch.

Conclusion

Our view has always been, and remains, that the DD and FD should be judged in the round – taking into account the totex, service challenges alongside the level of returns allowed for investors. To this end we have been reticent to engage in debates about how specific components that form the WACC should be calculated (with the exception of the formula error in the ratio of new to embedded debt).

However, with the proposal for a lower WACC having been received after the fast track companies' DD, it is now apparent that the current position no longer represents a fair and reasonable package when viewed in the round. We are therefore making a small number of representations aimed at improving the balance of the position:

- Beta use 5 year daily data to address the evident problems with the reliability of recent 2 year data, which would bring Ofwat more in line with CMA and other regulatory views
- Risk free rate avoid using RPI gilts to estimate the risk free rate, and use nominal gilts to, consistent with the original PR19 methodology and wider expert views discrediting RPI.
- Debt reconsider the proposed increase in the 'halo effect' given the challenges facing the notional company that cast significant doubt on companies' ability to outperform at historical levels

Such adjustments would still ensure that the regulatory settlement at PR19 would be extremely stretching both in absolute and in relative UK terms, but would be more reasonable and better aligned to other regulatory and Government policy.

In the remainder of this chapter we expand on the key issues with the DD approach. This focuses on (i) the importance of the early view of the WACC to business plan incentives; (ii) the estimation of beta; (iii) the estimation of the risk free rate; and (iv) the assessment of debt.

1. The estimation of beta

The DD re-assessment of unlevered betas

The DD states⁴ that for the 'early view' of the WACC, the beta estimate was based on daily returns data with a 2-year trailing window up to 31 July 2017, using Ordinary Least Squares to regress FTSE All Share returns data on returns for Severn Trent and United Utilities. Viewed from this perspective, the revised unlevered beta estimate used for the DD WACC, and the suggestion that a further substantial reduction in the WACC driven by a lower beta may be appropriate at the FD, has the appearance of a straightforward updating exercise, wholly consistent the 'early view' approach. This line of thinking (which appears to have underpinned the DD), is illustrated in the Table below which shows the evolution of the Ofwat's Daily 2-year unlevered beta estimates.

However, in our view this is too narrow a reading of the 'early view' unlevered beta assessment.

	31 July 2017 Used for Early View	28 February 2019 Used for DD	28 June 2019 Referred to in DD
OLS estimate	0.32	0.28	(Basis unstated)
ARCH/GARCH estimate	Not assessed	0.29	
Ofwat central estimate	0.32	0.29	0.26

Table 3 – Ofwat's Daily 2-year unlevered beta estimates

The critical issue here concerns the time period over which it is appropriate to estimate unlevered betas. As highlighted in the table below, the importance of considering evidence on beta over a relatively long time period has been noted by a number of regulators and academics, and indeed it was considered important by Ofwat at PR14, when concerns over the potential for the price review process to affect beta estimation were noted.

In line with this, we consider a key feature that supported the reasonableness of Ofwat using a daily 2-year unlevered beta estimate of 0.32 for its early view, was that it gave a figure that was broadly in line with the longer term daily 5-year unlevered beta estimate. That is not the case for the DD daily 2 year beta estimate of 0.29, or the 28th June 2019 estimate that Ofwat refer in the DD or 0.26.

Author	Key observations		
Robertson & Wright (within	There is 'a quite strong prima facie case to use all available data to		
2018 UKRN Cost of Equity	estimate, beta, not just a relatively short recent sample.' (p52,		
Study)	emphasis in original).		
Indepen: Ofgem Beta study	'In all cases, a look back over at least five and probably ten years is		
– RIIO-2 (December 2018)	desirable' (p19)		
Ofgem RIIO-2 Sector	'We remain unconvinced that we should place material weight on		
Specific Methodology	short-term equity beta results.' 'Our strong view is that the noise to		
Decision (May 2019)	signal ratio is particularly high within short-term results. We also		
	observe a mean reversion effect within the data - we therefore		
	believe that long runs of data will help us to see through the cycle,		

Table 4 – Examples of recent emphasis put on the importance of considering beta data over relatively long time periods

⁴ DD, Cost of Capital technical appendix, p46-47.

			avoiding undue bias on high-points or low-points within the short-term date.' (p52).
CMA,	Northern	Ireland	'Given that beta can vary over time we think that it is right to base
Electric	ity (2014)		our estimate on a relatively long run of data.'

