UKRN Guidance for regulators on the methodology for setting the cost of capital

BT response to Consulation, 16th November 2022

BT Group

1 Executive summary

We welcome UKRN's consultation and agree it is desirable that UK economic regulators take a consistent approach in assessing the WACC for the sectors they oversee – both in terms of choice of methodology and in estimating common parameters such as the risk-free rate. BT supports the UKRN in providing Guidelines to meet this objective, with regulators still having discretion given different duties and market environments.

In telecoms markets returns no longer require cost-based charge controls due to increasing levels of competition downstream of access to BT's ducts and poles (and dark fibre in a limited number of markets). However, determining the WACC is also an important factor in the 'Fair Bet' framework. This provides a regulatory commitment mechanism ensuring that investors (including but not limited to BT), who face the downside risk that their investment could go wrong, also have the opportunity, over the lifetime of the investment, to benefit from the commensurate upside should the investment turn out to be successful in later years.

Competition has driven high sunk, fixed investments in telecommunications in recent years, with BT alone committing to around £15bn to provide full fibre to 25m premises by 2026. Others have committed to build at scale, too. That includes Virgin Media/O2 upgrading their existing Gigabit capable cable network covering about half the UK to FTTP, and working to expand its FTTP footprint to £23m premises by 2027, while Cityfibre are spending £4bn to bring full fibre to 8m homes by 2025.[1]

To enable this, the regulatory framework needed to give investors confidence that the legitimate opportunity for upside (commensurate with the downside risk at the time of investment) will not be regulated away in later years. This framework is widely referred to as giving investors a Fair Bet.

This approach to investor risk warrants mention in the UKRN's Guidance. Failure to recognise the risks inherent in large capital programmes – especially where they are shouldered by private investors competing against each other during the investment phase – can result in an expectation by investors that regulation if or when it kicks in to constrain prices, might not reflect the level of project specific risk at the time of the investment. It would thus result in suboptimal investment levels from the outset.

Separate, but linked to the above, the UKRN recognises the challenge of identifying comparable listed companies its discussion of **Recommendation 5,** in particular when there are no listed pure play comparators to provide evidence of a specific firm's asset beta. This is the case for BT and its investment programme for full fibre. We are in a transitional phase, with high levels of investment in new and long-lived assets. Further, this means that past evidence of the equity beta (reflecting the pre-transitional BT) on its own will also have limited value. Estimates based on historical data therefore need to be adjusted to reflect the high degree of sunk fixed costs associated with BT's full fibre investment and the resulting impact on the level of operating leverage. Such an adjustment, for what has been termed the "risk-magnifying effect", will better reflect the level of systematic risk facing the regulated firm on its new investments.

We also have some brief comments on **Recommendations 7, 8 and 9**. Where we have not commented on a Recommendation, BT agrees with the UKRN's general approach noting that the guidance does not prevent regulators from adopting their specific interpretation where this is warranted by reference to their statutory duties.

[1] Virgin Media O2 to Cover 23 Million UK Premises with FTTP Broadband UPDATE - ISPreview UK; Our Rollout | CityFibre [viewed on 18 November 2023]

2 WACC and project specific risks

2.1 WACC in fixed telecoms markets

As the UKRN sets out, there is already significant alignment in cost of capital methodologies across sectors. BT broadly supports consistency in methodology. In addition, many of the key parameters used as inputs are not firm specific, or sector specific so it is sensible that the approach to inputs to the WACC, like the risk-free rate and the equity risk premium, are common across regulators.

We also recognise that economic regulators have their own statutory duties, and application of a common approach will need to reflect these differences. As we explain below, this may entail considerations not so much as to the WACC itself, but how the WACC is used.

At this time, BT's regulated services are not generally subject to the "building blocks" approach to setting price controls in which the WACC plays a key role.[2] The UK telecommunications sector is undergoing a transformational period during which fixed networks are being replaced and/or upgraded, and BT's broadband services are being migrated from copper-based access network (fibre to the cabinet) to a full fibre network (fibre to the premises). The network transformation involves high levels of investment. BT's plans to spend around £15bn of to provide full fibre to 25m homes by the end of 2026.[3]

Under the current regulatory regime, price regulation is limited to restrictions on an "anchor service"[4] whilst prices for other (faster) broadband connections can be set on a commercial basis. The anchor service is subject to a CPI price cap over the current control period, which lasts until April 2026. (Price control regulation only applies at the wholesale level given that there is established competition at the retail level.) The WACC is not therefore at the centre of economic regulation in telecommunications at this time. Rather the focus is on competitive investment, both by BT and others, while ensuring consumers are still protected via the anchor should this be necessary.

