Transcript of the Ofwat city briefing, 19 July 2019

PR19 draft determinations for slow-track and significant scrutiny companies

Jonson Cox: Good morning everybody and thank you for joining us. I'm going to start pretty much on time. I know we'll have a good number of questions. A particular welcome to those of you here in person and a welcome to those of you who are joining us by webcast. It's another important moment in the PR 19 journey and the ongoing reform of the water sector.

Before I get going on the price review I think I just want to pause and say how proud I am as chairman of Ofwat of the whole Ofwat team. They've worked tirelessly to get us here. It's hard to put into words the dedication, the determination and the long hours; particularly in this stage of the process where we've been dealing with slow tracked and significant scrutiny categories. But we have reached this point with what I call really calm competence in the Ofwat team particularly under David's leadership of the PR19 team.

There is of course still more work ahead of us, Now today as usual we'll go into a bit more depth and detail for you and you're as the investment community a really important constituent in this discussion. To reflect that you've got three of us as board members of Ofwat here. If you don't know me I'm Jonson Cox. Importantly we have Rachel Fletcher our CEO with us. David Black who is the senior director responsible for leading PR19 and many of you will know Jamie who's your point and day to day contact with the investment community. There are other Ofwat colleagues in the audience.

Now, a few observations for me just to get us going about what the future might hold and how as a sector we might respond. You don't need me to identify this but in the context of where the sector is, the challenges faced represent in my mind the biggest since the early days post privatisation. This is because it's so multifaceted: operational; climatic; societal; and political.

Challenges come from all sides and each dimension is fundamental. What is this sector's place in society? Who should own it? How should it be run? In whose interests? Does the sector understand the change in expectations on the horizon? What's the plan to respond and make the most of opportunities and deliver on

expectations? And above all. How does the sector secure its legitimacy? Over the last few weeks we've had yet more reminders of the scale of some of the issues. Record enforcement action. The Environment Agency's damning assessment of the sector's environmental performance. The Secretary of State's intervention yesterday. Customer representatives and interests have repeated their call for price cuts last week.

Now like any one here I can rehearse all the great successes of this sector and I know that it can rise to the challenges that we're putting forward today. But we're not in the place as a sector where we need to be. I do repeatedly hear the argument that as the regulator we're compounding the misery for the sector when we take regulatory action and some look to us vocally to defend the sector.

We do care really deeply about the water industry. But it's fundamentally to misunderstand and to mis-diagnose the situation. It would not serve the interests of the sector if the independent regulator took on the role of being its cheerleader. Parliament has given us a role. And that's to hold the sector to account on behalf of customers and all stakeholders and help drive up performance. By responding effectively, turning to yesterday's draft determinations, companies can secure trust and move reputation forward. I want to just talk about five dimensions that I think are important in the change we're driving through PR 19.

Fast track companies made those commitments right off the bat. Others face them as a result of draft determinations. And I know they can rise to it. First it is about driving a meaningful shift on operational performance and customer service. In this review companies have done the best ever job of engagement with their customers but customers do still rely on a regulator to determine difficult questions such as for instance: what's the achievable level of efficiency? We've been shifting focus back to running the business really well through mechanisms like performance commitments and ODIs.

We're using comparative benchmarking to set a forward looking (upper quartile in statistical jargon) challenge on common performance commitments. Companies that fail to meet that challenge could see up to half their profitability eroded but it's matched by an ability to significantly outperform on the return on equity as indeed Severn Trent has shown in this period.

The second, is our use of upper quartile efficiency; stretching but achievable improvements to drive efficiency and promote productivity which has been poor in the sector. Now I've just been taken apart out in the coffee area, about the level of our challenge, our challenge to base cost. But I'd encourage you to look all the way round these issues. So I was challenged about a company where I think the cost gap between what they want and what we have allowed is 16 percent. And how on earth

should a company deliver that. Look at the flip side on that particular one we're allowing 15 percent more from April next year, compared to current spend levels. So do just walk all the way round these issues.

The third one of my dimensions, is improving environmental performance and resilience of the sector. We're allowing 12 billion of investment in environment and resilience programs. That's about a quarter up on what we allowed at the last period. The fourth dimension for me is reflecting the movement in capital markets. Rates continue to come down. The risk free rate that underpins the whole calculation has reduced. There is still a wall of money that wants to invest in infrastructure. One bank told me of a number of hundred and eighty billion a few weeks ago chasing quality assets and water companies are certainly quality assets. The WACC may have come down but it's in line with current rates. They've moved further since we made our decision a few months ago.

The last point that I want to make which underpins the whole determination is our back in balance agenda. This puts investor, customer and public interest in alignment. It should create confidence that while remaining an incentive regime - and I underline that we believe strongly in incentives and rewarding investors appropriately - that companies don't disrupt their financial stability. Rewards are given in return for delivering for people and the environment.

Some companies have done a good job in this review on transparent dividend and remuneration policies that reflect performance for all stakeholders. A good number still have a way to go on this. There is some deleveraging. The range of that is quite wide there and again some have a way to go.

Rachel's been leading work with the sector to explore and agree a future vision and I'll turn to her shortly to highlight that work. But just before I do so. Again I've been challenged this morning about demanding challenges for the sector. But you know this isn't unique to the water sector; that's common across business. And I'd like to leave you with a thought that amongst all these challenges and the complexity of all the day to day interactions and the latest events unfolding around us please don't miss the wood for the trees.

Let's just revisit the investor proposition in this sector. A guaranteed customer base. Guaranteed product demand and guaranteed revenues. Index linking of both asset base and revenues. For those with the slower growing RCV asset base, a strong cash yield dividend. For those with a faster growing RCV - and there are some really quite remarkably fast growing RCV numbers in this review - good cash generation to support reinvestment.

There are performance incentives that can materially improve equity returns - I believe that remains an attractive proposition even in this world of lower returns. We seek to create public service utilities where investors, customers and public - the public interest - are on a constitutionally equal and fair level. I believe that's in the interest of all parties including investors and I just say to you as the investment community, please join us in being a positive force for shaping that agenda of renewal and the creation of legitimacy in this sector.

I'm going to move on because we're here to discuss PR 19. Companies had extensive opportunities to comment and evidence their case. We expect them to respond to our draft decisions, to reflect how they can improve their business plan and make any final representations of matters we've missed. With final determinations will be back here in December.

Now on that let me pause and ask Rachel to take us through how this price review process sits in the overall strategy, looking forward for Ofwat. Thank you.

Rachel Fletcher: Morning everyone. I know that you've all come here to drill into the fine detail of PR 19 draft determinations but if Jonson's message is to look at PR19 against the wider backdrop he's just painted, mine is to see PR19 not as an end in itself but as the first step towards the future that we're setting out in the joint vision for the sector.

So before you hear from David let me say a few things about that vision and sketch out a few highlights from the draft Ofwat strategy for 2020 and beyond. Many of you will already know that we've spoken to stakeholders and customers around the country to forge a draft joint vision for the sector and the idea is to give us a common ambition that we can jointly own and all play a role in delivering. And when I say we I mean regulators and policymakers as well as companies and their owners.

Three themes have emerged from this work and across the sector we're seeing a huge amount of support for these three themes. And you can see them on the slide there.

Shared vision for the sector

Delivering everyday excellence

The standard of service is continually rising and customers' changing expectations are met.

Stewardship for the future

Companies share responsibility for thinking and planning for the long term. They look after the systems, relationships, investment and reputation to ensure a sustainable future. They protect and enhance the environment.

Value for individuals and for society

Water is affordable. Through delivering water and wastewater services, companies deliver value for customers, communities and the environment.

We are working together to shape and refine this vision for the future of water in England and Wales.

I'm going to start with everyday excellence. This theme alludes to the fact that we all rely on water and waste services every day. And it also recognizes that excellence isn't static that frontiers are changing that what might have looked like excellent service 5 or 10 years ago might today look substandard or disappointing. And we only need to think about how Amazon has changed our expectations on delivery times as an example. Here you can see the continuum from PR 19.

