Annex D

BT OPENREACH WACC STUDY – PRELIMINARY FINDINGS

Philip Carse, 21st July 2008

NB: most interviews were conducted prior to BT announcing its NGA plans, on 15th July 2008.

<u>Main thoughts/conclusions</u>

- BT is facing growing competition from Virgin Media (better management, brand and new broadband products) and from mobile broadband (c1.25m subscribers at 31 March 2008).
- Little current justification for NGA, but all expect it to happen at some stage, assuming a proper regulatory framework is agreed.
- Majority perceive Openreach to be less risky than BT Group, but significantly more risky than 'proper' utilities, eg water, given technology and substitution risk. A realistic difference in WACC between Openreach and BT Group would be c 0.5%.
- Some perceive Openreach as more risky than BT Group, particularly given the greater range of volume outcomes from cable (DOCSIS 3.0 50Mbps) and mobile broadband competition
- Divided views on strategic merits of Openreach spin out, but financial benefits from a spin out (more debt, higher valuation) are not currently achievable given the credit crunch. Hence, Openreach's WACC could not currently be reduced through financial engineering.
- Inconceivable that BT's WACC could have fallen since 2005, given subsequent increases in equity risk premiums and interest rates. Some also argue that BT's beta has increased over the period.
- Ofcom's proposed WACC for BT/Openreach is at the low end of analyst estimates.
- Credit crunch not expected to ease until 2H2009/2010, due to bank's balance sheets being loaded with hard to price/sell asset backed securities.

Views on UK market/companies

- BT – generally perceived to be in a weak position given its lack of a mobile business, and therefore ability to compete against mobile convergence/broadband. The market is not convinced that WiMAX is the answer. BT is very good at product innovation, but with varying commercial success: BT Fusion failed, BT Vision is very good, but needs significant spending on content to underpin the value of the fixed line network.

- All respondents perceive Virgin Media to have improved in recent months, reflecting new management, better branding (the Virgin effect) and the imminent launch of a DOCSIS 3.0 50Mbps product. As several noted, Virgin is now beginning to exploit its one true competitive advantage – its network.

- Carphone Warehouse is generally perceived to be playing the broadband arbitrage game (ie exploiting Openreach LLU cross subsidy), and is not considered a long term player. It has also 'spoilt' the market by providing high value broadband for zero cost.

- Sky is considered a serious long term player, given its 9m DTH subscriber base, and has the best branding and customer service.

- A lot of interest and excitement about the mobile operators and the explosion in mobile broadband. In Austria and Portugal, mobile broadband has captured significant share of broadband (up to 20%); most consider it likely to play a relatively niche role in the UK given capacity and service issues, being most prevalent at the low end of the market (eg students).

- General perception that broadband retail prices need to rise, given increased costs of bandwidth from the video explosion, with usage-based charging likely to become more prevalent (irrespective of the outcome of the current Ofcom review). This will ease the transition to an NGA environment.

Outlook for telecom infrastructure investment

- Most respondents think that NGA is not justified now economically, but believe it will happen in some form ultimately given the wider social/political debate:

    - Will people be prepared to pay for services above 8-20Mbps?

- No consensus on whether NGA will be FTTC or FTTH.

- International experience/yardsticks are generally not considered relevant to the UK:

    - Verizon and AT&T need fibre NGA given long local loop lengths, generally poor quality copper networks and strong cable competition. They also benefit cost-wise from significant aerial distribution.

- The Dutch regulator OPTA has allowed KPN to do FTTC and close most of its local exchanges, effectively allowing only reseller competition on the fixed network, and relying on cable (90%+ coverage) as the main network competition. This would not work in the UK given the focus on ULL (and stranded asset issues), and BT having done a sale and leaseback on its exchanges, which would be costly/difficult to get out of.

- French fibre rollouts benefit from shared use of the sewer network.

- Other countries (eg S Korea, Italy, Scandinavia) benefit from high density of apartment buildings.

- In some markets, the opportunity is driven by the pay TV opportunity, whereas in the UK, the pay TV opportunity has been largely exploited by Sky (with DTH) and cable.

- Perception that BT is becoming more supportive of the NGA concept, eg talking about necessary supporting conditions. BT's valuation implies that it will happen, but analysts/investors don't have the capex numbers explicitly in their models. Other issues for BT:

    - Can it accommodate NGA spending given its ongoing high capex/sales ratio compared with its European peers (16% cf 12-13%)

    - Can it execute NGA (given problems with 21CN)?