The DD notes the relative advantages and disadvantages of using shorter and longer trailing windows for beta estimation. However, it appears to largely treat this as a matter for 'in principle' selection. It concludes that overall it agrees with Europe Economics that two year betas represent a good trade-off between the need to reflect up-to-date information whilst minimising the risk of uninformative volatility. We think this approach misses an important cross-check of the reasonableness of the 2 year beta estimate against longer-term measures – as appeared to have been the case in the initial view.

Having identified an updated 2 year daily beta estimate of 0.29, Ofwat does not comment on the extent to which it differs from the 5 year daily beta estimates of 0.32-0.33 under the ARCH/GARCH and OLS estimation methods. Instead, the DD assessment goes on to refer to the implied unleveraged beta range of 0.28 - 0.35 estimated by Ofgem in May 2019 using five companies (SSE, National Grid, UU, Severn Trent and Pennon) and a trailing window ranging from 5 to 17.5 years. While it is noted in the DD that the 0.29 estimate is within this range, the question of why beta should have moved from just above the middle of this longer-term range at the time of the early view, to close to the bottom of it for the DD assessment is not addressed. The suggestion in the DD that a more up-to-date beta assessment could result in an unlevered beta assessment of 0.26, raises further questions over the validity of the use of the 2 year beta as this figure is well below the lower bound identified by Ofgem.

The relationship between these different unlevered beta estimates is illustrated in the diagram.





This indicates that while the Daily 2 year figure provided a reasonable basis for estimating the unlevered beta in the 'early view' (given its broad alignment with the Daily 5 year figure), it does not provide an appropriate basis for updating that view in the ways proposed and suggested in the DD. That is, cross—checking the Daily 2 year figures both at the DD data cut-off date, and more recently against longer-term estimates, raises question over suitability.

The specific reason for this divergence is difficult to isolate, as share prices move for a multitude of market, sector and company-specific reasons. However, we note that the Final Methodology explicitly recognised that betas derived using a short trailing window may be distorted by specific events, with Ofwat acknowledging uncertainty associated with the price review itself as an example of this.⁵ There is also a reasonable prospect that perceptions of nationalisation risks over the period since the June 2017 election have acted as a material source of such distortion.

We believe the beta is better estimated using the daily 5-year beta. Such an approach would still take into account more recent market evidence, without the apparent volatility issues associated with using a short term 2-year data set, and would be more strongly aligned to the views of the UKRN study on beta, the CMA's decisions and other regulatory views.

Ofwat's approach to unlevering and re-levering beta

We strongly support Ofwat's continued application in the DD of the 'early view' approach of unlevering beta using Enterprise Value and re-levering based using the notional gearing assumption. We are both surprised and concerned, however, by Ofwat's comment that it expects to revisit this issue for final determinations.

While the UKRN cost of equity report recommended care be exercised when re-gearing betas, the interpretation of what that implied <u>differed materially between the authors</u>. We note that Ofwat's approach in the early view and the DD is both in line with long-standing regulatory practice, and consistent with the views of Burns (in the UKRN report) on this matter (including its inclusion of a debt beta).

We note that Ofgem has proposed to modify its approach to re-gearing in the RIIO-2 price controls. Notably, the approach proposed to Ofgem by Indepen involves implicitly assuming a Market to Asset Ratio that is structurally higher than 1. We would emphasise, though, that the issues that arise in relation to the adoption of such an approach have significant interactions with the broader balance of risk and return that the price control gives rise to, and importantly with the calibration of totex and performance incentives. These interactions make it important that the consideration of any such regulatory innovations is progressed alongside the broader development of the relevant incentive arrangements in order to ensure coherence and consistency.

Ofgem's development of its policy approach in this area is consistent with this, and importantly has come ahead of RIIO-2 business plan submission. We do not consider it appropriate for this kind of change in approach to be brought forward in the latter stages of a price control review process, after business plan submission, and fast-tracking assessments have taken place.

2. The risk-free rate

The DD included a substantial reduction in Ofwat's estimate of the Risk Free Rate: from 2.10% nominal in its December 2017 early view of the WACC, to 1.54% nominal for the DDs. The data that both of these assessments were based upon is summarised in the table below, together with weightings that Ofwat applied to the different estimates.

⁵ Ofwat (December 2017) Final Methodology, Appendix 12, p60.

