Wholesale Local Access Market Review

TalkTalk response to Oxera paper on the fair bet

September 2017

NON-CONFIDENTIAL VERSION

1 *Summary*

1.1 This paper responds to Oxera's paper, dated 16 June 2017, on behalf of Openreach regarding whether Ofcom's proposals to regulate Openreach's 40/10 VULA product in the Wholesale Local Access ('**WLA**') market review are in accordance with the so-called 'fair bet' principle.[1]

1.2 At the outset, it is important to note that the 40/10 VULA product was rolled out following an announcement in July 2008. It will therefore have been in the market for nearly a decade by the time Ofcom's regulation comes into effect. Furthermore, the potential consumer harm from failing to regulate prices of a product which should be regulated is very large indeed– in excess of £1 billion over the course of the next charge control period alone.[2] This means that strong evidence should be required for Ofcom to take the decision not to regulate VULA. However, Oxera's analysis does not contain such strong evidence– rather, it assumes most of the main inputs to their model, and presents basic assumptions, with no support, as fact.

1.3 The 'fair bet' principle states that regulation should ensure that at the time an investment is made there has to be sufficient "upside potential from any investment to offset the downside risk of failure."[3]

1.4 Oxera makes a number of fundamental errors and unjustified assumptions in its analysis. As a result, Oxera is incorrect in its assertion that Ofcom's approach does not satisfy the fair bet principle. The most important failings in Oxera's analysis are:

- *Oxera assumes far greater commitment to capex than is justified*.
    - The return allowed under a 'fair bet' changes with the amount of information a firm has about the riskiness of an investment, since the more information is available the lower the appropriate risk premium. The exact time that capital is assumed to be committed is thus crucial to determining whether a fair bet was allowed.
    - Oxera models two scenarios for when capex was committed. Both of them claim that capital was committed far earlier than is supported by the evidence. Oxera therefore overestimates the cost of capital for Openreach's FTTC investments.
- *Oxera has failed to reflect that the value of capex to be undertaken for rolling out FTTC was dependent upon take-up*.
    - The technical manner in which FTTC has been rolled out means that the amount of capex is positively correlated with demand for the product. For example, even under a single pre-commitment of

[1] Oxera (2017), *Response to Ofcom's WACC proposals for the WLA charge controls*, 12 June.

[2] By the start of the next regulatory period, there will be around 9.5m VULA customers, rising at around 1.6m per annum. Taking Ofcom's central estimates of charge controls, those customers will pay around £22 more in the first year of the next regulatory period, and £31.80 in the second year, if no charge control is imposed and Openreach instead retains prices which are flat in nominal terms.

[3] Ofcom 2017 WLA market review, volume 1, para 1.21.

capital the amount and timing of investment will respond to demand during the investment cycle. Equipment in an exchange can be and is expanded in line with demand, even within the initial capital investment commitment. Oxera has failed to reflect this interrelationship in its paper.

- *Oxera's lower bound for the cost of capital is based on Ofcom's proposed WACC for Other UK Telecoms, which is excessive*
    - TalkTalk has set out both in its response to Ofcom's WLA consultation, and in the accompanying response to Oxera's submission on the cost of capital on behalf of Openreach, the various reasons why Ofcom's estimate of the cost of capital, and in particular Ofcom's estimate of the risk free rate, is excessive. This means that Oxera's lower bound for the cost of capital is inappropriately high.
- *Oxera has no data supporting its assumption of the appropriate distribution of returns*
    - Oxera sets out at length (correctly) that the distribution of returns is one of the three vital elements in determining whether the fair bet principle has been satisfied. However, it then simply asserts without evidence that returns are normally distributed, with a standard deviation of 3.5%. In the absence of evidence or support, Oxera's modelling is based on nothing more than guesswork.

1.5 Given these fundamental flaws in its approach, Oxera's paper should be not be given any evidential value. By adopting multiple unjustified modelling assumptions, Oxera's result that the fair bet principle is not satisfied by Ofcom's proposed regulation becomes a foregone conclusion. An unbiased set of assumptions would have been unlikely to have reached this conclusion.

1.6 The remainder of this paper outlines these four primary points in turn. A number of more minor points are dealt with in section 6.

2 *Oxera assumes far greater commitment than is justified*

2.1 The timing of commitment of capex is important in the fair bet analysis since capex that is committed earlier will tend to have a higher WACC since demand and cost is less well understood, and the investment of that capex is consequently riskier.

2.2 Oxera considers two capital investment scenarios when it models whether the fair bet is satisfied:

> *Scenario 1: The degree of optionality associated with the CAPEX profile was low, and all investments in the NGA network were committed and tied to BT's announcements in 2008 and 2010 to build the fibre network and reach 40% and 66% of the UK households respectively*.

Scenario 2: there is some discretion and optionality in the CAPEX profile, in particular for investments that take place after the project has matured and is no longer risky. For the purposes of estimating a lower bound, we assume the project to have fully matured at the start of this market review and that all investments taking place from now onwards (c. 41% of the overall NGA investment, based on Ofcom's model) are independent from previous investments, and could have been stopped if the investment had underperformed.

2.3 Scenario 1 therefore assumes that, as of 2008, 100% of the total capital expenditure on FTTC roll-out to 66% of the UK was fully committed, and a fair return should be calculated on the entire roll-out as if nothing has been learned about either demand levels or build cost uncertainty since 2008. Scenario 2, on the other hand, assumes that as of 2008, all expenditure until 2017 was fully committed, but that investments from April 2017 onwards could still be varied by BT from that point and thus the risk on post 2017 investments should be calculated based on 2017 knowledge of costs and demand.

2.4 Both of these scenarios are clearly unrealistic and incorrect, being directly contradicted by public statements in BT annual reports.

2.5 Firstly, businesses generally review major CAPEX programmes at least quarterly. It would be inconceivable – if BT was acting rationally (which is the premise of Oxera's analysis) – that BT would not have reviewed and revised the level and timing of investments for 7 years (or in scenario 1 for over a decade).

2.6 Second, it is clear that BT did in fact review and revise its investment level and speed. BT's 2009 Annual Report clearly states that initial commitment was only to 40% roll-out at most:

> *In July 2008, we announced plans to make Britain's biggest ever investment in a fibre-based super-fast broadband network. We will spend £1.5bn making fibre based services available to around 40% of the UK's homes and businesses by 2012.*[4]

2.7 That is, in 2008 BT had at most committed to roll-out to only 40% of UK premises, even if it could be presupposed that all of that investment was fully and irrevocably committed. The capex required for a roll-out to 40% of premises will be substantially less than three-fifths of the capex required to roll-out to 66% of premises given variations in population density and that lowest cost locations will tend to be addressed first. And in practice it is likely that BT could have considerably descoped even this investment if customer demand had turned out much worse than expected (or the costs higher). For example, it is likely that BT could have slowed roll-out, pushing back costs until consumer demand for bandwidth had increased further. This would have increased returns on an underperforming project, as there would have been greater demand at launch in many areas.