    - Can it achieve the resulting cost reductions (staff cuts etc)?

- All are agreed that BT/Openreach need better regulatory clarity in order to pursue NGA:

    - A proper RAB and proper rates of return (though Viviane Reding's suggested 15% doesn't seem to be taken seriously)

    - A more holistic approach from Ofcom, looking at Openreach's overall rate of return rather than micro-managing individual products, as now

    - An acceptance that retail prices need to rise to stimulate NGA investment.

- Recognition that NGA rates of return would not be 'guaranteed' if they result in uncompetitive prices versus cable, mobile broadband etc.

- General agreement that significant NGA capex is unlikely to happen for c3-5 years, as BT has every incentive to wait for Ofcom to agree a new regulatory framework, to sow uncertainty for unbundlers, and for fibre prices to fall.

- Potential drivers for NGA to happen sooner:

- Success of Virgin's 50Mbps product
- Success of mobile broadband in substituting for fixed broadband (and also hastening substitution of mobile for fixed calls)
- Femtocells (the minority view) – may ironically stimulate demand for NGA from the mobile operators as a way of relieving pressure on their own networks
- Sky – may demand premium broadband products from BT to stay ahead of Virgin Media
- Could the digital switch-off spark a fundamental change in the way that people view video content, eg using broadband much more?

<u>Views on BT/Openreach</u>

- Majority view is that Openreach is less risky than BT Group (and therefore deserves a lower WACC), but is clearly more risky than a conventional utility given technology and substitution risk. The consensus was that Openreach's WACC would be c0.5% below that for BT Group.
- Some perceive Openreach as more risky given the potential acceleration in line loss from cable and, particularly mobile broadband/substitution, resulting in a vicious circle (unit costs rise due to falling economies of scale, but price need to fall to remain competitive).
- Divergence of view on the strategic desirability of spinning out Openreach:
    - FOR – already ring fenced; why does BT need to own network?; raises issue of funding NGA to an industry level rather than a BT problem; forces the establishment of a proper RAB; facilitates proper open access
    - AGAINST – a separate Openreach would focus on minimising investment, whereas being part of BT provides the stimulus to also invest in new products and services.
- The financial rationale for a spin out of Openreach was compelling 12-18 months ago, enabling a separate credit rating, loading up of debt, an improved valuation multiple (6-7x EBITDA which is better than BT's 4-5x, but still below a utility), and better highlighting the value of BT's remaining businesses. However, this would not now be possible given the credit crunch. Hence, there is currently no scope for reducing Openreach's WACC through financial engineering.
- BT/Openreach are perceived as being inefficient compared with their European peers.

- Most expect the current Ofcom review to result in wholesale price increases, but not as much as BT is requesting, and with mitigating impacts for unbundlers, eg changes to backhaul pricing. There is some concern that if Ofcom under-estimates potential line loss to cable and broadband, a step increases in prices may be required at the next review (5 years time?)

<u>Views on financial markets</u>

- Credit markets are still willing to fund defensive, investment grade businesses such as incumbent telcos, but costs have risen, eg 250bp above Libor. FT raised a $15bn facility for its TeliaSonera bid; and an NGA programme would be better perceived than this.

- The credit crunch is unlikely to ease until 2010, given that the major banks have very limited capacity due to the loans still sitting on their balance sheets. Many have yet to try to sell these loans or write down below 100%, suggesting further bad news.