2.2 The Fair Bet as a mechanism to incentivise investment

While refraining from cost based charge controls except for a limited set of markets today (see above), Ofcom noted that price setting for full fibre may be necessary in future periods subject to a number of triggers being met. It said this could be the case if network competition fails to become fully established after the investment phase has largely been completed and if a number of triggers are met.[5]

The WACC will therefore have an important role to play in future in two ways. Firstly to set help identify, whether lifetime returns of the investment have been such that a charge control is indeed consistent with the Fair Bet; and secondly, in determining the level of the charge control. As for the former, the firm's WACC at the time of the

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[2] Whilst BT's main services are not set by direct reference to the WACC, price regulation based on the rate of return is used for various services such as duct and pole access, and call termination. In addition, anchor prices were originally set to recover the service WACC.

[3] BT Group plc Annual Report 2022

[4] Under the anchor pricing approach, there are no direct price controls on speeds above 40Mbps download and 10 Mbps upload (the 40/10 service). Given demand substitutability between service tiers (and in addition to competition) the price controls on the 40/10 service constrain the prices of higher tier broadband products in the portfolio.

[5] Ofcom has stated that it will also look at prospects for further investment and future competition, and at consumer outcomes (for example, prices which match those in competitive areas and/or services offered on attractive commercial terms). Ofcom Statement, 18th March 2022 at [wftmr-statement-volume-4-pricing-remedies.pdf]

investment matters, whereas for the latter the estimated forward looking WACC at the time of future regulatory decisions is the relevant metric.

Regarding the Fair Bet, Ofcom said that were cost-based price regulation to be considered for full fibre services in future, BT could expect to be allowed a return on the investment of at least WACC plus a premium in recognition of the project-specific risk which investors took at the time the investment decision was made.[6] As long as investment returns do not meet the ceiling, no charge controls would be imposed. In other words there will be no charge control unless achieved project return $\leq$ (Project WACC + Project-specific risk allowance).

Two key issues therefore follow:

- What was the WACC for the full fibre investment at the time of the investment?
- What level of premium on the WACC provides is appropriate to compensate for the project-specific downside risk involved at the time of the investment?

We recognise that the latter issue, concerning non-systematic risk, is outside the scope of this consultation, and therefore focus below on the former issue. In particular, we discuss how large scale new investments pose particular challenges in estimation of the appropriate equity beta which the UKRN discusses under Recommendation 5.

2.3 Equity beta for new investments

2.3.1 Absence of listed pure-play comparators

One of the major challenges regulators face in estimating a WACC for the full fibre investment programme is that there are no listed pure play comparators available to provide a guide to the beta (and thus of the level of systematic risk) of the investment. BT's own equity beta represents the average for a number of activities performed by BT, and Ofcom already disaggregates this into three components representing three different types of business which (for risk purposes) Ofcom considers BT undertakes.

These notional businesses Ofcom defines are Openreach legacy services (with the lowest level of systematic risk and beta); Other UK Telecoms services (with medium risk) and Managed services/IT services (which are deemed highest risk). The asset betas for these three risk levels from Ofcom's last review are shown below.[7,8]

Ofcom disaggregation of BT asset beta

	BT Group	Openreach legacy services	Other UK Telecoms services	Rest of BT services
Asset beta	0.62	0.53	0.62	0.85
Implied equity beta*	1.05	0.88	1.05	1.45

*with Gearing at 40%

[6] "[W]e recognise that the range of activities captured within the OUKT category is quite broad, and that the asset beta (and WACC) for FTTP could be higher than for OUKT." See Ofcom: 2021 WFTMR: Annexes 1-26 (ofcom.org.uk), paragraph 21.9; and Ofcom: 2021 WFTMR Volume 4: Pricing remedies (ofcom.org.uk) , paragraphs 1.106-1.118

[7] See, for example, Figure A21.1: Disaggregation approach, Ofcom Statement, 18 March 2021 wftmr-statement-annexes-1-26.pdf

[8] Table A21.7 op. cit.

Full fibre was deemed to best fit in the middle grouping of activities, although Ofcom noted that the Other UK Telecommunications services WACC should not be taken as representing a specific WACC for full fibre, noting the WACC for full fibre (FTTP) could be somewhat north of that.[9]

2.3.2 Operational leverage and the risk magnifying effect

BT's view is that an asset beta of 0.62 (ie that for Other UK Telecoms services) would be a material under-estimate of the degree of systematic risk involved in the full fibre investment programme BT committed to undertake. Being based on historic observations, it will not reflect the scale of investment ahead of demand (i.e. much higher than the on-going cost of depreciation of existing assets) and the unusually high degree of operational leverage (caused by the high proportion of fixed to variable cost). In addition, the revenues will be subject to demand variability both in terms of take-up (some households may not purchase fixed broadband services at all) and variability in the tiers of broadband service they purchase (some households may opt for lower priced tiers and not take advantage of the higher speeds that full fibre makes possible).