2.8 BT's optionality over increasing roll-out of FTTC from 40% of premises to 66% of premises is clear from CEO Ian Livingston's statement in BT's 2010 Annual Report, in

[4] BT 2009 Annual Report, at page 8.

comments written 22 months after BT had stated its intention to roll out to 40% of premises:

> *in the broadband market… we are making one of the largest private sector investments in Europe, spending £1.5bn to bring fibre to at least 40% of the UK in 2012. If conditions are favourable, we see no reason not to extend this to around two-thirds of the UK by 2015.*[5] [emphasis added]

2.9 That is, in May 2010 BT's CEO was stating that expansion to two third of premises would only occur if conditions were favourable. This makes it clear that, as of May 2010, there had been no commitment to launch beyond the first 40% of the country, and that BT were taking into account cost and demand conditions when determining whether to go beyond the first 40% of the country.

2.10 By the time of the next BT Annual Report in 2011, before BT had started its roll-out from 40% to 66% of the country, CEO Ian Livingston made it clear that BT was seeing strong demand for FTTC investments:

> *Openreach's fibre broadband network roll-out is on track to pass 5m UK premises by spring 2011 – well on our way to 10m premises by 2012. Thousands of customers are taking up super-fast fibre-based broadband every week and really like the service.*[6]

2.11 Given this contemporaneous evidence, it is clear that the most that BT could have been committed to before being able to observe that demand from consumers was strong is the capex required for an initial 40% tranche of the country. There is strong reason to believe that even this level of commitment is excessive, and that BT could have descoped the initial 40% tranche by eliminating more marginal areas and/or slowing the speed of roll-out from its initial plans in the event that demand was meaningfully lower than the central expectation.

2.12 In practice, this creates two bounds for the level of BT's initial commitment:

- an upper bound being capex which occurred prior to BT announcing that it was expanding its FTTC rollout to cover 66% of UK premises—this will be less than the capex to cover 40% of premises, given that the announcement of expansion to 66% took place while the roll-out to 40% was ongoing. This assumes, likely incorrectly, no descoping or reconfiguration of the capital expenditure was possible, even in the face of new knowledge on customer demand and build costs; and,
- a lower bound being capex which occurred prior to commercial launch of the retail FTTC product when very little was known about demand and descoping and reconfiguration in response to new information was unlikely. Much or all of the cost risk, on the other hand, would already have been unwound by the point of commercial launch.

[5] BT 2010 Annual Report, at page 5.

[6] BT 2011 Annual Report, at page 9.

2.13 Both of these bounds imply considerably less commitment than even Oxera's Scenario 2 (the scenario with the lower level of commitment). The 'true' level of commitment will lie somewhere within these bounds (that is, after Openreach had some weeks or months of demand data, but well before the expansion to 66% was announced in BT's FY 2010/11).

2.14 If Oxera wishes its model to diverge from normal, rational business practices and the public statements made by BT in their annual reports, then Oxera must provide compelling evidence as to the reasons why it must do so. Given the considerable resources Openreach has to spend on regulatory engagement, the lack of empirical research in this regard is telling. In particular, Oxera could have, but did not:

- examined the contracts between BT and its subcontractors, to determine whether the contracts in place prior to the commercial launch of FTTC covered either all the expenditure of the whole project (scenario 1) or all expenditure until 2018 (scenario 2), or – most likely – far less than that.
- examined whether there were break clauses in BT's clauses with subcontractors, and whether there were any penalties associated with BT exercising them.
- examined the proportion and costs of BT's workforce devoted to FTTC roll-out, and whether and how quickly resources could be allocated to other projects.
- examined BT's contracts with equipment suppliers to determine what volumes of equipment BT was committed to.

2.15 However, Oxera's position goes further – that the even more generous Scenario 1, where decisions in 2008 fixed the capex programme in perpetuity, '*should carry most weight in the analysis*' of the fair bet. Oxera appears to believe this conclusion is supported by §A8.14 of Ofcom's WLA Review consultation, which stated:

> *In our view, it is the first tranche that is most relevant to our assessment of the fair bet. We recognise that BT has continued to invest beyond its initial £1 billion tranche, in order to extend the footprint of the network and that the expected payback period for this subsequent investment may extend beyond 2020/21. However, the fact that BT was able to stagger the rollout to some degree means the risk of subsequent tranches of investment would have declined significantly over time as demand and costs became better understood. [emphasis added]*

2.16 In TalkTalk's view there is no plausible reading of this paragraph from Ofcom which supports Oxera's Scenario 1 as a reasonable approach to BT's degree of commitment– rather, Ofcom appears to be saying that beyond the first 40% of the country, there would have been a sharp diminution in the risk of investment.

2.17 Overall, therefore, Oxera's approach significantly overestimates the degree of commitment of BT's investment in FTTC. At the time when demand and cost conditions were unknown, at most the required investment to reflect 40% coverage of UK premises was committed. This is in sharp contrast to Oxera's case that the committed investment was at least that to roll out FTTC to 66% of UK premises.

3 *Oxera has failed to reflect that the value of capex to be undertaken for rolling out FTTC was dependent upon take-up*

3.1 An important element of capex risk is operational gearing. If costs are fixed irrespective of demand it tends to make profits more volatile and dependent upon the economic cycle (thereby increasing the cost of capital) than would be the case if costs and demand were correlated.

3.2 Oxera's focus on a purely theoretical framework, without consideration of practical concerns or the technical structure of the FTTC network, means that there has been no consideration given to correlations between revenues and capex. Had Oxera done such analysis, they would have found that there were substantial linkages, which defray a considerable proportion of the risk of investment beyond the earliest stages.

3.3 For example, Oxera has not reflected that there are two different types of cabinet in Openreach's FTTC deployment, and that which is chosen by Openreach in a given area may depend upon already revealed indicators of both product specific demand and demand driven by the broader economic cycle. When demand is higher, a larger cabinet can be chosen and capex costs will also be higher. A type 1 cabinet can serve a maximum of 128 subscribers, while a type 2 cabinet can serve a maximum of 288 subscribers.[7] Cabinet capex may therefore be positively correlated with demand.[8]

3.4 The same is true of some elements of future capex. As Cartesian points out, BT has recently been dimensioning its network for 30% take-up, reflecting a conservative view of the long-run demand for superfast broadband.[9] Where take-up exceeds 30%, BT will therefore need to construct additional FTTC cabinets– or enlarge existing cabinets– to cover the excess customers. [✂], it has substantially derisked the overall project for BT. By building a network which could only cope with at most 30% take-up (in individual geographic areas), BT both deferred some of its capex from initial roll-out into the latter years of FTTC development, but also reduced the break-even level of take-up in the earlier years, providing itself with protection against low levels of demand.

3.5 The manner in which BT undertakes local capacity expansions of FTTC also acts to reduce the risk of these expansions. Before increasing capacity at an FTTC cabinet (or constructing a new FTTC cabinet to augment capacity in a particular area), BT builds a 'waiting list' of customers who have ordered FTTC but are currently unable to receive it. This means that there is guaranteed demand for the expanded FTTC cabinet when it is rolled out, in addition to the general trend of growing demand for superfast broadband products which supports any network expansion.

[7] See Cartesian (2016), *Wholesale Local Access Market Review: NGA cost modelling*, at Figure 7.

[8] Other capex categories, such as modems, and MSANs, are also related to the volume of demand for FTTC.

[9] Cartesian, *op. cit.*, §3.22.

3.6 This further supports the implausibility of Oxera's scenario 1. Although TalkTalk has not had access to detailed data, it is likely that a large proportion of expenditure from this point onwards will be in network expansions to cope as take-up in geographic areas exceeds that area's capacity. This capex would not have been undertaken if demand for FTTC had been low (or costs had been higher than expected), and so could not have been pre-committed in 2008. Moreover, this tranche of capex is itself very low risk– arguably as nearly low risk as investments in copper– given the continuing growth in demand for superfast broadband, and the presence of existing waiting lists of customers providing a guaranteed initial source of demand.