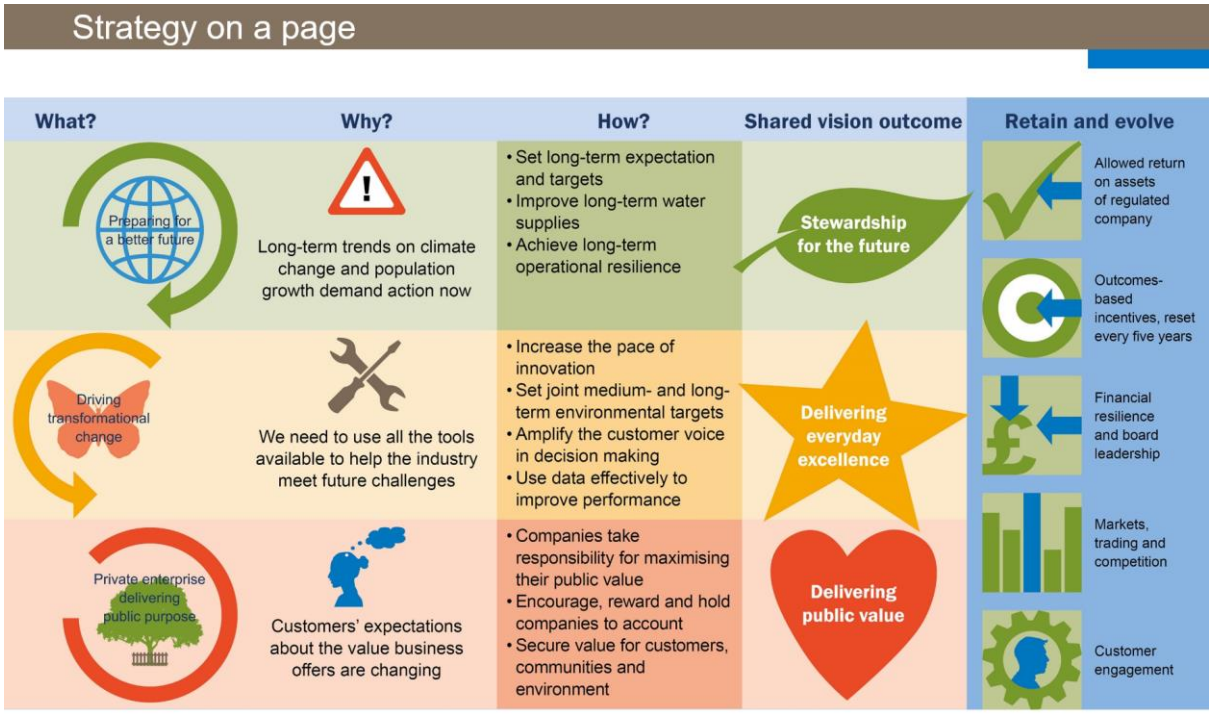
This price review is all about setting more ambitious performance targets with corresponding penalties and rewards and with the introduction of C-MeX the start of a journey to set customer service standards with reference to that achieved in other industries. We know that population growth and climate change as well as constantly changing customer expectations makes the aspiration of excellence challenging for the sector.

But we also know that new technology, big data, and new ways of working have the potential to allow the water sector, like every other sector in the economy, to

continually improve and get ahead of these challenges. So as part of our strategy we've thought long and hard about whether we are doing enough to bring forward the kind of innovation that I've just been talking about. And particularly we thought about the barriers to innovation especially where innovation is bringing risks or requires a longer term payoff than a five year period will allow. And that's why last week we consulted on introducing a 200 million pound Innovation Fund that companies might compete to use and I'd encourage you to take a look at this and respond to our consultation if you've got ideas on how Ofwat can play a constructive role in driving further innovation in the sector.

The second theme is stewardship for the future. I don't need to tell you that the water sector is all about the long term; long lived assets, the protection of precious natural resources, stewardship of relationships and reputation and returns over the long term for investors. And here again you can see this theme of stewardship picked up in PR 19. Resilience is a massive theme as Jonson's already said we're expecting 12 billion pounds of investment over the next five years to meet the needs of future customers and to provide a healthier environment. And there are also stretching environmental targets on pollution, river clean-up, leakage and per capita consumption.

One shift we are signalling in our draft strategy for 2020 and beyond is the need for Ofwat to focus more on the long term and in particular we are looking to introduce some long term targets for the sector well beyond the five year horizon that we're talking about today. We're already working with the Environment Agency the Drinking Water Inspectorate and governments in England and Wales on these targets.



We expect these to be high level strategic targets that provide further clarity to the sector on where we should be aiming for in 15 to 20 years' time without prescribing exactly how we get there. I'd expect these targets to complement not replace the 2030 commitments the sector has already made. For example on zero net carbon and on single use plastics. And this suite of longer term commitments should mean that really well performing companies should be aspiring not just to hit the PR19 targets but to get themselves well on track to meeting where the sector needs to be by 2030.

And of course these targets will provide additional certainty for investors. The final theme is value for customers and society. And this final aspiration in the joint draft vision is perhaps the most distinctive. Everyone is used to value for money and value for money for customers, being a big focus for the sector and in the PR 19 draft determinations we're certainly challenging companies to improve efficiency and bring down bills by 50 pounds on average in real terms over the next five years. And for your part you'll be concerned to get a fair return for investment. And that is something that Jonson has already touched on. But what is new in this part of the joint vision statement is the recognition that water companies can deliver significant social and environmental value as they go about their core role of providing water and waste services to customers.

For example the opportunity to help deprived communities and build human capital through the choices companies make on apprenticeships, training and employment or the opportunity to clean up rivers and create environmental value through using catchment management solutions in water and waste treatment. Many of the things that we have in mind here can be delivered with no extra cost to customers and sometimes bring cost savings or attract new funding sources from partnerships. Now we are seeing signs of this.

It's great to see more catchment management projects in the PR 19 business plans for example many of these projects are being done in partnership and some have attracted significant funding from corporates like Nestle or large charities like the National Trust. But consideration of the public value that can be created is still an afterthought in all companies rather than something that runs through the lifeblood of the business. And while it would take a radical turnaround in the industry's mind-set, the water companies have an opportunity I think to be the poster child of ethical business with their strong roots in their communities and their environmental footprint. They have an opportunity to play an extensive role for example in meeting the country's 25 year environment plan ambition to leave the environment in a better condition than we found it.

You've probably twigged that this part of the vision forms a natural extension from the new board leadership objectives. We've recently put in the licence the

requirement for company boards to have a clear purpose, reflecting the needs of all stakeholders. I'm pleased to see the industry grapple with this part of the vision. It's what sits behind the water UK public interest commitment which along with ambitious targets on carbon, plastics, leakage, poverty and social inclusion includes the agreement that all companies will consider by April next year how they can enshrine their public interest commitment into their business. And you may know that Anglian Water has already changed its articles of association in response and some have requested licence changes.

This is a good step forward and one we stand ready to support where we can. But what I would say at this juncture is that while the industry is embracing its public purpose this could help it build legitimacy and tap into the significant pot of ESG finance which is available worldwide. I think it will only be successful in increasing the legitimacy of the sector, if on top of this, the sector delivers its core services excellently, is accompanied by responsible corporate decisions and behaviours on tax, financing structures, executive performance pay and dividends.

And finally if there is also robust and transparent evidence of delivery against these ambitions. In Ofwat we are also considering what this focus on a wider value might mean for how we regulate.

We should be joining with other regulators and policy makers, to make sure that there is a framework that allows the sector to strike an appropriate balance between the value created for bill payers, for society, for future generations, for the environment and for investors. And we're already considering how the PR 24 process might apply different treatment to companies, depending on their success in delivering wider value for society.

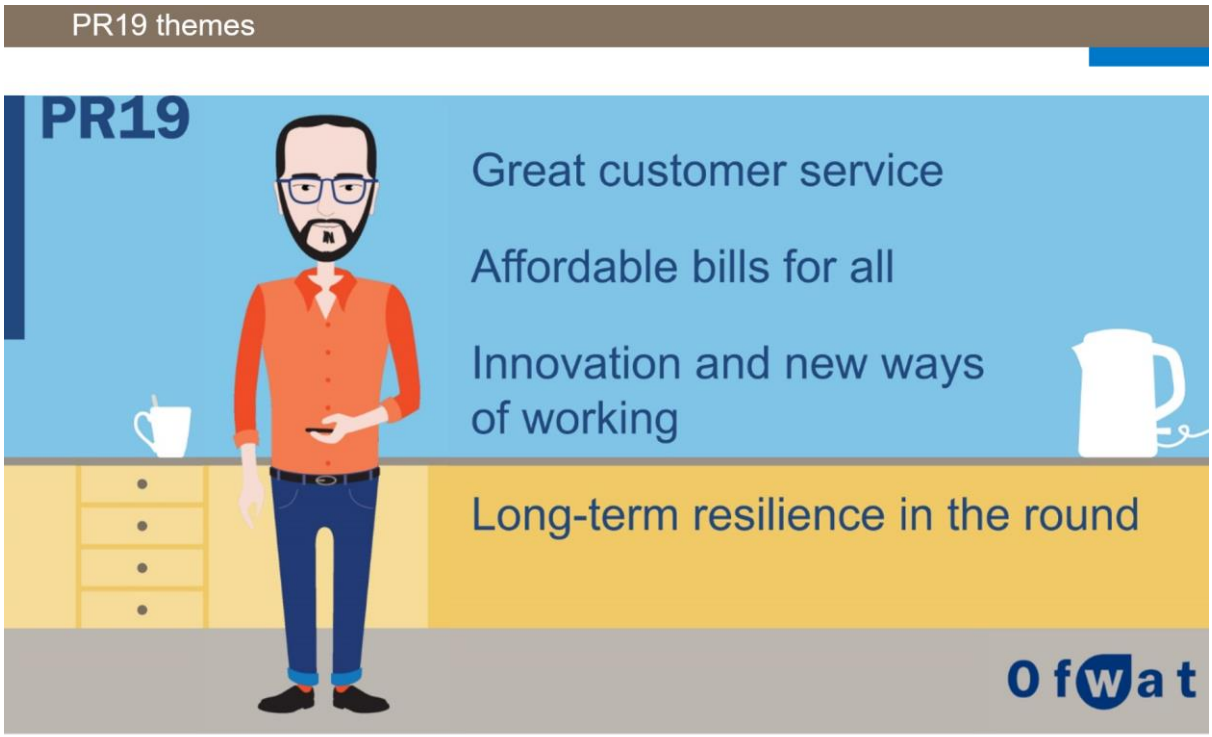
But now I'm talking about PR24. I'm definitely getting ahead of myself. But I hope this has whet your appetite and encourages you to engage with us on the vision for the sector and the strategy for Ofwat.