In a paper for the European Commission, Brattle Group[10] describe what they term as a "risk magnifying effect" which comes about for these reasons - network transformation involves a commitment to make large capital investments over several years regardless of revenues. Their explanation is as follows:

- the financial assets of a new network project are its ability to attract customers and generate revenues and a margin over variable operating costs. These benefits are risky because demand may not materialise;
- the financial liabilities are represented by the present value (PV) of the capital spending commitments. These commitments are not risky, since the cost of the coverage build will need to be incurred even if customers are disappointing and/or pay lower prices than expected;
- the project NPV is the PV of the expected risky benefits less the PV of the fixed capital outlays. The presence of sizeable and relatively fixed capital obligations means that a reduction in the value of the project's financial assets (the PV of the risky benefits) will cause a disproportionately larger fall in the project NPV; and
- to the extent that systematic risk is attached to the financial asset , then these risks are magnified onto the project NPV by the presence of fixed financial liabilities, such as (in this case) the need to spend to build out the network.[11]

2.3.3 Making adjustments to quantify higher risk

The major challenge is how to operationalise these considerations. In our response to Ofcom's Wholesale Fixed Telecoms Market Review in 2021, we set out an approach to quantifying the impact of higher operating leverage on the beta of the new network as opposed to that in place.[12]

Starting with first principles of corporate finance to assess the value of a project, we described how the asset beta of a project can be decomposed into two constituent elements: (i) the revenue beta, which measures demand risk

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[9] For example, at A21.51 op. cit. Ofcom noted that, "[T]hese factors taken together [demand elasticity for service tiers and the higher proportion of fixed costs to overall project value] do point to FTTP being higher risk than copper-based services, however, the extent to which the risk is higher is difficult to quantify. Comparing the systematic risk of FTTP to other services provided by BT Group is even more difficult."

[10] Section VII.B.1. Capital Leverage, "Review of approaches to estimate a reasonable rate of return for investments in telecoms networks in regulatory proceedings and options for EU harmonization" at review of approaches to estimate a reasonable rate-KK0416408ENN.pdf

[11] The Brattle Group point out that this is similar to the magnifying effect of higher levels of debt on the riskiness of equity. What BG term "capital leverage" considers the way in which the presence of debt like investment obligations magnifies the risks attached to project benefits onto the ultimate profits or NPV of a project.

[12] BT, 29 May 2020. Annex to the BT response to Ofcom's consultation on promoting competition and investment in fibre networks – Wholesale Fixed Telecoms Market Review 2021-26. Appendix to Annex 6. P37. BT Group (annexes) (ofcom.org.uk)

associated with the project and (ii) the ratio of fixed costs to the project's value, which captures the operating leverage associated with the project. The higher the fixed costs relative to the project's value, the greater will be the operating leverage and thus the asset beta. We found that there was a material difference between the estimated asset beta for the new network compared to that for the existing networks, and that the WACC was therefore higher.

Whilst there may be challenges in classifying costs as fixed or variable in some instances, our proposed approach does indicate that it can be important to consider WACCs for large individual projects (e.g. FTTP in telecoms, or new airport runways in aviation) with specific characteristics. Adopting such an approach will be appropriate when no pure play listed comparator exists, and we therefore urge the UKRN to consider how best this is to be achieved.

2.4 Brief comments on the Recommendations

The UKRN's Recommendations largely follow Ofcom's recent approach, based on the capital asset pricing model (CAPM), and on which we have commented in depth during consultations conducted by Ofcom.[13] We do however have the following brief points.

In terms of using the mid-point of WACC estimates, **Recommendation 7**, we would point out the importance of ensuring that both the high and low estimates of the WACC are both themselves plausible estimates (rather than being outliers). Further, if the mid-point is used without deviation, and prices only allowed what is deemed to be the best estimate of the cost of funding projects, then we would expect to see some other mechanisms in the regulatory framework that provide investment incentives, when new investment is an objective of regulation.

We consider that the appropriate maturity of corporate bonds for assessing the cost of debt, **Recommendation 8**, ought to be broadly aligned with the lifetime of the investments in question. This is to reflect the risk an investor will face over the full time period over which they earn cash flows to repay debt holders. For long-term investments, the appropriate cost of debt will therefore be on longer-dated corporate bonds. This would also be consistent with the UKRN's recommended approach adopted for estimating the risk-free rate where yields on long-term gilts are recommended.

Regarding gearing which, as set out **in Recommendation 9**, is required to de-lever the observed equity beta under the CAPM approach, we consider that the correct measure of debt is <u>net</u> debt as opposed to gross debt, as companies often hold cash and cash equivalents in reserve, and which otherwise might be used for paying off debt. We accept that net debt should exclude cash holdings and equivalents that are required to finance ongoing activities.

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[13] For example, see Annex 6, BT Group (annexes) (ofcom.org.uk)

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