3.7 Overall, a failure to consider the positive correlation between demand and capex means that Oxera's analysis will overestimate the cost of capital of undertaking BT's FTTC project, and therefore bias Oxera's analysis towards a finding that the fair bet has not been adhered to.

4 *Oxera's lower bound for the cost of capital is based on Ofcom's proposed WACC for Other UK Telecoms, which is excessive*

4.1 At Table A1.2 Oxera derives its estimate of the benchmark WACC under its Scenario 2. This table demonstrates that the WACC in this case is a blended average of a modification of Ofcom's 2009 estimate of the Rest of BT cost of capital (12.8%) for the first committed tranche of investment, and Ofcom's 2017 estimate of the cost of capital for Other UK Telecoms (9.4%) for the remaining CAPEX.[10]

4.2 If Ofcom were to consider Oxera's Scenario 2 relevant (which it should not, as it assumes an inappropriately large amount of commitment on the part of BT), then it should ensure that the WACC adopted for Tranche 2 is appropriate. As set out in TalkTalk's June 2017 response to the WLA consultation, the accompanying paper by Frontier Economics, and the accompanying paper to this one responding to Oxera's cost of capital submission on behalf of Openreach, the cost of capital proposed by Ofcom in its WLA consultation is inappropriately high. In particular, the proposed risk free rate of 0.5% is significantly in excess of a proper estimate.

4.3 This paper will not reiterate TalkTalk's views on the appropriate cost of capital for BT's GEA products, which have been dealt with at length in those other submissions. However, when calculating the benchmark WACC under scenario 2 Oxera should use the appropriate cost of capital. Replacing the 9.4% estimate for tranche 2 with a more appropriate estimate of 7.7% at most, and weighting in the same manner proposed by Oxera for its (inappropriate) scenario 2 leads to a lower benchmark WACC of 10.7%, even if the estimated cost of capital for Tranche 1 is left unchanged.

[10] See section 6.2, below, for comments on this modification, which is itself inappropriate.

5 *No data supports Oxera's assumption of the appropriate distribution of returns*

5.1 As Oxera sets out at section 3.2.3 of its submission, three parameters need to be identified in order for an assessment of the fair bet to be robustly calculated:

- the project specific cost of capital;
- the expected returns over the lifetime of the project; and,
- the shape of the distribution of returns.

5.2 This section focusses on the third of these parameters– the shape of the distribution of returns.

5.3 In its paper, Oxera sets out its view on the shape of the distribution of returns as follows:

> *in the absence of detailed data to infer the shape of the returns distribution, we assume a normal distribution centred around the expected lifetime returns, with a standard deviation range of 2.0-5.0%.*

5.4 In effect, therefore, Oxera has assumed two things:

- that the shape of the distribution of returns is normal (that is, skewness is assumed to be zero, kurtosis is assumed to be three, and there is no lower bound); and,
- that the standard deviation of returns ranges between 2.0 and 5.0%, leading to a midpoint of 3.5%.

5.5 Oxera's assumption of a normal distribution is not justified at all in its paper. This assumption is crucial: if returns are negatively skewed (so that the right hand tail of the distribution is shorter than the left hand tail) then regulating GEA may be of very little importance to the expected returns from the project, as little of the upside of the distribution is truncated by regulation. In effect, if potential project returns are clustered between the unregulated mean and the project returns allowed by regulation, then regulation will have little impact on average returns taking into account the impact of regulation.

5.6 There are good reasons to think that the distribution of returns for BT's first tranche of FTTC investments may have been negatively skewed. In particular, as noted at §3.4 above, BT dimensioned its network to be able to cope with 30% or lower take-up. This would naturally truncate the right hand side of the distribution, as in the case of unexpectedly strong demand, BT would be unable to fulfil that demand. This implies that a normal distribution is unlikely to be a good assumption for the appropriate distribution of returns, undermining Oxera's calculations. Competition from other firms, such as Virgin Media, and Altnets such as Gigaclear, would also tend to lead to a negative skew, as there would likely be entry and expansion of superfast networks in the case that FTTC was highly successful, with strong demand, truncating upside returns. This entry would not occur in the event that FTTC underperformed.

5.7 Furthermore, Oxera then goes on to assume a standard deviation of between 2.0% and 5.0%. Oxera's (footnoted) justification of this assumption is as follows:

> *We consider [2.0-5.0%] to be a reasonable assumption of a plausible range of outcomes for this investment... visual inspection of the distribution of return spreads for PFI projects... would suggest a standard deviation of around 3% since around 70% of the outcomes are within a range of ±3% of the sample's average.*

5.8 This analysis is problematic and unreliable. As Oxera indicates in its quote, it has few details of the PFI comparators it is relying on– including the actual returns. Oxera appears merely to have conducted a cursory look at a single graph in an NAO document. It does not appear to have details of the PFI projects themselves to ascertain that they have similarities with investing in FTTC, merely stating that *'PFI projects are similar to BT's FTTC investment, in that both are typically long-lived projects, involve infrastructure investments, and might involve multiple tranches of investment*'. It is apparent from this quote that Oxera is largely assuming based on some general principles that these are suitable comparators.

5.9 In any comparator exercise, it is important to carefully choose an appropriate comparator data set, ascertain what differences there might be between the comparator(s) and the subject of interest, and to the extent possible control for those differences. Oxera's analysis does not undertake any determination that there are enough similarities between the comparators and the subject of analysis to be of relevance, let alone control for systematic differences. As section 6.0 below demonstrates, the NAO's report itself sets out a number of potentially problematic systematic relationships which mean that it is inappropriate to use the NAO's PFI dataset without suitable adjustments and controls. This means that the comparator analysis does not provide strong support for the assumption that the standard deviation of returns being at a point estimate of 3.5%, as assumed in section 3.2.3 of Oxera's paper.[11]

6 Other issues

6.0 Oxera's comparator analysis is flawed

6.1 The comparator analysis undertaken by Oxera at section 3.2.2 is liable to overestimate the margin over the cost of capital which is required to fulfil the fair bet principle. Oxera does not appear to have ascertained whether, in aggregate, the PFI projects earned returns just sufficient to fulfil the fair bet, or whether there were supernormal profits earned by the PFI contractors. This means that Oxera's statement that:

> *BT's unregulated spread above the correct project-specific WACC calculated by Oxera is consistent with the observed deviations for nearly 50% of the PFI projects*

[11] We note that a standard deviation of 3.5% is in any case above the estimate provided by the comparators, which would also tend to lead to a finding that the fair bet has not been fulfilled.

is of no relevance. This may reflect that both BT and the PFI investors are earning supernormal returns over and above the levels that would be required for the fair bet principle to be passed.