I hope it shows you that our ambition for the industry goes way beyond the stretching targets for PR 19 and that companies embarking on the next AMP should have their sights set on the future too. And with that I'll hand over to David. Thank you.

PR19 draft determinations, slow-track and significant scrutiny companies

David Black: Thank you Rachel. Thank you Jonson. We started on our journey to the 2019 price review with engagement on the challenges facing the sector. And we

identified four key themes with companies and other stakeholders that we considered vital to address in the 2019 price review.

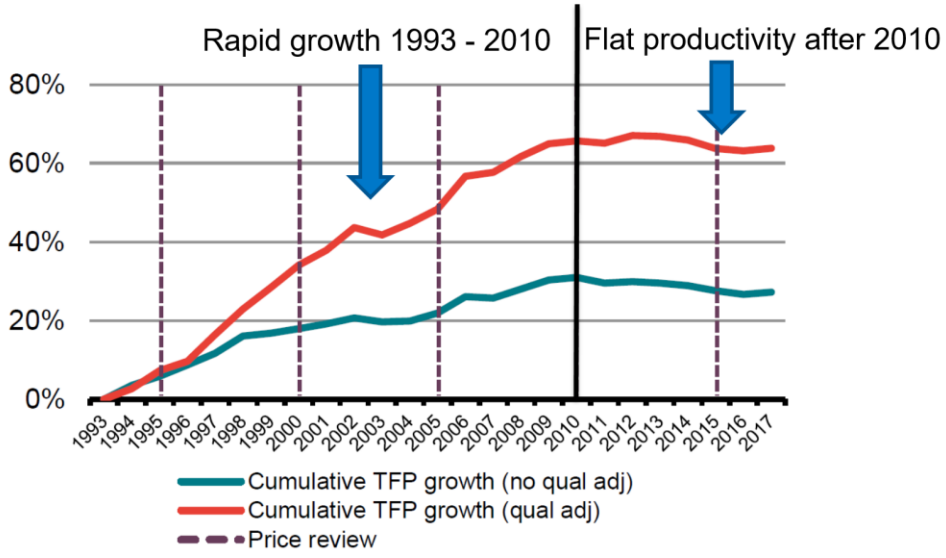


These were great customer service, resilience in the round, affordability and innovation. Our focus on innovation is particularly relevant to boosting productivity in the sector. A point touched on by Jonson earlier.

As shown in the graph the sector's track record on productivity was very strong in the period between 1990 and 2010. But since then are very disappointing; and these are this sector's own view of the numbers and are disappointing even taking account of quality improvements. In order to address the challenges facing the sector to maintain affordability the sector really must improve its productivity.

Water sector productivity growth – fading away?

Productivity measures sector outputs in relation to inputs. If the sector is address challenges ie deliver more of what matters, then increasing productivity will be important.



Source: Frontier Economics (2017) for Water UK

In January we announced our initial assessment of plans fast tracking three companies Severn Trent Water South West Water and United Utilities whose plan had already reached a high bar and we published their draft determinations three months ago. The remaining companies categorized as slow track and significant scrutiny had further work to do on their plans.

We have now set out our draft determinations and our view of their price and service and incentive packages that they will deliver for their customers between 2020 and 2025. These packages incentivise companies to make a step change in their performance for customers and the environment. And it secures the investment needed to provide resilient and sustainable services now and into the future. And at the same time it delivers real price reductions for all customers.

Outcomes framework

Common performance commitments –common performance commitments with common definitions covering customers' key priorities and stretching performance levels.

Bespoke performance commitments – Companies propose bespoke performance commitments to reflect their own customers' preferences.

Standard outcome delivery incentives for common and bespoke PCs – incentives that aim to align the interests of company management and investors with those of customers.

Enhanced outcome delivery incentives – intended to incentivise companies to improve performance beyond the best level currently achieved by any company to deliver benefits for all customers over the long term.

Customer protection – measures to protect customers in cases where outperformance payments are much higher than their expected.

Underpinning all of this is both the enablers and expectations of improved productivity. I'll now talk through some of the particular elements of the package.

Firstly on the Outcomes Framework. Our Outcomes Framework focuses companies on delivering the high level objectives that matter to today's customers and future customers and the environment.

We expected companies to propose stretching performance commitments to benefit customers and to back these up with financial and reputational incentives. The Outcomes Framework gives companies the freedom to decide how to deliver for the customers enabling companies to innovate and find new ways of delivering services.

Early evidence in the water sector during this period and from the energy sector suggests that an outcomes approach along with the total expenditure approach facilitates efficiency improvements and service improvements.

In regard to performance commitments many companies responded to the challenges set out in our initial assessment of their plans and accepted the performance commitments based on forward looking upper quartile performance. And of course all companies have accepted our challenge to reduce leakage by at least 15 per cent. Our interventions in these draft determinations have been generally to increase performance levels for some companies and to push laggards further to close the gap between them and the rest of the sector. In a few cases we

have also intervened to reduce the performance commitment to a level that is consistent with that funded by base service costs.

For the three upper quartile performance common outcomes for water supply interruptions internal sewer flooding and pollution incidents we also consider the challenge in the round, taking accounts of historical improvements in previous periods and the overnight adjustment required in 2020. And on this basis we decided a glide path was required in regard to water supply interruptions to smooth the overnight adjustment required at 2020 but we retain the same end goal a forward looking upper quartile, by the end of the period.

We consider that the performance commitments in our draft determinations are stretching but achievable at a sector level and across the whole period. Outcome delivery incentives are the underperformance payments and outperformance payments that back the performance commitments. They help align management and shareholders' interests to those of customers increasing the focus on improving service that customers care about. In PR19 we've been very clear that we expect a greater proportion of revenue to be linked to service performance. It's also important to note that performance commitments are set on an absolute basis, so it's possible, if very unlikely that all companies could outperform their performance commitments and earn net ODI out-performance payments in the next price control period.

When we considered company plans in the initial assessment of plans we found a wide variation in the level of ODI rates across companies for the same increments of performance and that these variations could not be explained by differences across operating areas and factors such as comparative and current performance, water stress, metering penetration and household income. We therefore required companies to explain the outcome delivery incentive levels in relation to a reasonable range based on a half standard deviation around the average for the sector.

In response in their revised business plans companies have narrowed the gap substantially but there is still significant variation between companies on some measures and so we have intervened to drive to improve the consistency of ODI rates across the sector. Now we're not aiming to make ODI rates the same across all companies and we accept there are reasons for variation, but we are concerned that the rates are set on a robust and reasonable basis. So we've applied a series of horizontal and company specific tests to assess company proposals to make our interventions. And as part of their draft determination representations we expect the companies to provide us with an updated view of the P 10 and P 90 range for their performance commitments and ODIs.

As a result of our interventions in the draft determinations we expect the outcome delivery incentive range to range from around minus two point six per cent for the sector to plus point six percent. So yes there is a negative skew in these rates but there was at PR 14 as well of minus one point seven to point six per cent. And when you look at company performance during the PR14 period, they are currently performing 10 basis points above the expected level with a range of minus point five to plus one point five. So real evidence that companies are able to outperform on their performance commitments and beat expectations set in the final determinations.