	Ofwat Early view		Ofwat DD	
	Weighting	Nominal estimate	Weighting	Nominal estimate
Nominal 10 yr gilts	50%	1.69%	0%	1.82%
Nominal 20 yr gilts	50%	2.50%	0%	2.02%
Average Nominal	100%	2.10%	0%	1.92%
RPI-linked 10-year gilts	0%		50%	1.50%
RPI-linked 20 year gilts	0%		50%	1.58%
Average RPI-linked	0%		100%	1.54%

Table 5 - Forward looking estimates of the risk-free rate based on nominal and RPI-index linked giltsrelevant to Ofwat's 'early view' and DD assessments with Ofwat weightings

The data in the table highlights that two thirds of the reduction in the risk-free at DD resulted from a change in the assessment approach, as:

- Applying the same approach as in the early view would have involved putting 100% weight on nominal gilts based estimates and implied a figure of 1.92% nominal (down from the early view of 2.10%): a reduction of 18 basis points;
- But the DD view involved putting 0% weight on nominal gilts based estimates and instead putting 100% weighting on RPI-linked gilts based estimates. This change in approach implied a figure of 1.54% nominal: a further reduction of 38 basis points.

The DD notes that there are advantages and disadvantages associated with using nominal and RPIlinked gilts to derive risk-free rate estimates. However, Ofwat's assessment looks unduly focused on the disadvantages of using nominal gilts, and it does not appear that the disadvantages of using RPIlinked gilts have been fully assessed. Ofwat's assessment of the relative merits of using nominal as opposed to RPI-linked gilts focuses almost wholly on the question of whether the inflation risk premium in nominal gilts might explain the difference in the implied risk-free rate when derived using nominal vs RPI-linked gilts.

The conclusion that the inflation risk premium in nominal gilts is the most plausible explanation of the difference appears overstated. In particular, the potential for the estimates derived based on RPI-linked gilts to be subject to distortions due to the flawed nature of RPI as a measure of inflation does not appear to have been given any weight (with the DD approach putting 100% weight on RPI-linked based information). We agree with Ofwat that it would be preferable to use an index-linked gilts based measure, <u>assuming the relevant inflation index was credible</u>. We note that the UKRN report recommended this, and that Europe Economics – as Ofwat's cost of capital advisers – clearly state that *'if there were a CPIH-linked (or even CPI-linked) gilts series, we would certainly favour its usage for estimating real yields'*.⁶ It is reasonable to assume that the primary reason that nominal yields were used in Ofwat's early view, was because of concerns over the continued use of an RPI-linked series (and related data availability issues). These concerns have not gone away, indeed Europe Economics have recently noted:

As RPI diverges more and more from CPIH and does so in ways that have not been stable over time (as was discussed at length in our 2017 report), the case for placing sole reliance upon RPI-linked gilts as versus nominal gilts, has become weaker.⁷

⁶ Europe Economics (July 2019) The Cost of Capital for the Water Sector at PR19, p22.

⁷ Europe Economics (July 2019) The Cost of Capital for the Water Sector at PR19, p22.

Despite the above and Ofwat's previously firm position on the inadequacies of RPI more generally (including because of recognised instabilities), the DD proposal places sole reliance upon RPI-linked gilts.

The table below shows the weightings and associated risk-free rate that Europe Economics proposed as a way of taking account of both concerns about the inflation risk premium in estimates derived from nominal gilts, and the reliability concerns associated with using an RPI-linked series. Europe Economics' approach would use nominal yields to arrive at a 10 year figure when large systematic deviations of inflation from target are considered by it to be unlikely, and adopting the expedient of putting equal weighting on the nominal and RPI-linked gilts based assessment for a 20 year figure.

	Weightings
Nominal 10 yr gilts	50%
Nominal 20 yr gilts	25%
RPI-linked 10-year gilts	0%
RPI-linked 20 year gilts	25%
Assumed Risk Free Rate	1.81%

 Table 6 - Europe Economics recommendations to Ofwat on level of the risk-free rate, July 2019

In presenting this approach the Europe Economics' report states that 'We freely acknowledge that other judgements are possible', but also remarks that 'We do not consider that there is a strong basis for favouring either the nominal or RPI-linked ends of...[the]...range'.⁸ In contrast to this, Ofwat's DD appears to adopt an extreme position that gives insufficient attention to the risks associated with using an RPI-linked measure.