6.2 The NAO report that the Oxera analysis is based on itself cautions that returns may have been higher than is warranted:

> *...investors do not have to demonstrate that their returns are reasonable for the specific risks of the project. There is thus a risk that if competition is not present, or if there are inefficiencies in the PFI equity market, that value for money may not be optimal ...*[12]

6.3 The NAO then goes on to cite a specific reason why returns would tend to be in excess of the cost of capital:

> *Investors told us that they do not conduct detailed calculations to determine the rate of return they seek when bidding for a contract. Instead their company boards consider specific risk factors for higher risk projects and for others set minimum rates of return for projects known as hurdle rates, which reflect their cost of capital. These hurdle rates include investors' need to recover their costs for bids they have not won...*[13]

6.4 In BT's case, there was no requirement to recover costs for bids which were not won, as this was not an instance where BT had any bid costs. Rather, BT took a unilateral business decision to invest in FTTC. As such, in order to benchmark returns to PFI projects against BT's investment in FTTC, the element of profits which is intended to cover the bid costs of unsuccessful bids should be deducted from the observed returns of PFI projects over the project WACC set out at Figure 3.1 of Oxera's report.

6.5 Furthermore, even once the costs of unsuccessful bids were deducted from returns to PFI investors, the NAO still found that there were persistent and unexplainable excess returns:

> *after allowing for changes since the project started and the primary investors' main risks, we found residual differences between our estimated values and bid prices. We used conservative estimates to value the risks, checked the results using an alternative method, and used sensitivity analysis, but could not eliminate these residual differences... We cannot, therefore, discount the possibility that market and other inefficiencies in the initial pricing of equity add to the investors' profit.*[14]

6.6 These excess profits would also, alongside funding for unsuccessful bids, need to be deducted from investors' observed returns before Oxera could make appropriate comparisons.

6.7 In addition to the total project returns being incomparable, the mechanism by which the distribution of returns is determined is fundamentally different due to the

[12] NAO (2012), *Equity investment in privately financed projects*, at §3.2.

[13] NAO, *op. cit.*, at §3.3.

[14] NAO, *op. cit.*, at §3.24-3.25.

existence of a bidding process. Returns are likely to be as much determined by the nature of the competition that led to the issuing of the contract than the fundamentals of the project itself.

6.8 Overall, therefore, Oxera's comparator analysis is flawed because it fails to control for known issues with the comparator data used, which were identified in the source cited by Oxera. The approach used will therefore overstate the excess returns required for the fair bet to be satisfied, and bias Oxera's analysis towards showing that the fair bet is not satisfied by Ofcom's proposed regulation.

6.1 Oxera's comments on efficiency are unclear

6.9 At various points through the document Oxera makes comments regarding the manner in which price caps should be introduced. For example:

> *when introducing price caps consistent with the fair bet principle, the regulator should ensure that the welfare-enhancing incentive properties of RPI-X charge controls are preserved. That is, investors should be allowed and incentivised to earn adequate returns in excess of the capital from (higher-than-expected) efficiency or technology gains, and these additional returns should not be clawed back through ex post regulation*.

6.10 It is unclear what Oxera means here and what it implies for the fair bet. Oxera has presented no evidence that BT has indeed been more efficient or pushed technological development faster than would have been expected. In the absence of such evidence, it must be considered equally likely that BT may have been less efficient than expected, and that there may therefore be underperformance, the cost of which should be borne by BT's shareholders and management rather than by its customers.

6.11 In particular, there is strong evidence that the technological development of BT's network has lagged other comparable countries, in particular due to lower penetration of FTTP than in comparable networks. Ofcom's 2016 *International Communications Market Report* sets out FTTP coverage in a range of other countries.[15] At 1%, the UK's FTTP coverage is the joint lowest of all countries surveyed, and is far behind comparators such as South Korea (100% FTTP coverage), Japan (97%), Singapore (95%), Portugal (75%), Sweden (59%), Spain (53%) or Russia (53%). This points towards UK consumers being mainly served by a lower grade technology than is prevalent in many developed nations.

6.12 In any case, the nature of RPI-X regulation– in all industries– is that efficiency gains are reflected in the price cap after a delay. In the case of the earliest tranches of VULA investment, this delay will be approximately a decade– well beyond the 3-5 years which it will take to fully reflect efficiency gains in the prices charged by telecoms firms regulated under the European Framework Directive. As such, BT will have retained any efficiency gains in VULA for longer than is mandated under

[15] Ofcom (2016), *International Communications Report 2016*, at Figure 3.32

European law, creating stronger incentives for cost minimisation than would be the case for products which were already subject to cost-based price regulation.

6.13 In light of the lack of evidence of efficiency or technological outperformance, and some evidence that the technology used to serve UK consumers is outdated compared to that adopted in other nations, TalkTalk considers that Oxera's comments on efficiency are little more than polemic, which should be given no weight by Ofcom.

6.2 Oxera's estimated asset beta for VULA in 2008-10 is unreliable

6.14 One of the crucial elements of the cost of capital for the first tranche of investment in VULA is the asset beta. However, as Oxera admits in Appendix 1 to its paper, it does not have any actual evidence as to the asset beta at the time when Openreach was making its first tranche of investments in VULA. Instead, it linearly interpolates the asset beta estimates of the 2017 WLA and 2014 FAMR, despite the 2014 FAMR not estimating a beta for Other UK Telecoms, which means that Rest of BT is dominated by the risks of BT Retail and BT Global Services, rather than the (safer) assets of Openreach. 0.83 is therefore likely to have been an overestimate of the asset beta for VULA in 2014.

6.15 Moreover, there is no evidence presented by Oxera that linear interpolation is likely to lead to a good estimate of the asset beta for 2008-10. Once again, this appears to reflect Oxera adopting assumptions without attempting to justify the approach, beyond that it is '*simple*'. That an approach is simple does not make it more likely to be accurate.

6.3 Oxera has not reflected supernormal profits on speeds other than 40/10 GEA

6.16 When considering the overall returns from investing in VULA, all of BT's sources of returns should be taken into account. As a matter of fact, Openreach's returns across all its portfolio of FTTC products will not be reduced to a normal level by Ofcom's regulation. Only the 40/10 GEA product will be regulated, and, even if there is a competitive constraint on 55/10 GEA and 80/20 GEA from the regulated 40/10 product, this will not constrain prices to competitive levels. Rather, there will be some element of supernormal profits remaining, which Oxera should take into account when calculating returns relative to the cost of capital.[16] These supernormal profits are likely to increase over time, as consumers' demand for bandwidth increases, and the 40/10 product becomes an increasingly weak constraint on faster GEA products.

[16] There will be supernormal profits because the constraining product (40/10 GEA) is also controlled by Openreach. Profit maximisation therefore dictates that prices of other GEA products will be set in excess of the normal price level. The only case where this will not happen is where there is perfectly elastic demand between the different speeds of GEA products, which is unrealistic.

6.17 In the same way, there are several ancillary products to 40/10 VULA which Ofcom does not propose to regulate to cost. These include GEA Cablelinks, GEA Managed Install, and Superfast Visit Assure. Neither Oxera nor Ofcom appears to have taken these supernormal profits into account when calculating returns from Openreach's VULA investments.

Wholesale Local Access Market Review

TalkTalk response to Oxera paper on WACC proposals

September 2017

NON-CONFIDENTIAL VERSION

1 Summary

1.1 This paper responds to Oxera's paper, dated 12 June 2017, on behalf of Openreach regarding Ofcom's proposals for the weighted average cost of capital ('**WACC**') in the Wholesale Local Access ('**WLA**') market review.[1]

1.2 Oxera's paper in support of Openreach presents a theoretical view of Openreach's Cost of Capital that is wholly inconsistent with both the practical realities of financial markets and up-to-date regulatory analysis. This partial and inconsistent analysis should be given no meaningful weight by Ofcom. Ofcom should take into account the lack of Oxera's evidential support on Openreach's submissions, notably on the fair bet and the appropriate price caps which should be set for MPF and GEA products.