Increasing Investment

£12 billion enhancement – new and improved services, some delivered by direct procurement for customers

- £5 billion on environmental improvements
- £2.3 billion on resilience
- £450 million for collaborative work to develop and enable strategic new water resources

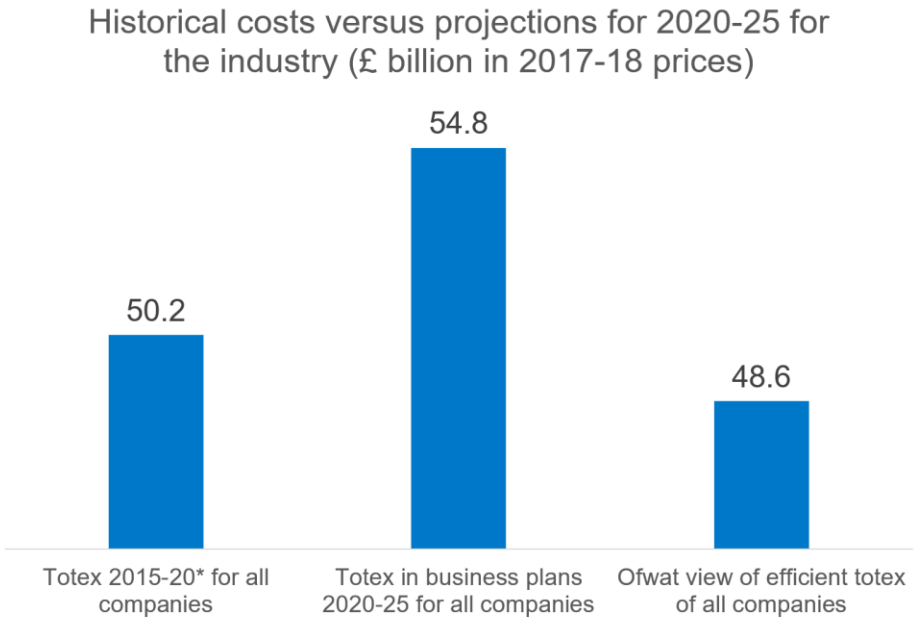
Cost efficiency. So firstly we've talked about already the increased enhancement investments. So this is investment to help reduce the pressure on scarce water resources and meet the needs for resilient systems and services. And where it says a substantial part of this program is going on environmental enhancements consistent with the UK government's Water Industry National Environment Program and the Welsh Government's Environmental Programme in Wales.

We're also allowing 450 million pounds for collaborative work to develop and enable new strategic water resources such as major new reservoirs and a north south link to help ensure we have enough water resources in the long term and also to address

our concerns that companies approach to planning gave insufficient consideration to new supply options within and between regions.

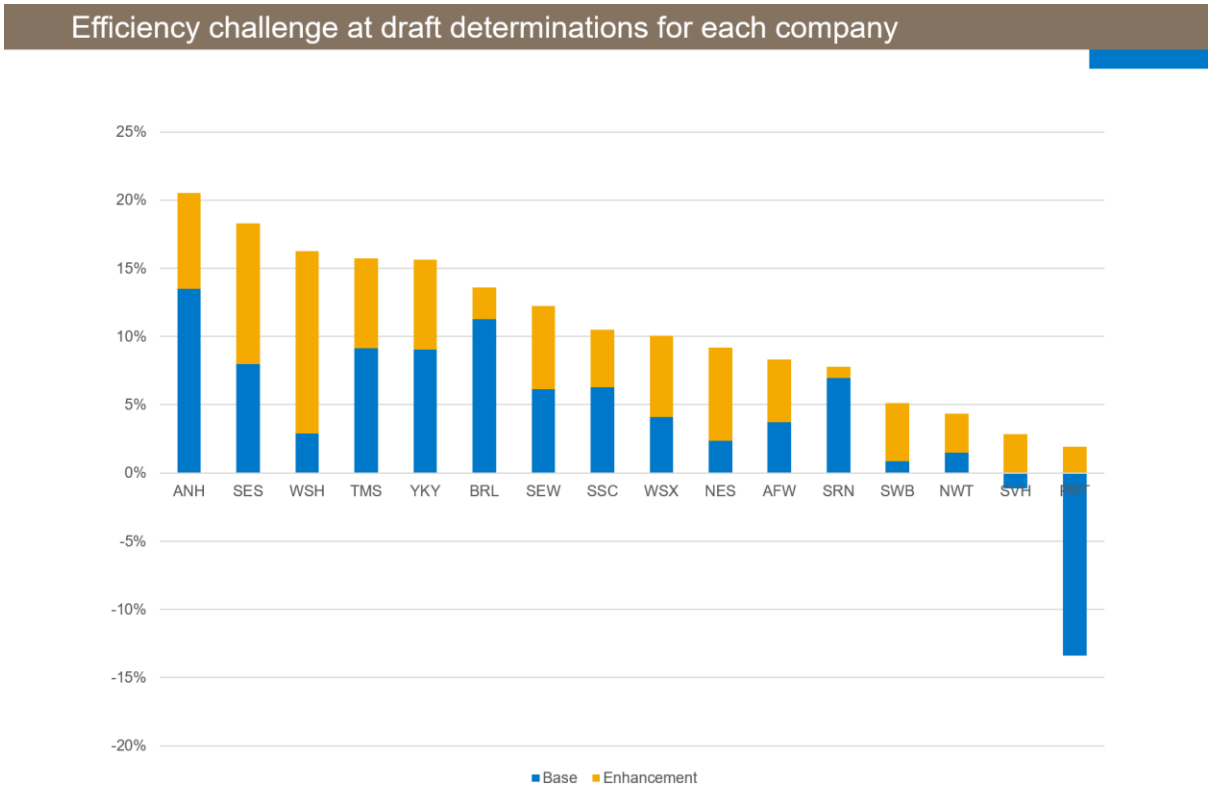
In PR19 we've also introduced direct procurement for customers which is a process for water companies to competitively tender for a third party design build finance operate and maintain infrastructure. We identified a major scheme with United Utilities and their fast track business plan and also identified further opportunities in the Anglian and Welsh Water areas at slow track draft determinations. Moving on to efficiency, already a topic of discussion I hear, this slide sets out our total cost allowance for all companies at draft determination and how it compares to business plans and then with historical spending.

Total cost allowances: PR14 and PR19 compared



So you can observe that there is a substantial cost challenge to the sector at draft determination. The difference between the fifty four point eight billion pounds and forty eight point six. But you can also observe that compared to historical spending levels the reduction is rather more modest of around 2 to 3 per cent. So we've been very clear throughout the price review process that we expect a genuine step up in efficiency in which companies can make full use of the opportunities under the water 2020 framework and unleashing the power of innovation.

Companies have strong incentives to perform on efficiency and have done so at a sector level and previous price reviews. Since 2015 companies have outperformed on average by around 60 basis points in RORE terms with a range of minus one point five to plus three point three percent. Again much better than was expected at PR14 final determination. In coming to our view of efficient costs, we consider evidence both within the sector and also by comparing the sector with the wider economy.



We've taken an upper quartile approach and applied an efficiency challenge along with it. So in terms of the results you'll see on this slide range from an efficiency challenge for Anglian of slightly over 20 percent to a rather more modest challenge at the other end of the scale.

Significant scrutiny companies

Significant scrutiny companies: Affinity Water, Hafren Dyfrdwy, Southern Water, Thames Water

Position at IAP: Potential for reduced cost sharing rates and ODI payment caps, depending on response to issues raised

Position at draft determinations

Subject to how companies respond in the remainder of the process:

- we do not currently intend to apply an ODI cap for any of these four companies
- we are unlikely to apply a reduced cost sharing rate for Hafren Dyfydwy
- Affinity Water and Southern Water both have more progress to make in addressing our concerns in their representations on draft determinations to avoid a reduced cost sharing rate
- Thames Water has substantially more progress to avoid a reduced cost sharing rate.

So we have identified some companies namely Anglian Water, Thames Water, Yorkshire Water and SES Water as continuing to put forward increases over their current base costs without sufficient justification rather than making efficiency savings. And that's where our interventions look the most substantial.

So moving on to the cost of capital. So we've updated our view of the cost of capital for draft determinations. So it's lower than what we set in our final methodology in 2017 by 21 basis points. At an appointee level our cost of capital in CPH terms is 3.19 per cent or at the wholesale level it is 3.08 percent. So the main driver of the reduction in the cost of capital is firstly a lower risk free rate due to changes in market expectations and data on equity beta points to a lower required return for water company equity.

Our view of the cost of debt has not moved very much at all. However we have updated our calculations to reflect the updated data and also to make greater use of wider market information on debt costs to measure the embedded cost of debt. We've also revised our split between embedded and new debt to move the level of embedded debt from 70 to 80 percent reflecting information in water company business plans. As we set out in our PR19 methodology the cost of new debt is indexed and we'll reconcile this at PR 24. Indexation means that customers don't pay a risk premium on the forecast cost of new debt and that companies are protected from increases in the market cost of debt. And as some of you no doubt will have

seen from our documents released yesterday our view of the cost of capital was based on data up until the end of February.