In practice, the case for not using evidence from RPI-linked gilts looks stronger than even that presented by Europe Economics, because the extent of the flaws identified with RPI can also be expected to generate risks over how indexation will actually be applied to existing RPI-linked gilts in the future. It is notable in this respect that the House of Lords Economic Affairs Committee January 2019 report 'Measuring Inflation'⁹ expressed major concerns over the continued use of RPI to index existing index-linked gilts. The report recommended that the government decide whether RPI should continue to be published in its existing form for the purposes of existing RPI-linked gilts, or whether a process of adjustments should be made to the RPI so that it converges on the single general measure. With respect to such changes, it explicitly noted that the consent of the Chancellor of the Exchequer to changes to RPI that cause material detriment to index-linked gilts holders would no longer be required after the last issuance to which that clause relates expires in 2030. This points to a further reason why considerable caution is merited when seeking to draw inferences from RPI-linked gilt yields.

3. The DD cost of debt assumptions

Embedded debt costs

One notable feature about Ofwat's latest position on the cost of debt is that, despite no new information becoming available, the DD would involve a different and considerably more stringent

⁸ Europe Economics (July 2019) The Cost of Capital for the Water Sector at PR19, p22-3.

⁹ https://publications.parliament.uk/pa/ld201719/ldselect/ldeconaf/246/246.pdf

approach to embedded debt being applied. This results in a substantial downward movement in the WACC (c7 basis points, other things being equal).

Given the importance of the early view to incentivising high quality plans, any changes to that view should be made in a balanced way. The change in approach to embedded debt at the DD does not appear consistent with this and risks undermining the power of the early view at future price reviews, and could encourage companies to "hold back" from submitting stretching plans in the future in expectation of such changes.

Ofwat's approach to the cost of new debt

Our key point of debate in relation to the cost of new debt relates to the coherence and consistency of the proposal with what is occurring in practice to the notional company.

The PR19 methodology and DD assume that the cost of new debt is funded in line with the average of A/BBB non-financials (with a tenor of 10 year or more) less a deduction to reflect a 'halo effect' that water companies have when raising debt. The DD involved increasing the proposed size of this 'halo effect' deduction from 15 to 25 basis points.

We note that in the DD, Ofwat registered its disagreement with company representations that any outperformance adjustment to the A/BBB iBoxx benchmark index ought to capture only outperformance after controlling for the impact of factors such as credit rating and tenor. In particular it is noted that the benchmark index can be viewed as a reference point for the sector's costs of borrowing, outperformance due to credit rating or tenor of debt should not be excluded from the process of assessing overall outperformance.

We would emphasise, however, that these points relate to historic assessments of the cost of debt. Credit rating will be an extremely relevant factor affecting the extent to which companies may be able to match or better an A/BBB iBoxx reference point. A material deterioration in expected credit ratings can be expected to undermine the extent of any 'halo effect' that is achievable, and indeed may raise question marks over the appropriateness of using the average of A/BBB (as opposed to BBB) reference point.

As the DD table below shows, not a single company has been able to target an A credit rating under the notional structure. And the DD assumes a larger 'halo effect' than in the early view, based on observed debt cost performance over periods in which companies typically have had materially better credit ratings than are expected in AMP7. Achieving this halo effect, based on an average credit rating that appears unattainable for the notional company in AMP7, looks unrealistic.

	Target credit rating for the notional financial structure			
Water company	Fitch	Moody's	Standard and Poor's	
Anglian Water	-	Baa1	-	
Dŵr Cymru	BBB+	Baa1	BBB+	
Hafren Dyfrdwy	-	Baa1	BBB+	
Northumbrian Water	-	Baa1	BBB+	
Southern Water	-	Baa1	BBB+	
Severn Trent Water	-	Baa1	BBB+	
South West Water	-	-	Boundary of A/BBB+	
Thames Water	-	Baa1	BBB+	
Wessex Water	BBB+	Baa1	-	
United Utilities	-	Baa1	BBB+	
Yorkshire Water	-	Baa1	-	
Affinity Water	-	Baa1	-	
Bristol Water	-	Baa1	-	
Portsmouth Water	-	Baa1	-	
SES Water	-	Baa1	-	
South East Water	-	Baa1	A-	
South Staffs Water	-	Baa1	-	

Updating the WACC to reflect more recent iBoxx movements

The DD notes that iBoxx movements after the DD data cut-off point of 28 June 2019 suggest that a further reduction in WACC may be justified to reflect this. While we recognise that this was presented as an illustrative assessment, we would note that changes to the assumed cost of new debt in the WACC would be expected to put further pressure on credit metrics (and on credit ratings), and thus further intensify the consistency issues referred to above with respect to the appropriateness of the new debt cost outperformance and reference point assumptions.