1.3 In particular:

- *The paper is divorced from market reality*– Oxera's paper routinely ignores actual market data. This is because of the inconvenient truth that market data simply fails to support Oxera's position. Oxera's analysis therefore relies almost solely on historical regulatory actions.
- *The historical regulatory actions which Oxera relies on are already outdated*– Oxera relies very heavily on prior decisions of other regulators, many of which are already several years old; and, in particular, it places considerable emphasis on Ofwat's most recent cost of capital determination in 2014 granting a higher cost of capital than that envisaged by Ofcom. However, since Oxera's paper was submitted, Ofwat has published its initial views on PR19, and has indicated that it currently plans to reduce both the cost of equity and cost of debt granted to water companies. Once this new, more recent, information is incorporated, Oxera's evidence base collapses.
- *Oxera's view that the TMR is constant over time is not supported by evidence*– as set out by Ofwat, the supporting work by PwC for Ofwat, and the Credit Suisse Yearbook, proper analysis indicates that the TMR is not constant over time and is expected to be significantly lower over the next few years than it has been on a historic basis.
- *Oxera's position on the pension deficit fails to reflect how investors perceive BT*. Recent analysts' reports on BT Group make clear that investors do in fact treat BT's pension deficit as if it were increased debt, in contrast to the assertions made in Oxera's paper. Oxera's theoretical concerns are therefore of little relevance to the practical decision facing Ofcom.

1.4 Table 1 below provides a comparison of Ofcom's WLA proposals with Oxera's recommendations and what the market evidence indicates. The market evidence is based on the following ranges and point estimates:

[1] Oxera (2017), *Response to Ofcom's WACC proposals for the WLA charge controls*, 12 June.

- A real RFR of -2.0%, consistent with both the real spot rate for 10 year bonds and the 3.5 year forward instantaneous rate.[2]
- A real BT cost of debt of -1.35%, taken as a weighted average of the nominal yield to maturity of all of BT's outstanding nominal debt, adjusted by a conservative estimate of expected RPI inflation of 2.5%.[3]
- A total market return of 3.3%, based on the midpoint of the 3.0-3.5% range put forward recently by Dimson, Marsh and Staunton.

Table 1: Comparison of Ofcom and Oxera approaches with market data (BT copper)

	2017 WLA proposals	Oxera proposal	Market evidence
Real RFR	0.5%	1.0%	-2.0%
Total market returns	6.0%	6.1%	3.3%
Pre-tax nominal cost of debt	1.4%	2.1%	-1.35%

1.5 This table demonstrates how far Oxera's proposals are away from the current market evidence. Oxera takes Ofcom's proposals– which already give Openreach an excessive margin over its forward-looking cost of capital– and then proceeds to add a further margin on top. There is no evidence in support of Oxera's assertions.

2 Oxera's paper is divorced from market reality

2.1 For a firm the size of BT, most parameters of the Capital Asset Pricing model can be directly observed in the market. Some adjustments may be required to correct for the application of the charge control to Openreach rather than the broader BT group, but these adjustments can only serve to decrease the estimated cost of capital given the maturity of the Openreach business compared to the offering of, for example, premium sports channels to consumers.

2.2 Oxera chooses to ignore market reality.

2.1 Oxera ignores market data on the risk free rate

2.3 Although some parameters in the capital asset pricing model– notably the equity risk premium ('**ERP**')– are unobservable, many of the parameters can be directly derived

[2] As of 17 August 2017, Bank of England data indicated that the real spot rate for a 10 year maturity gilt was -1.96 %, and the 3.5 year forward real instantaneous rate was -2.00%. A 3.5 year forward rate is chosen to be contemporaneous with the end of the next charge control period.

[33] Taking into account the BoE 2% CPI inflation target, and OBR analysis suggesting that the CPI-RPI wedge is at least 0.5% (and more likely closer to 1%).

from market data. Amongst those parameters are the risk free rate; the debt premium; and the equity beta.[4]

2.4 The risk free rate is particularly well observed because of the deep and liquid markets for index-linked gilts in the UK, along with forward yield curves which enable regulators to obtain an unbiased estimate of the risk free rate at various points in the future.

2.5 Oxera's paper almost completely ignores market data when reaching its conclusions. The clearest and most important example of this is section 2.1.1, which considers the risk free rate. In this section Oxera sets out that:

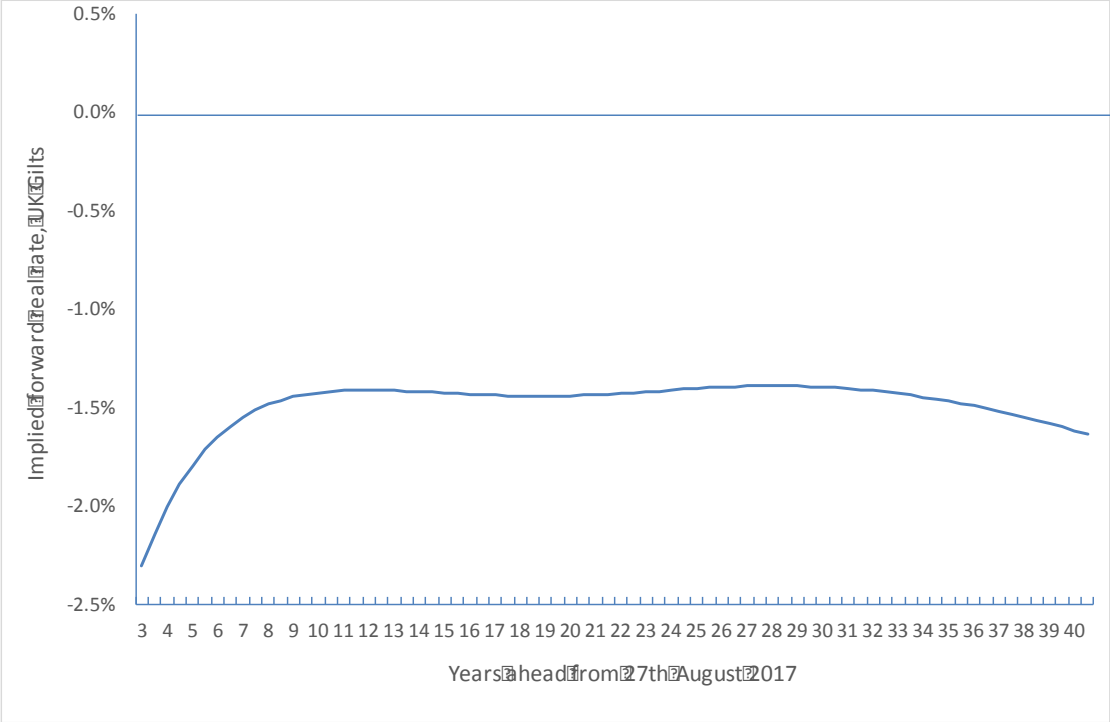
- Ofcom has reduced its estimate of the RFR from 1.0% in the 2016 BCMR, to a proposed 0.5% in the current WLA Review, and that this '*is an excessively large reduction*';
- that Ofcom's '*proposals appear to be driven almost entirely by the observed movement in yields over a six month timeframe following the EU referendum result*';
- that '*given the sharp increase in observed volatility of gilt yields, any short term movements in yields need to be treated with caution*';
- and that '*Ofcom's proposals significantly diverge from the majority of recent UK regulatory determinations*'.