Cost of capital

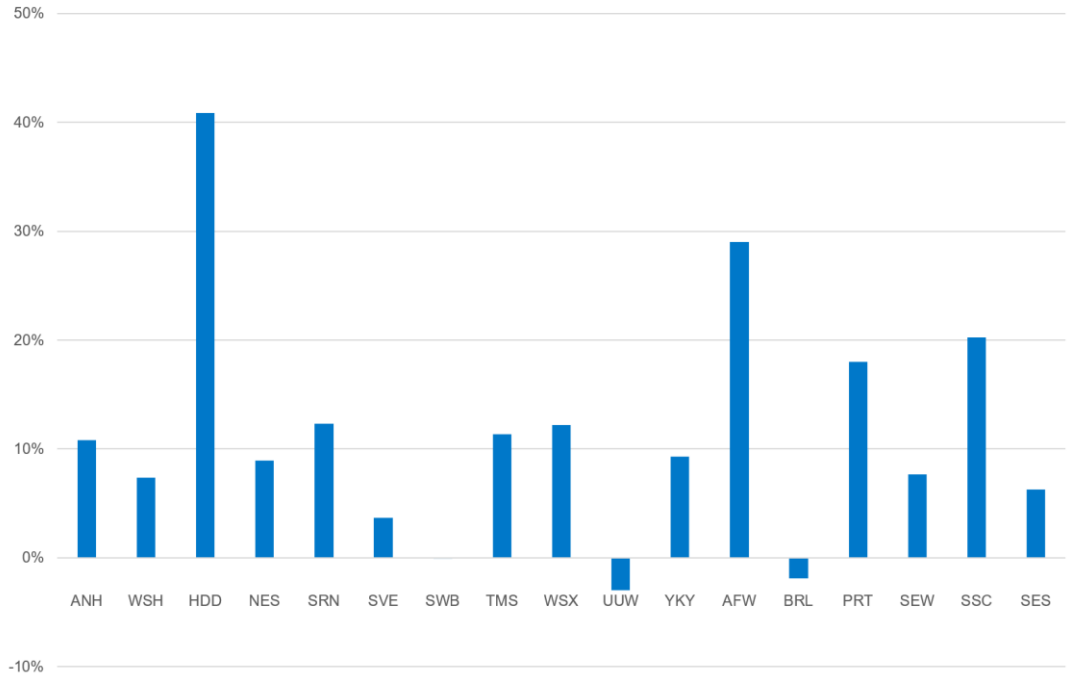
Component	Components of the cost of capital our draft determinations			Early view (CPIH 2%)
	Nominal	Real (RPI 3%)	Real (CPIH 2%)	
Cost of equity	6.56%	3.46%	4.47%	5.03%
Cost of debt	4.38%	1.34%	2.33%	2.32%
Notional gearing		60%		60%
Ratio of embedded to new debt		80:20		70:30
Appointee cost of capital	5.25%	2.19%	3.19%	3.40%
Retail margin deduction		0.11%		0.10%
Wholesale cost of capital	5.14%	2.08%	3.08%	3.30%

Our updated view of the cost of capital uses a data cut off of 28 February 2019. Since then there has been further downward pressure on some key parameters of the cost of capital.

Since then we have seen further downward pressure on some key parameters; movements in the risk free rate, Beta and the cost of new debt could mean a further drop in the cost to capital to potentially up to 37 basis points lower than as set at the end of February. However I would also note that these are just observations about market movements. We will take our decision at final determination, taking a full view of the cost of capital in the round.

Moving on to RCV growth, so the level of the enhancement investment is reflected in the significant RCV growth we're expecting at PR19. Eight companies have RCV growth that exceeds10 per cent in real terms in our draft determination. We consider it reasonable that equity contributes where RCV growth is high and we take this into account in our assessment of financeability.

Projected cumulative RCV growth in the draft determinations over 2020-25



Our assessment of financeability is consistent with the approach we adopted at previous price reviews. We have defined financial ratios that we use in the PR19 methodology. These are based on but do not precisely follow the definitions used by credit rating agencies. We haven't set thresholds for individual financial ratios, but we carry out our assessment in the round taking account of the level and trend of financial ratios over time and on the basis of which board assurance statements have been given.

We consider that our determinations to be financeable on a notional basis taking account of our interventions. Financeability of our draft determination is helped by the transition to indexation on a CPIH basis. This has the effect of bringing revenue forward in a similar manner to adjustments to PAYG or RCV runoff rates. But to manage the transition of price controls to a CPIH basis our policy is that we index 50 percent of the RCV to RPI and the rest including new RCV is indexed to CPIH.

In terms of the results of our financeability assessments, we have assumed that equity injection is required at Portsmouth Water, partly to finance the new Havant Thicket Reservoir and we've assumed dividend restrictions in the case of Affinity Water. For some other cases, we're also assuming that notional financeability can be

maintained through a reduction in dividend yields under the notional financial structure. The PR19 methodology allows the use of PAYG and RCV run-off levers to address financeability constraints and we've made further interventions in company plans either to reduce the revenue brought forward for six companies or to allow adjustments for three companies to maintain notional financeability.

Slow track and significant scrutiny companies average bill reductions in real terms

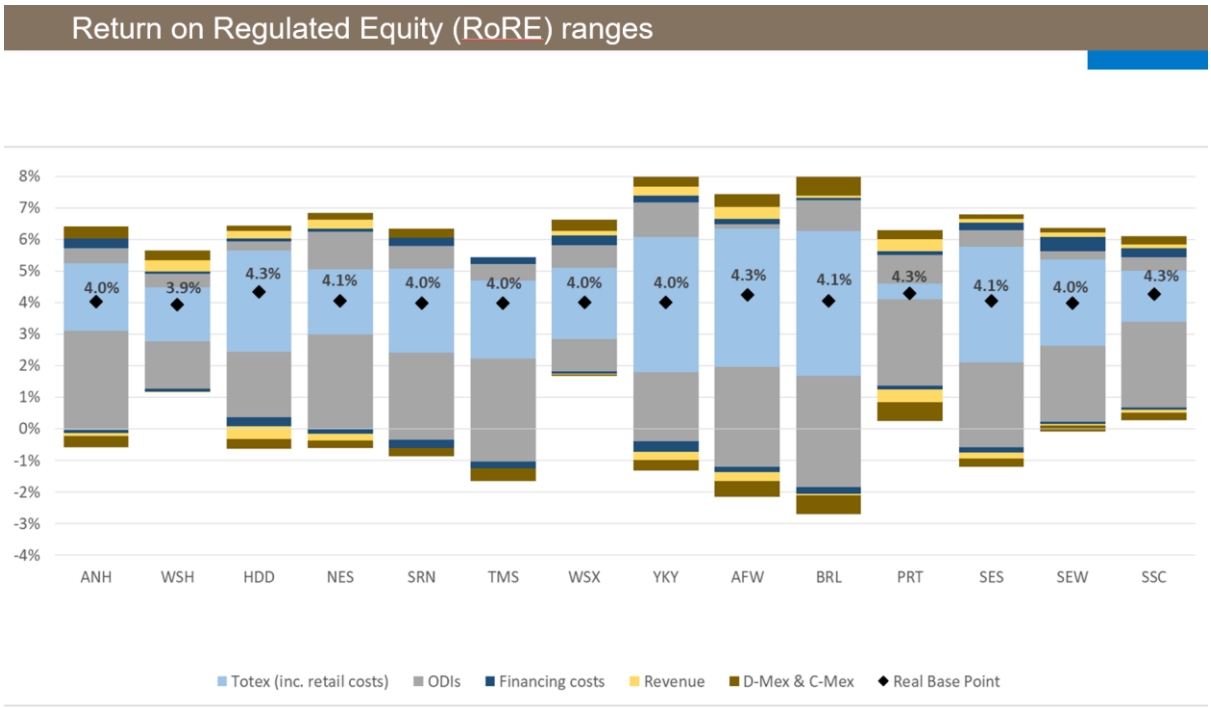
Company	Change
Anglian	↓ 12%
Dŵr Cymru	↓ 14%
Hafren Dyfrdwy	↓ 2%
Northumbrian	↓ 26%
Southern	↓ 14%
Thames	↓ 10%
Wessex	↓ 15%
Yorkshire	↓ 10%
Affinity	↓ 12%
Bristol	↓ 16%
Portsmouth	↓ 12%
SES	↓ 15%
South East	↓ 10%
South Staffs	↓ 17%

Fast track companies (without updates to cost of capital): Severn Trent ↓5%, South West ↓14%, United Utilities ↓11%

The impact on Bills has been mentioned, there's quite a broad range of bill impacts across companies, you'll notice from 2 percent reduction to a 26 percent reduction but with most companies clustered in a range of around 10 to 17 percent. Key drivers of bill reductions are the lower cost of capital, improved base efficiency and changes in the balance between operating and capital costs. And these factors have enabled us to square the circle and increase resilience and investment, at the same time as keeping bills affordable.