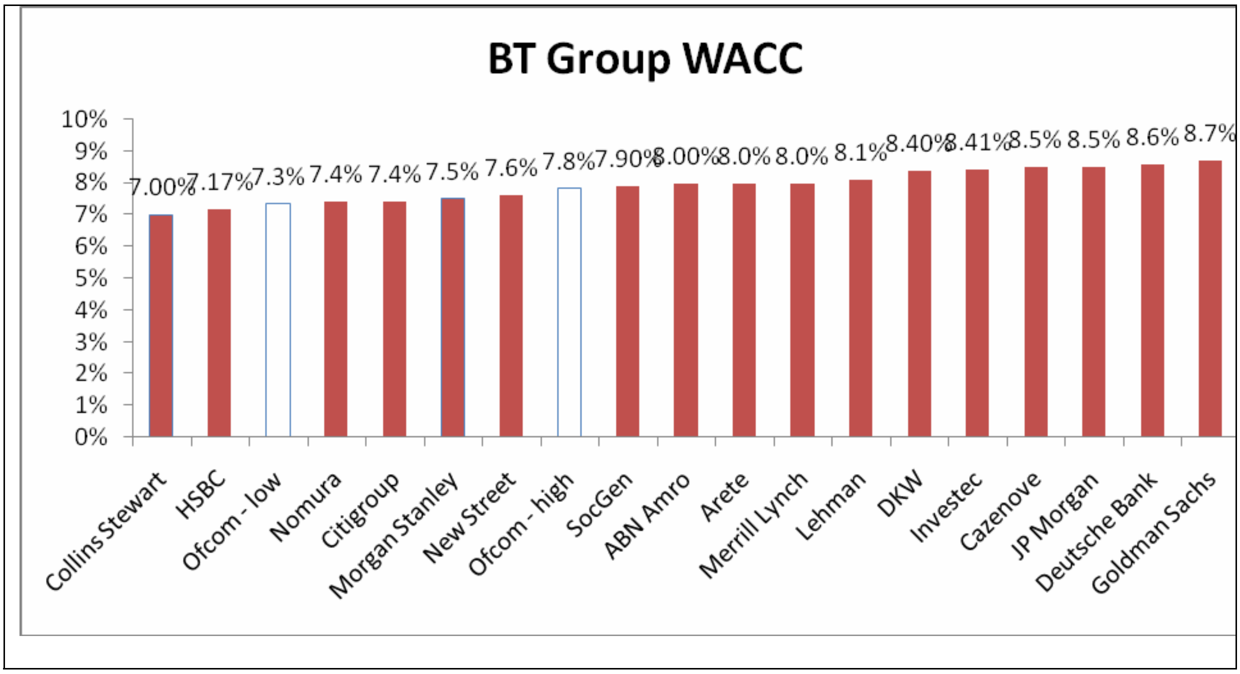
- The recent signs of deterioration in the real economy mean that the situation now looks worse than 6-9 months ago.

<u>WACC views/assumptions</u>

- Ofcom's implied WACC assumptions for BT Group fall towards the bottom end of the range compared with city telecom analysts (see figures/chart below). This is estimated on the basis of Openreach accounting for c34% of BT's value, taken from Citigroup's estimates.

- Every survey respondent found it counter-intuitive that BT/Openreach's WACC could have fallen since 2005, given subsequent increases in debt premiums, equity risk premiums and market volatility, as well as BT's relative risk (ie beta) from having Global Services contribute a higher proportion of revenues.

- One analyst showed us a time series of their WACC assumptions, which show a clear increase in WACC from c6.4-6.8% in 2005 to c7.1-7.4% in 2008 to date.



Note: Ofcom BT Group estimated based on 33% of Openreach WACC and 64% of rest of BT WACC.

	Sep-01	Sep-02	Feb-03	Dec-03	Feb-04	Sep-04	Jan-05	Aug-05	Nov-05	Jun-06	Nov-06	Feb-07	Aug-07	Mar-08	Jun-08
Rf	4.9%	4.3%	4.0%	4.5%	4.3%	4.5%	3.7%	3.2%	3.5%	4.0%	3.5%	4.0%	4.2%	3.8%	4.3%
Spread	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.3%	0.9%
Cost of debt	5.9%	5.3%	5.0%	5.5%	5.3%	5.5%	4.2%	3.7%	4.0%	4.5%	4.0%	4.5%	4.7%	5.1%	5.2%
Tax rate	35%	35%	35%	35%	35%	33%	30%	30%	30%	30%	28%	28%	28%	28%	28%
Post tax Cd	3.8%	3.4%	3.3%	3.6%	3.4%	3.7%	2.9%	2.6%	2.8%	3.2%	2.9%	3.2%	3.4%	3.6%	3.7%
Beta	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
ERP	3.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
CoE	8.8%	9.1%	8.8%	9.3%	9.1%	9.3%	8.5%	8.0%	8.3%	8.8%	8.3%	8.8%	9.0%	8.6%	9.1%
D/E	35%	35%	35%	35%	35%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
WACC	**7.0%**	**7.1%**	**6.9%**	**7.3%**	**7.1%**	**7.6%**	**6.8%**	**6.4%**	**6.7%**	**7.1%**	**6.7%**	**7.1%**	**7.3%**	**7.1%**	**7.4%**