2.6 The elephant in the room is that, as Oxera shows in its Figure 2.1, the best market proxies for the risk free rate have been decreasing consistently since 1995 and have been *negative* since 2014.

2.7 In any case, Openreach attracts capital on the international market from international investors, and if UK Sterling yields have decreased then this is an accurate reflection of international investors' approach to risk. As of 8 August 2017, the real spot yield on a 5 year gilt was -2.29%, and on a 10 year gilt was -1.86%. Bank of England data also indicated that real yields were expected to remain below -1.0% at all points over the next 40 years.

[4] The equity beta is at a company level, rather than at a product level.

Figure 1: Bank of England estimates of real returns on UK gilts



Source: Bank of England

2.8 The market data is clear– any positive estimate of the risk free rate is biased in favour of giving Openreach unearned supernormal returns on its products. Oxera does not anywhere address this glaring omission from its analysis. In light of these data, the fall in yields following Brexit is of no meaningful relevance– an appropriate estimate of the RFR was zero or lower before the Brexit vote, and will have reduced since then.

2.9 In the same way, recent volatility may add some uncertainty to the appropriate estimate of the risk free rate, but not to the extent that Oxera has implied. For 1.0% to be the appropriate estimate of the RFR, observed gilt yields would have to be biased downwards by 3.0% compared to their 'true' level. This is an inconceivably large difference, particularly in a situation where Oxera's own chart shows that real gilt yields have not been above 0%– let alone at +1.0%– since 2014.

2.10 It is also notable that the argument made by Oxera– and supported by Openreach and BT Group in their submissions to Ofcom– that recent movements in gilt yields should be ignored is diametrically opposed to the approach advocated by BT in the 2014 Fixed Access Market Review.[5] In its response to that review:

> *BT noted that risk-free forward rates had increased recently and said that, although such rates were below historical averages, if Ofcom were minded to make any change to the real RFR, it should increase it to reflect recent evidence.*[6]

[5] The 2014 FAMR was the preceding review of the same markets which are now being considered in the current WLA review.

[6] Ofcom (2014), *Fixed Access Market* Reviews, at §A14.38

2.11 BT/ Openreach's approach, supported by its consultants such as Oxera, is therefore to advocate the use of the most recent data when observed risk free rates are increasing, and to caution against the use of the most recent data when risk free rates have fallen. This makes it clear how self-serving Openreach's arguments, and those of Oxera in Openreach's support, are.

2.2 Oxera ignores market data on the cost of debt

2.12 In the same way as Oxera ignores high quality, easily obtained data on the current and future level of the RFR, it then also proceeds to do so with respect to the cost of debt for BT. Oxera's paper provides no data whatsoever on the actual cost of debt which is being paid by BT– if it had done so, it would have demonstrated that the cost of debt allowed by Ofcom is well above the forward-looking cost of debt for BT Group.

2.13 Indeed, the forward-looking cost of debt for BT is effectively currently negative in real terms for some of its issued debt. Table 2.1, below, uses data from Morningstar which illustrates the very low yields on many of BT's debt securities.

Table 2.1: BT yields to maturity (in nominal terms)

Coupon	Maturity	Amount ($m)	Price	Yield to maturity (%)
8.625%	26/3/2020	392	120.0	0.90
0.625%	10/3/2021	1,721	101.2	0.29
0.500%	23/6/2022	660	99.9	0.52
1.125%	10/3/2023	1,262	103.3	0.53
1.000%	23/6/2024	660	100.6	0.91
1.750%	10/3/2026	1,491	104.4	1.21
1.500%	23/6/2027	1,319	99.9	1.51
5.750%	7/12/2028	784	132.5	2.43
6.375%	23/6/2037	653	150.3	2.98
			Average	**1.15**

Table only includes BT nominal debt; BT also has an index-linked bond maturing in 2025.

Source: http://quicktake.morningstar.com/stocknet/bonds.aspx?symbol=bt, accessed on 11 August 2017

2.14 As Table 2.1 shows, all of BT's debt apart from a single bond due to expire in 2037 has a yield to maturity of less than both CPI inflation (2.6% in June 2017) and the Bank of England's base-case prediction of CPI inflation until 2020.[7] They are all below current RPI of 3.6%. All but the two longest-term debt issues are below the Bank of England's long-term CPI inflation target of 2% . In all likelihood the CPI real cost of debt facing BT is currently at or below zero. The RPI real cost of debt will be even lower, given an expected 0.5% to 1% wedge between CPI and RPI.[8] All bonds that

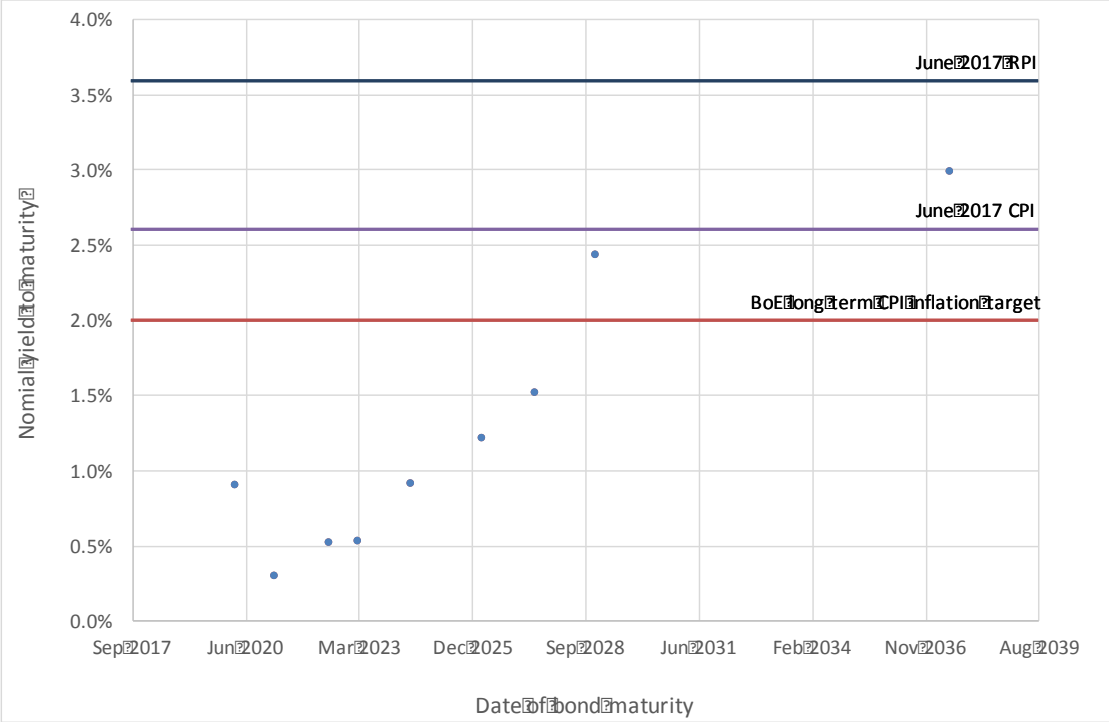
[7] http://www.bankofengland.co.uk/publications/Documents/inflationreport/2017/may.pdf

[8] http://budgetresponsibility.org.uk/docs/dlm_uploads/Working-paper-No2-The-long-run-difference-between-RPI-and-CPI-inflation.pdf

expire within the next two charge-control periods have an expected real-term yield of less than -1%, irrespective of the inflation measure used.