Moving on to back in balance, so as Jonson mentioned in July 2018 we published our back in balance statement that aimed to encourage companies to take greater account of their customers interests and set out expectations for companies in terms of their transparency around dividend and performance related executive pay policies and an expectation for companies with high gearing to share the benefits with their customers.

All companies have made firm commitments about their proposals in regards to dividend and executive pay transparency. However in most cases we think there's further to go in terms of working through the details of how companies will demonstrate the measures, the particular measures that they're taking account of. We expect to see that by our final determinations. All companies have adopted our gearing up performance sharing mechanism. However, Thames Water, South Staffs and Bristol Water propose their own versions of the mechanism and we have assessed these proposals but not accepted their proposed changes. And these companies will be required to adopt the default mechanism in our draft determination.



So return on regulated equity. So this chart attempts to set out the potential dispersion from both outcome delivery incentives, TOTEX out and underperformance and financing costs and shows you the potential up and downside risk that companies are exposed to over PR19.

So as mentioned the PR19 price review does increase the proportion of revenue at risk from service performance through ODIs and sharpens the cost sharing incentives. These will benefit efficient companies with the inefficient companies losing out. We have set outcome delivery incentives caps and collars on individual performance commitments to limit overall risk exposure. This does not mean the sector as a whole should expect to receive the returns that are skewed to the downside. Rather that companies should expect to be rewarded for the provision of

high quality and efficient services and that inefficient company should bear a higher proportion of underperformance.

So in conclusion our draft determinations will deliver real benefits to customers, better service more investments and lower bills, while continuing to ensure that efficient companies are financeable. PR19 will both enable and challenge companies to improve productivity and service for customers. Companies that succeed will be rewarded. Companies that don't will bear the cost in lower returns. Their future really is in their hands. We have set out our position clearly.

Companies now have an opportunity to review our draft decisions and reconsider their plans. We'll look carefully at the representations we receive before we make our final decisions in December.

We will now take questions.

Next steps

Next steps	Date
Representations on slow-track and significant-scrutiny companies draft determinations from companies and stakeholders	10 am on 30 August 2019
Ofwat publishes final determinations	7 am on 11 December 2019
Companies wishing to appeal their determination to the Competition and Markets Authority	11 February 2020
Revised price limits apply	1 April 2020

Questions and answers

Jonson Cox: So there you have it the context the review the context of the review and the overall strategy and forward look of Ofwat and the program from David that we've set out. We will turn to questions. Let's try and keep questions pretty concise if we could. If you feel like you have subsequent or follow ones perhaps you could route them through Jamie afterwards. We'll take questions first from the floor and then occasionally I'll go to Jamie who is receiving questions that are coming in from the webcast. Please say who you are. Say your question and then, so I've got three to start with. I've seen three people so we'll start there and I'll allocate them to one of our team. Rachel or David and we have Andy here or Jamie.

Jenny Ping: This is Jenny Ping from Citi Two questions please. Both on WACC. I understand that you had to have a cut-off point which you've assigned to the end of February but given you've done the work to update it to the end of June why is it did you not use the lower number to start and use that as your sort of draft determination rather than defer back to February and warn on the possibility of the downside. And then secondly you talked about setting a WACC in the round. Should I be reading that as you won't just be doing a mechanistic update and you will be considering other factors in that WACC settlement. And if so what other softer issues will you be considering. Thank you.

Jonson Cox: I think David it is for you again. Thank you.

David Black: So I'll deal with I think the second question first as I think it will help illuminate the first question. So when we do look at the WACC we clearly do look at the evidence and the data that's available to us and we need to weigh it up and consider it when we're setting draft and final determinations. We are looking at the settlement in the round when we set a company settlement. So there is a wider consideration of issues in terms of the reasons why we have used the February view of the cost of capital. So that is our view; we've set out the 20 basis points lower is our view of the cost of capital at draft determinations. We have to provide transparency around our view around how the market data has moved since the cut-off date.

We note it's reasonably unusual to have such a significant movement over this time period so we thought it was valuable to set that out and be transparent around that. But it's not that those numbers are the numbers we have taken to the board of Ofwat and said that's the cost of capital, we'd still have to work through that evidence.

We've described the range we've described where those numbers have come from but it's certainly not the case that those would be the numbers if we were to set the WACC at FD we will have to look at what they mean and you'll have noticed maybe in the detail of our advisors reports for example their view of the change to market data this is 21 basis points so there's still quite some work to do before we'd reach a view about the final view of the WACC.

In terms of the early cut-off point I'd have to say there is some administrative convenience in that from our perspective, so there's obviously a lot of modelling goes on in terms of the price review process and so we took the decision we would set the view of the WACC relatively early in our draft termination process we won't necessarily have the luxury of that a final determination we will have to look at all factors closer to the time but clearly we'd prefer to take an early view and hold it if we can in terms of making sure that we are modelling and understanding the implications of the WACC in terms of when we look at a company's business plan.

So you know as a board we do look at both the business plan and what the WACC means in terms of the actual numbers that are turning out in the draft and final determination. So it's not just a case of saying the risk free rates move therefore the WACC will move automatically.

Jonson Cox: Thank you David. I'd underline David's comment. It's a board decision taken in the round. And of course that's one of the reasons why there was a time lag. Dominic let me turn to you.

Dominic Nash: Thank you its Dominic Nash from Barclays. You won't be surprised it is going to be following up about WACC. On our numbers, if you take your WACC at face value. The cost of equity, your forward looking is coming in at 2.8 percent real around that level here and I think the biggest driver for that getting it down there is there's been the fall in beta that we've seen and you're using a two year beta calculation to get there. Is that two year beta calculation likely to remains as we go into the draft determination and is that 2.8 percent real realistically the number you would have given if you were gonna do the draft determination today. Just got a follow up question - is that enough? Do you think I mean it's a lovely academic systematic risk return, but do you think that's enough to get the discretionary equity into re-equitisation of the sector or discretionary CapEx into getting the sort of improvements in services up taking into account the cash flow risk that this sector faces which is obviously a diversifiable risk of nationalization for example.

David Black: Yes. Okay. So just going to reiterate the point our view of the cost of equity draft termination is the numbers we have set out rather than the potential implications of changes in the markets. And we do think that is a sufficient cost of equity in terms of making sure the water sector remains an attractive investment. And so in terms of their view about how we calculate betas I think we do put a lot of weight on the two year evidence. We have also looked at shorter and longer periods.

There's obviously a range of views in terms of the wider community around views around the long term betas versus shorter term measures. Our concern is that if you go too short a term you're actually exposed to volatility i.e. the numbers move around without telling you very much. If you go for a longer time period than there's a risk your data looks very old potentially you're drawing data from the previous price review periods to inform your views about the appropriate cost of equity for the next price review period. So there is a balance to be struck. I don't think there's any magic answer to that. We do think that a two year range gives us enough data points to give you a statistically robust number but it's also quite current. But so that's probably all I can say in terms of how we take a view on that.

Jonson Cox: Thank you. Question here and then I'll go to Jamie in from the web and then come back to the audience.

Mark Freshney: It's Mark from Credit Suisse I have two questions. Firstly generally going through the documents it appears you're very wedded to this mechanical process on the Capital Asset Pricing Model. I'm just wondering whether you're just looking at IRRs and returns as is the right way to be looking at this because investors buy this sector for the dividend yield. Clearly you need a higher dividend yield in the UK just now for the political risks. I'm just wondering whether there needs to be another wider conversation about other valuation metrics. Secondly looking at the returns and the process for setting those returns compared to when the 2.3 percent was set almost a couple of years ago now and the 2.1 it seems the main component driving that is the gearing assumption has gone up because the share prices have gone down. So in a way because we've had two years of weak share prices following publication of various manifestos two years ago it's basically led to a lower return which seems very perverse to me. So can you talk about whether you think that's right?

David Black: Okay. So just firstly in terms of the couple asset pricing model and the use of that it is something that regulators do consider from time to time. The recent UKRN study on this also looked at the issue again and I guess it's sort of a bit like democracy; it's the worst way of doing things but there isn't any better way that we can see. I think you're right that we do need to look at the broader evidence and we have set out in our document how we do look at a range of inputs into the measures we derive.

In terms of trying to reach views about market returns we look at historical evidence we look at more contemporary evidence and do try to weigh it up. So we do look as broadly as we can at the evidence available to us. But I do think there is a long established precedent for using the Capital Asset Pricing Model; it has delivered results over time that have worked in terms of the regulated sectors in terms of striking a fair balance of returns. And it is worth saying now that terms we are not proposing a major change at this point in the process. I don't think would be a sensible approach in terms of the change in equity beta. You're right that some of this is driven by gearing up and down of betas in terms of moving from a raw beta through to an unlevered beta and back up again to a view about the beta for the notional company.