2.15 Oxera's complaint that there is '*uncertainty*' over recent bond yields has no practical relevance. While there may be uncertainty concerning whether the real cost of debt is zero or negative, or over how negative the real cost of debt is, there is no uncertainty that allowing a real cost of debt of +1.5% is permitting BT to make supernormal profits which are unrelated to BT outperformance or quality of management.

Figure 2: BT market cost of debt



Source: http://quicktake.morningstar.com/stocknet/bonds.aspx?symbol=bt, accessed on 11 August 2017, ONS inflation report, https://www.ons.gov.uk/economy/inflationandpriceindices, accessed on 17 August 2017

2.16 Oxera's comment that:

> *… Ofcom's proposal for revising the parameter estimates of the cost of debt results in an overall allowance that appears low compared with the allowances prevailing in other regulated sectors.*

is also simply of no relevance. Market data clearly indicates that the cost of debt proposed by Ofcom is excessive compared to BT's actual costs of raising debt, which is what Ofcom is actually attempting to estimate. Moreover, as demonstrated in section 3, the regulatory precedent relied on by Oxera is outdated. As such, Oxera's critique should be given no weight by Ofcom in its considerations.

3 The regulatory precedent which Oxera relies on is already outdated

3.1 In addition to ignoring market data, Oxera's analysis is starkly backwards-looking. Oxera's section 2 cites previous regulatory decisions in the UK when considering both the appropriate risk-free rate and allowed cost of debt.

3.2 Figures 2.3 and 2.4 provide the lists of comparator regulatory judgements referred to by Oxera. Ignoring previous Ofcom decisions, the other regulatory decisions acknowledged by Oxera are:

- the Competition Commission's 2015 decision in Bristol Water;
- Ofwat's 2014 price review;
- the CAA's 2014 decisions on regulating Heathrow and Gatwick;
- the Competition Commission's 2014 Northern Ireland Electricity decision;
- Ofgem's 2014 final settlements in 2014 for electricity distribution operators.

3.3 These regulatory decisions were themselves necessarily based on historical data. When Ofcom publishes its final decision in the first quarter of 2018, these decisions will be at least three years old, and the data the decisions rely on will be many years older still; in the case of Ofwat's PR14 decision, the decision has also been superseded by the evidence referred to in section 3.1. For this reason alone the approach that Oxera has adopted is necessarily and intrinsically flawed. It ignores medium-term market evidence in favour of excessive reliance on out-dated regulatory judgements.

3.1 Ofwat's recent evidence on the cost of capital

3.4 Oxera appears to place particular weight on Ofwat's decisions as representing a floor for the relevant cost of capital facing BT:

> *… the significantly lower allowance from Ofcom for the Openreach cost of debt relative to other utilities– particularly the water sector in the UK– appears contradictory and out of line.*

3.5 Since Oxera's paper was finalised, Ofwat has published its initial methodology document for its 2019 Periodic Review of water pricing ('**PR19**').[9] Although no specific parameter estimates are made in this document, Ofwat makes it clear that the allowed cost of capital in the 2019 Periodic Review is likely to reduce in the forthcoming period:

> *…there are compelling reasons why the interest rate environment is expected to remain low by historical standards through 2020-25…*
>
> *We consider that the evidence points to a macroeconomic backdrop which is significantly different from PR14 and previous price controls. In our previous price*

[9] See Ofwat (2017), *Delivering Water 2020: consultation on PR19 methodology. Appendix 13: Aligning risk and return*, 11 July.

determinations, even if interest rates were low, they were expected to rebound. The market data for 2020-25 suggests this is not the case.

3.6 Equally, Ofwat appears to be moving towards a position that the allowed cost of equity for the next period will be lower than in the current period:

> *Evidence from the recent Credit Suisse Yearbook points to expectations that future equity returns will be lower than the historical average. The Credit Suisse Yearbook states, for example, 'since real interest rates remain at low levels, this is likely to depress returns on all asset classes – including equities. Given that equity investors made a 4.2 percentage point higher return than money market investors in the 1900-2016 period, the authors predict an additional return of just 3 to 3.5 percent in the years ahead'… low real interest rates will continue to drive lower equity and bond returns over the 2020-25 price control period than have been seen over the longer term.*

3.7 Ofwat also sets out a range of reasons which militate against using backwards-looking estimates of total market returns– as is implicitly being proposed by Oxera. These estimates:

- *'may not adequately capture current markets or future expectations'*
- *'may lead to overstatement of allowed returns if regulators only adjust above but never below long run evidence'*
- *'may undermine perceived legitimacy of controls if investors earn excess returns due to factors beyond their control'*.

3.8 Oxera's approach on the risk free rate– that it should be maintained at +1.0%, irrespective of market data– is also not supported by Ofwat's analysis. Ofwat states:

> *We have also considered the implication of the current market trends on the potential risk free rate for PR19. The PR14 risk free rate, used in the final determinations, of 1.25% was based on the yield from UK government index-linked gilts with 10 year maturities. This is considerably higher than the 10-year average of index linked gilts (April 2017), which was around -2%.*
>
> *The evidence… implies a real risk free rate that should be negative over the entire 2020-25 price control period. We also consider the recent decision by the Ministry of Justice to use a risk free rate of -0.75% for insurance claims (from March 2017) as evidence of current low gilt rates impacting risk free rates. We therefore consider that the current evidence suggests that the risk free rate for PR19 should be considerably lower than the risk free rate we set at PR14, reflecting current market conditions*. [emphasis added]

3.9 Ofwat's analysis is therefore directly opposed to Oxera's approach of treating current regulatory decisions as static, as if the same parameters would be adopted by regulators if the decisions were made in light of current market conditions. Rather, it appears to support a **negative** risk free rate estimate. A 0% RFR should be considered a ceiling on the range of parameters which could reasonably be adopted by Ofcom. The contradiction that Oxera appears to find between Ofcom's estimate and those of other regulators is a chimera.

3.10 Similarly, Oxera's view on the TMR:

> *Ofcom's proposal to lower the TMR by 10bp does not appear to be well justified… a reduction in the real RfR would not necessarily translate into a fall in the TMR, as a reduction in the RfR could be offset by an increase in the ERP.*

is fundamentally undermined by Ofwat's analysis:

> *[PwC] found that reductions in the risk-free rate are not perfectly offset by increases in the equity risk premium (and therefore the TMR is not constant). Therefore , while a reduction in the risk free rate leads to some increase in the equity risk premium, but the increase in the equity risk premium is not as great as the reduction in risk free rate. This is consistent with the data we present above from Barclays and Credit Suisse…*
>
> *This view is also shared by some investors… [data from HICL] shows changes in the equity risk premium and risk free rate over time, with a general trend of a falling total market return. It suggests changes in the risk free rate are, to a limited extent, offset by changes in the equity risk premium, but not fully.*

3.11 This evidence from Ofwat provides the justification for Ofcom's proposed reduction in the TMR. Indeed, in light of the evidence from Credit Suisse (see §3.6 above), a reduction of only 10bp in the TMR appears excessively generous by Ofcom, and is likely to overstate the true cost of capital facing Openreach. Ofcom should therefore consider whether a further reduction in the TMR would be justified, potentially to as low as around 4.0%. Given a negative RFR, and an ERP of less than 4.0% based on Credit Suisse evidence, a TMR of 6.0% appears unsustainably high.