I think one of the benefits we've got in the water sector though is we do have two pretty pure play listed companies who happen to have gearing at a level very similar to the notional company. So if you're uncomfortable with the results of the gearing up and going down process you can just observe the equity betas of those companies directly. And that's certainly basically pitching at a slightly lower level than we get out

of that gearing up and de-gearing process. So in a sense I think you're right that a market sentiment about valuation does impact on this calculation but it's not just manifestos that have been published out there you know arguably the companies that are listed are performing well and their valuations could be seen perhaps higher than that and some of the other unlisted companies in the sector so it's not clear to me the direction of the impact to market valuations is to the disadvantage of the WACC calculation from an investor perspective. And the point in terms of where valuations are right now versus long term trends they're actually believe it or not slightly above in terms of the premium to the RCV.

Jonson Cox: Just remind us where the premium was yesterday Jamie?

Jamie Tunnicliffe: I think most people have pretty close to double digits; just over 10 percent to 13 percent - that sort of range. The long term average going back to 1993 is 9 percent.

David Black: So in terms of you know the argument that somehow or other the beta calculation is too low because of the change in market valuations you know these are neither borne out by the current position or if you look in terms of the broader evidence around the riskiness of these companies.

Jonson Cox: Thank you David. I got a hold that one there if I could. Now I'm going to go to Jamie for any questions from the webcast but if anyone in the audience wants to ask a question following. Raise your hand. Verity and I can't quite see who it is in the corner we can get the mike over to you guys. Well Jamie. Are there any ones particularly while we're on the WACC issues that you want to raise from the webcast?

Jamie Tunnicliffe: Well there is one, just you know someone sort of thinking ahead you know what are the real areas normally we're in a funnelling process and they're just interested about the main areas for potential adjustments between now and FD. What's the focus? What should they be talking to companies about?

David Black: So in terms of costs I think it's worth just touching on that briefly in terms of views about cost efficiency so we've distinguished between base and enhancement costs. And in terms of the base costs we're modelling that using econometric models. And so there are some questions around the productivity shift we're setting for the sector and the use of real price effects. So we've made a change between the IAP version of costs and the draft determinations to allow for real price effects of labour which effectively reduces the frontier shift set for the sector. So that'll be a question in terms of the modelling approach. I guess there'll be the usual questions about the data in the model and the particular parameters although we have now very well established cost models that we've been through a

fairly exhaustive process. And so you wouldn't expect to see many changes in that area in terms of enhancement costs. I could lump them into several buckets.

So we've got these debates with companies around what we would term as catch up costs. So if costs for funding things like leakage or upper quartile performance where we've been very clear that we won't be funding those. So I'd say there's less scope for change. And that's basically because it's a matter of our methodology. There are other areas of costs. So some of the investments proposed that say in the resilience space where we're indicating to companies that in principle there's you know there could be a case that they're making but they haven't met the evidence threshold in terms of what we've set out. And so we would expect to see some companies respond to that and come back with evidence that may be more persuasive than they've put to us. And so that could lead to an adjustment in enhancement costs. And then so those are probably the main areas in terms of cost. And then in terms of outcomes we've set out how we reach views around outcome performance commitments.

Obviously there's a new year of data for both outcome performance commitments and costs and so we'll have to look at the implications of that in terms of both the cost models and in terms of the outcome performance commitment levels. In terms of outcome delivery incentives I think we've set out a very clear methodology for how we've made adjustments. And so companies will have the opportunity to respond against those.

Jonson Cox: Let's take a pause though David. Thank you. I am going to come back to the audience now. We'll come back to Jamie later.

Chris Laybutt: Good morning. Chris at J.P. Morgan two questions but they're both related. The first is just in terms of the cut-off date for the FD. When should we expect you to be I guess taking data from? So what's the equivalent of the 28th of February for the end of the year? And in terms of investor concerns we're hearing some or many investors concerned that we may see a dip in financial data and macro settings that may impact returns. And then in the years that follow that we may see bond yields for instance head towards a higher level. It's an age old question but indexation is one solution. Ofgem are considering that now. What do you think of that as a concept thinking forward to the next review and more generally?

Jonson Cox: Let me just say I don't think you'll ever get us to absolutely tie down our Board decision making process in a procedural way. But Rachel do you want to deal with that or should David?

David Black: So in terms of the cut-off date we've talked about autumn in terms of finalizing the date; there's a balance to be struck. Ideally markets wouldn't move between making our decision but obviously it's quite a busy time over the next few months for the UK economy. So we will say we will take a view and we'll will run our models through that. But we will also have to look as we get closer to final determination is that view still relevant and correct. And so there'll be a balance to be struck. It will be more demanding than the draft determination process when we've been able to take a view and accept that markets may move because we can pick that up with final determination. So it won't be such an early cut off for final determination but it is a question regulators face at each price review. Then in terms of market movements beyond final determination. So we have built in some indexation in terms of the cost of debt for PR19.

In terms of cost of equity. It does feel very much like a risk that equity holders bear in the sector in terms of movements over time and the historical evidence would point to that these shifts have been in favour of investors so that may be a reason from a regulator's perspective to introduce more indexation because it avoids the risk of error. And I'm sure that will be something we'll think about for PR 24 but it's not something for PR19 at this point.

Jonson Cox: Thank you David. Verity over to you

Verity Mitchell: Yes. Verity at HSBC I've got two questions the first one is some clarification really on your change in gearing assumptions is that partly a function of the fact that there's so much RCV growth in this sector so you thought that was appropriate. And is that applicable to all companies irrespective of their embedded debt versus their new debt. So first just to clarify that. And then secondly I suppose it's a question to Rachel about the long term aspirations of Ofwat and even the enhanced companies have tried to deliver real reductions in bills. So do you think this five year process is fit for purpose in trying to deliver things like long term resilience when the companies seem to strive to want to reduce bills in absolute terms.

Jonson Cox: So David. Do you want to do the first part?

David Black: So our gearing assumption in terms of the level of debt hasn't changed. It remains 60 per cent. We have changed the level our view about the level of embedded debt. So that was 70 percent at IAP it's now 80 per cent and that is very much based on company business plan data which gives us a fairly clear view of their expectations of raising finance over the period and their level of existing finance. So the 80 percent is slightly higher than the number used at PR14 which was 75 per cent.

Rachel Fletcher: Yeah in terms of your question about is the five year process fit for purpose if you're actually trying to drive resilience. I mean we know obviously I come from Ofgem which experimented with longer price reviews and then they've gone back to shorter price reviews. I think we do need to keep the five year period in situ to keep the focus on efficiency and to pass through productivity gains to customers.

I think that's an important part of how we regulate and that's part of what today's conversation is all about. I think there are other tools that we can use to keep the focus on resilience and those of you have read our draft strategy document might have picked up that we are. We are starting a bit of a process to think about whether we could be driving greater reporting around asset condition, asset health, so that we are able as a as a regulator and as an industry to keep a closer eye on what is actually happening to the assets. Their performance commitments that we've got in the price review are the right ones but they're very much lagging indicators of what's happening to asset health. But I think there are complementary tools and techniques that we can use as a regulator and as a sector to drive that focus on resilience.

Jonson Cox: Thank you Rachel, Jamie is there a question from you and then I'm coming to the middle here.

Jamie Tunnicliffe: There's one on line asking about whether our view on the need for headroom in investment grade ratings has changed.

David Black: No in terms of the short answer. So we've asked companies to submit to us their views around their notional and actual views around their target credit ratings and most companies have targeted two notches above investment grade. There are four companies that haven't done so on an actual basis and we have applied more scrutiny to their finances on that basis. But we haven't set a view around what the right answer is. But there was a fair degree of convergence in the sector.

Jonson Cox: To the high end and then we'll pass the mic forward.

James Brand: James Brand from Deutsche Bank. Given the cut in the cost of capital companies performance under TOTEX and ODI incentives is gonna be a really important factor in terms of delivering returns throughout the next regulatory period and you've said throughout this process that you are setting upper quartile targets for companies to hit in terms of those different cost and outcome based performance measures. You've often said you're using dynamic upper quartile or forward looking upper quartile targets. I was wondering whether you could just give a bit more detail in terms of how you've gone about that because it's still a little bit unclear, at least in my mind, how much those upper quartile measures are based on

performance today and maybe you've rolled forward a little bit to adjust for changes in scope or how much you're actually modelling productive improvements in the upper quartile targets going forward. Because you're also saying in your regulatory document a P50 performance allows a company to earn its cost of equity, so you are explicitly assuming that companies are all on average going to meet that upper quartile target and therefore obviously by definition it won't actually be upper quartile by that point, so if you can give some details on how you get to upper quartile. That'd be really interesting.

David Black: Okay. So in terms of costs we generally in terms of wholesale base wholesale costs we take a view about historical upper quartile in terms of the data we're using as is historical we do business plan data which we have looked at in terms of what forecast upper quartile would look like. But in terms of setting cost efficiency challenges they're based on historical upper quartile data. But we do apply a frontier shift to that to try to replicate what upper quartile would have expected to be by 2025 and that's where taking the view around the productivity gains expected in the wider economy and a view around any real price input price pressures that might be faced in the sector is what drives that number.

In terms of the retail cost models we have used forward looking cost data in regard to that. So we don't deploy a frontier shift to the forward looking cost data but we've given 50 percent weight to historical costs and 50 percent to forward looking data. And in terms of the performance commitments themselves, these are based on forecast upper quartile performance. So we've asked all companies to forecast upper quartile performance for the next period. We've looked at that data and reached a view around what the appropriate level ought to be set for those performance commitments that do have an upper quartile basis but we've also looked at the changes achieved by the sector historically. And so you know and a number of those key areas there's quite significant movements every AMP in terms of improvements by the sector.

So in terms of pollution incidents or internal sewer flooding. And so when you look at the historic gains achieved by the sector we are comfortable that there are reasonable numbers.

James Brand: If you're saying you're trying to forecast the upper quartile, but yet you're expecting companies to broadly break even on incentives, are you assuming a much bigger catch up then of the underperformers you're assuming that things really compress and everyone gets pretty close to the upper quartile for it to be in that position.

David Black: So we're assuming that customers are paying for a level of stretching service performance by companies. So yes we are expecting companies

to reach those performance levels or they will incur penalties and therefore their customers will receive compensation in the form of lower bills. But we are taking a view around what's reasonable for an efficient company to achieve. And so we do look at as I say at historical performance improvements as well as what's coming through company business plans. I think the encouraging thing I see from the revised business plans is actually in many cases companies are accepting these challenges. So they're not changes that the companies are contesting in the main.

Jonson Cox: James, thank you. Iain.

Iain Turner: Yes. Iain Turner from Exane. Obviously the sector has been very kind of controversial over the past couple of years. And if you look back at the most recent investor survey that you did there was a big step down from investors' perception of the Ofwat level of independence from government. I wonder whether that's something that you worry about and how you've tried to conduct things going forward to try and give investors more confidence in this process and in your independence.

Jonson Cox: So let me say a little bit Iain and then pass to Rachel. Well we'll share it between us right. So that comment arose I think last year when we were challenged by the government by the Secretary of State essentially on the legitimacy of the sector. We are independent. For instance no part of any of this PR 19 process has been discussed with government. That decision is arrived at by our board independently and investors can have that assurance. But this is an industry of national significance. And I think it's only to be encouraged that the Secretary of State and other senior ministers in government take a keen interest and have a perfectly legitimate point of interest in the sector. And you all have seen when we were challenged in that we responded in our way as regulators. And we took that into account. So I would contest that there is any increase in political engagement, our independence remains as strong as ever. And as you know Iain, I've lived through many periods in this sector; periods of challenge. It's been said before but look at the track record here. Seventh price review undertaken independently. Rachel do you want to add anything.

Rachel Fletcher: I mean I think the only thing I'd add is we also have to listen to what customers and ordinary people on the street are saying and are concerned by it. And we bring that into thinking about the long term investability of the sector. The need to provide for future customers as well as address the issues of the day. So I think the thing that has concerned me is people equating if you like Ofwat picking up on some of the mood and looking to respond to that and some of the policy decisions that we've been making with us losing our independence and I think I would draw the distinction between being leant on by government on the one hand which as Jonson said, we certainly have not been under any pressure officially or unofficially in any

part of PR19 or indeed on anything, any of the other policy decisions we've made that distinction between a regulator that is independent and a regulator that is also listening and wanting to respond to the concerns of the public. And I think it's important and in the industry's interest that we do listen because that is where some of the keys to legitimacy are going to be found and that's why you've seen us move at speed with the back in balance agenda. And that's why we talk about the vision for the future and we set out our strategy you know really taking a greater recognition of the role that this sector can play in society.

Jonson Cox: There you've got it Iain. Thank you. We're coming to a close. So is there anyone left who wants to ask a question. One down here. So let's go here and then Jamie I'll come to you. If anyone else has a question just raise your hand now or shortly so I know.

Sharon Vieten: It's Sharon Vieten. Columbia Threadneedle. The four highly leveraged structures that you look at among the companies you cover. What are you planning to do about these four especially one who has quite a bit of work to do over the next few weeks?

Jonson Cox: OK four highly leveraged structures among the Big Nine English companies do you want to talk about one David.

David Black: I could start.

Jonson Cox: But we're not going to start discussing PR24. I assure you Sharon.

David Black: So I think the first point to make is that we've been very clear with companies about expectations about getting their finances in order in terms of to address the challenges of PR19. So we told companies two or three years ago now, in terms of our intentions around the review as we set it out the in the methodology. So companies have had quite a long run up at this in terms of understanding the direction of travel understanding our views and in terms of making sure that they are financially resilient.

As part of their business plans we've sought assurances from their board around financial resilience and we've tested and challenged that. We are seeking further assurance from a number of companies in terms of their business plans in terms of the revised terms of the response to draft determinations. There are a number of companies that are in the process and some companies are proposing to undertake various mitigation such as injecting more equity into their businesses. Some companies are quite well advanced for that process.

Other companies are still in the process of working through that. So you know I am confident that companies are able to address the challenges they are now very clear in terms of the draft determination around the impacts for their particular finances and companies are you know; this is not a surprise to companies that in the main are anticipating this.

Jonson Cox: Sure. I just underline under line what David said. We have been giving notice on the need for financial resilience for a number of years. And actually this determination very clearly put with companies for responsibility for a sustainable financing. You have a follow up I think a quick follow up.

Sharon Vieten: Just to that point on equity, further equity injection; the reason for the equity injection are quite imaginative. What are you going to do you know? I'm looking at company structures their shareholder loans lines everywhere, dividend payments, interest payments, shareholder loans. How are you going to simplify the structure? Because part of resilience and legitimacy is also about simplifying these complex structures going forward. How are you going to address that are you going to?

Jonson Cox: So I'm not going to have a long discussion on shareholder loans here but David or Rachel do you want to say a bit about that?

David Black: Okay. So we completely agree that excessively complex and opaque structures don't enhance the sector's legitimacy and certainly raise questions. Some companies are taking steps to simplify the structures and to be more transparent around those and we do have a work program in terms of making very clear in terms of where companies do have financing structures that are different from the notional structures both their level of returns and the level of dividends and how that compares. So I think the sector is definitely moving in that direction. I think there may be a question around some of the financing proposals companies have put forward that is a question for them and their boards. We will obviously be looking very critically at their financial resilience when they come back with their revised business plans.

Rachel Fletcher: And then just add one thing to that. I mean, you know part of the back in balance agenda and one of the things that attracted a lot of attention earlier this year of course was the decision that Ofwat made to require highly leveraged companies to share the benefits of that leverage. You know that is an incentive to simplify structures and you know that's kind of part of the rationale behind the decisions that we made earlier in the year.

Jonson Cox: And it's indeed complemented by what we've recently said on consulting about ring fencing of the regulated company because that's the company

that holds the licence. So if you want a longer discussion Sharon start with Jamie in the first instance. Jamie is there any last one or two you want to come back up from the webcast.

Jamie Tunnicliffe: There is one more. Why does it make sense for companies being asked to implement expensive short term mechanical solutions to remove phosphorus from rivers whereas there are cheaper longer term and more sustainable solutions on offer?

Jonson Cox: So I think you've heard from Rachel earlier how much we support longer term sustainable solutions. But Rachel you want to add anything to.

Rachel Fletcher: Well I mean the incentives are there to use nature based solutions especially where they're cheaper. And I think you know one of the barriers to that happening more frequently is force of habit. Actually in this sector a mind-set shift as I mentioned is required. I'm also aware that some of the Environment Agency's standards are very prescriptive and perhaps don't allow for the margin of error that you might require around a nature based solution. I think that is an issue. I am confident the Environment Agency wants to look in to this we would like to work with the Environment Agency so that we can see much more of these green solutions. I do and I repeat what I said earlier. I think the water sector has got the opportunity to kind of rebrand itself if you like as an environmental services sector and I think that would be an exciting proposition for investors, an exciting proposition for future employees and an exciting proposition for the way the sector is viewed socially. So I think that is you know we've got a role to play along with our fellow regulators in making sure that we remove barriers. But as I said I think some of one of the key barriers is in the mind-set and the force of habit within the companies themselves.

Jonson Cox: Veteran followers of the sector will remember much wider environmental to economic regularly debates in the past. Actually the join up is fantastic at the moment, working very smoothly. As Rachel said, we encourage companies to continue to challenge and bring forward more sustainable and longer term solutions. I think that's probably a moment to call a day isn't it. I guess you're all anxious to get back to your desks or wherever.

I thank you all and thank those on the webcast for attending today. We'll be around for a little while. Jamie is the point person to go to with any follow up questions.

Thank you very much for joining us today.