3.2 Conclusions on regulatory precedent

3.12 Oxera's finding that Ofcom's proposed cost of capital is too low, based on regulatory precedent, appears to largely be a result of the outdated regulatory decisions which Oxera has referred to in its submission. Using the most recent publication– Ofwat's initial PR19 consultation– a very different view to that of Oxera is reached. Rather than being too low, several of the parameters proposed by Ofcom– notably the RFR, which impacts both TMR and the cost of debt– appear to be too high and therefore excessively generous to BT.

4 Oxera's view that the TMR is constant over time is not supported by evidence

4.1 At section 2.1 of its submission, Oxera avers that '*academic evidence suggests that the TMR is relatively stable over time*'. In support of this, Oxera cites a single 2013 paper by Wright and Smithers. It uses this single citation to argue against Ofcom's proposals to reduce the TMR by 0.1%.

4.2 Given the manner in which Ofcom's cost of capital determination is rounded, 0.1% is the smallest change which could be made to the TMR. In effect, therefore, what

Oxera is arguing for is not a '*relatively stable*' TMR, but a TMR that is completely unchanged irrespective of the circumstances.

4.3 Furthermore, evidence subsequent to this 2013 paper is not consistent with its findings:

- the recent 2017 Credit Suisse Yearbook finds that in the 16 years from 2000-2016, the annualised real return on equities in the UK was 2.4%, compared to 6.9% in the fifty years from 1967-2016.[10] This is not strong evidence of stability; rather, it points to there having been a significant structural break in 2000, with returns from 1967-2000 considerably higher than 2000-2016.
- PwC analysis presented in Ofwat's initial PR19 document demonstrates that there has been considerable inconsistency in decade-by-decade equity market returns, and that recent returns have been much lower than those between 1976 and 1995.[11]
- Ofwat also sets out that '*evidence from the recent Credit Suisse Yearbook points to expectations that future equity returns will be lower than the historical average*'. Ofwat cites that Dimson, Marsh and Staunton expect the TMR to be only 3-3.5% over the next few years.
- Finally, Ofwat cites evidence from both Credit Suisse and The Economist that there is a relationship between the real interest rate and equity returns over the next five years. As Ofwat states, '*This analysis supports the view that current low real interest rates will continue to drive lower equity and bond returns over the 2020-25 price control period than have been seen over the longer term*'.

4.4 Oxera's analysis is therefore both partial and outdated. It is inappropriate to cite a single academic paper from 2013, and then to attempt to use this to make the extraordinary claim that any change in the estimated TMR– even the smallest possible change– is unjustifiable.

4.5 As such, the weight of evidence appears to be that the TMR is <u>not</u> constant over time, contrary to Oxera's assertions. Rather, it is expected to be lower over the next few years than has historically been the case, and this should be reflected in cost of capital determinations. Ofcom should therefore give little weight to Oxera's partial analysis of the TMR, and should continue to set a lower TMR in the WLA Review than in previous market reviews.

[10] Dimson, Marsh and Staunton (2017), *Credit Suisse Global Investment Returns Yearbook 2017*, at page 45.

[11] Ofwat, *op. cit.*, at Figure 3.

5 Oxera's position on the pension deficit fails to reflect how investors perceive BT

5.1 Oxera sets out its position on the impact of the pension deficit on gearing (and consequently WACC) in section 3.1 of its report. It states that:

> *In the absence of any compelling evidence or argument supporting [Ofcom]… it would be inappropriate for Ofcom to adjust BT's WACC as a result of its pension scheme. This would also be consistent with Ofcom's previous approach in this matter and with the approach adopted by other UK regulators.*

5.2 Oxera has three fundamental points supporting this view:

- no other UK regulator includes the impact of pension deficits in its assessment of WACC;
- Since 2010, BT's pension deficit has remains broadly unchanged;
- Ofcom has not cited any new academic evidence to support the inclusion of a WACC impact from pension deficits.

5.3 However, none of these points is meaningfully relevant to the decision which Ofcom has to make regarding the impact of the pension fund:

- other UK regulators have different duties to Ofcom– in particular, they have financeability duties and therefore adopt backwards-looking approaches to regulation. Ofcom has no financeability duty, and adopts a forward-looking approach to regulation. By definition, pension deficits are backwards looking, and current users should not be penalised because of BT's previous decisions regarding its pension fund. It is therefore unsurprising that Ofcom adopts a different approach from, say, Ofwat, given the different legal duties the two regulators have on them.
- it is unclear even within the terms of Oxera's report why there would need to have been a change in the scale of the pension deficit, or other material change in circumstances, for Ofcom to change its view regarding the appropriate form of regulation. Oxera does not provide any supporting rationale for this point.
- it is also unclear why Ofcom should need new academic evidence to change its view on the form of regulation. There are a range of forms of evidence which can be relevant to a regulator with Ofcom's duties, and academic evidence is only one of them. Moreover, Oxera appears to have misunderstood the manner in which regulation operates– while new evidence could provide a positive reason to change regulatory position, the absence of new evidence does not create a positive case not to change regulatory position.

5.4 Furthermore, consideration of recent evidence from financial market analysts demonstrates that, as in Ofcom's analysis, the pension deficit is treated as akin to additional debt being held by BT. This provides powerful support for Ofcom's position.

5.5 For example, a recent research note by John Karidis of Numis Securities states, *inter alia*, that:[12]

> *we calculate FCF after our estimate of the cost to debt fund BT's deficit, because whole top-ups reduce the pension deficit akin to repaying the principal of a bond…*
>
> *Our forecasts of BT's FCFE [Equity Free Cash Flow] are after our estimate of what it would cost the company to debt fund the entire BTPS deficit*. [Emphasis added]

5.6 This type of assessment of BT, by one of the most respected analysts in the communications sector, demonstrates why Ofcom's proposed approach is right. Investors react to BT's pension deficit as if it were increased debt, given that its characteristics are similar. Given that investors view the pension deficit as debt, then it will be taken into account by these investors when they determine the riskiness of holding BT debt or equity, and impact the returns they therefore require in order to hold BT's assets.

5.7 Oxera's view, at its heart, appears to be that regulators can only amend their views when there is some new academic publication which supports that change– and should be willing to ignore market evidence even when that conflicts with the previous regulatory approach in order to maintain an unchanged position. This cannot be the correct regulatory methodology, and Ofcom is right to take the impact of BT's pension deficit into account, in the same manner that it is taken into account by investors in BT securities.

5.8 Moreover, the approach adopted by Ofcom was in fact originally proposed by Oxera itself in a 2009 paper. As Oxera said:

> *companies with large defined-benefit pension schemes should be treated as having higher gearing than similar companies without such a scheme. This approach would be consistent with market practitioners, including credit rating agencies, such as Moody's and Standard & Poor's, which typically take into account unfunded pension obligations, together with corporate debt, when assessing the likelihood of default.*[13]

5.9 In light of this, Oxera's section 3.1 should be given no weight. Ofcom's approach is in line not only with the approach taken by analysts, but also in line with Oxera's own, previously expressed, views on the appropriate approach to the treatment of pension deficits. Its current support for Openreach's position appears to be, by Oxera's own admission, in direct contradiction to the manner in which market practitioners consider companies such as BT.

[12] Karidis, J. (2017), *BT Group: more FCF and Ofcom thoughts*, 7 August.

[13] Oxera (2009), *Defined benefit pension plans: defining the cost*, December