Issue 1

BT's response to Ofcom's document on:

Annual licence fees for 900MHz and 1800MHz spectrum – further consultation

(Issued by Ofcom on 1 August 2014)

Submitted to Ofcom on 26 September 2014

Executive Summary

1. BT agrees with the revised method by which Ofcom has determined the market value of 800MHz and 2600MHz spectrum from the UK auction results and with the new method that Ofcom has used to interpret international auction results to determine how the UK values of 800MHz and 2600MHz spectrum should be scaled to determine the lump sum values of UK 900MHz and 1800MHz spectrum. We believe that the various changes from the previous consultation proposals result in a more accurate lump sum valuation.

2. However BT has a number of significant concerns about the new proposed method to translate the lump sum spectrum values into annual licence fees ("ALFs") because of an inappropriate choice of discount rate in the annuity calculation. In particular:

   a. The practical effect of the proposals is to distort the competitive balance by in effect giving national MNOs a 20 year loan based on the cost of debt, which can be defaulted on without penalty at any time. This lies in stark contrast to the requirement facing BT to pay for 100% cost of its spectrum up front and carry all the risks of delivering its business case or selling its spectrum.

   b. The rate of return requirement for the national MNOs using the 900/1800MHz spectrum under these proposals is not any commercial WACC rate that all operators have to follow, but a pure cost of debt rate.

   c. The impact of Ofcom's revised proposals in which they have moved from a WACC rate of 5.1% (real, after-tax) to a cost of debt rate of 2.6% (real, after-tax) is to reduce spectrum charges by c. £1.2bn (20 year NPV to HM Treasury assuming a 2% CPI).

3. BT is concerned that the delays in implementing the market value based spectrum fees is distorting competition. Every month that implementation of the new ALFs is delayed saves the licensees *c*. £15m. In this context, given the delays that have already occurred, we do not consider that the phase-in arrangement (whereby only 50% of the ALFs' increase is to be charged for in the first year) is appropriate. Furthermore, we do not see how this arrangement can be said to be consistent with the Government's Directions[1] to Ofcom that require the 900/1800MHz spectrum to be charged at full market value and not at some fraction of full market value.

[1] See section 6 of the Wireless Telegraphy Act 2006 (Directions to Ofcom) Order 2010, http://www.legislation.gov.uk/uksi/2010/3024/article/6/made

Question 1. Do you have any comments on our proposal to base our assessment of the market value of 800MHz and 2.6GHz spectrum in the UK on an analysis of bids by the marginal bidders in the UK 4G auction?

Yes, we agree that Ofcom's revised proposals represent a reasonable approach to deducing the market value of 800MHz and 2.6GHz spectrum in the UK. Although the new valuation of 800MHz and 2.6GHz spectrum is slightly higher than before, it does have a firmer analytical basis and aligns more to our own view of market values.

Question 2. Do you have any comments on our revised assessment of the lump sum values of 900MHz spectrum and 1800 MHz spectrum?

We agree that the revised methodology represents a reasonable approach to deducing the market values of 900MHz and 1800MHz spectrum in the UK. In particular, we agree with Ofcom's view that absolute values of spectrum outside the UK should not be used to determine the UK market values, but that information on the relative values of different bands is potentially relevant. We note that Ofcom has taken a conservative approach to interpreting the available international data and that this has resulted in valuations that are at the low end of the likely UK market values.

Question 3. Do you have any comments on our revised approach to converting our estimate of the lump-sum value of the spectrum into annual fees using a discount rate based on the cost of debt?

BT does not agree with the change of Ofcom's position to calculate the ALFs, in the form of annuity payments, from the lump sum value based on cost of debt discount rates instead of WACC. The savings to MNOs resulting from this change of position from a WACC-based discount rate to a cost of debt discount rate is in our estimation a value of about £1.2bn over 20 years in real terms (see Annex 1 for BT's calculations).

BT and others buying spectrum in an auction would base their market valuations of spectrum on the risks to the projected cash flows and would use much higher percentage discount rates than the 2.6% real cost of debt rate. We further note that additional mobile network infrastructure can compensate for less available spectrum and that operator investment cases for this would normally include a discount rate based on WACC. With a 2.6% real post tax discount rate our market valuation of spectrum would have been higher. Hence, the auction price would have been higher and so ALFs for other spectrum derived from that market value would be higher in that circumstance.

In contrast, Ofcom's proposed new methodology amounts in essence to the provision of subsidies to the affected MNOs given the inappropriate discount rate used, with the ability to default on the loan at any time and hand spectrum back if the ALFs are considered in future to be too high (or persuade Ofcom to lower the fees). If the value of the spectrum goes up and the ALFs are in effect too low, it would alternatively be possible to trade the spectrum and make some windfall profit. As such, the MNOs face asymmetric risk from these proposals for these important spectrum bands: if ALFs are too high, MNOs can default on the "loan" involved, whereas if ALFs are too low, they have the option of capitalising on this through trading. This contrasts starkly with the situation relating to licences purchased outright at auction (as faced by BT) where the risk associated with any divergence between spectrum value and what was paid for it is symmetric and licensees face the risk of losses as well as gains.

A level playing field for spectrum costs is important if competition is to be promoted and sustained. It is therefore necessary that Ofcom seeks to ensure that competitive distortions are avoided when deciding the charge for spectrum, whether it is to be paid for "up front" or "rented". We do not believe that the current proposals deliver a level playing field.

The aim of market value based ALFs is surely to recover the value of the spectrum so as to promote efficient use and competitive fairness with other parties. The "full market value" of spectrum should be the value faced by the purchaser of the spectrum and an equivalent annual charge should be set in a way that in theory the **purchaser** would be indifferent to paying for the licence through a lump sum or an annuity. The annuity should therefore be based on an equivalent basis to how the lump sum market value was established and annual charges set on an equivalent basis in terms of applicable discount rate. For this reason, Ofcom's original logic that the relevant discount rate is the cost of funds for the licence payer was correct. This relates to the risk faced by the licensee in raising the relevant funds up front (i.e. its WACC) rather than the risk associated either with the flow of payments to the Government or the risks around the MNOs' revenues from using the spectrum (which are suggested as the options in paragraph 4.12 of the Consultation). The distorted logic of the consultation proposal whereby the rate is based on the cost of debt because the licence could be revoked if fees are not paid takes an inappropriately extreme approach.

Ofcom identifies two "polar" cases in paragraph 4.15 of the Consultation. WACC is the appropriate approach if underlying spectrum value and the ALF is perfectly correlated. Alternatively, the cost of debt is to be preferred if the variables are completely uncorrelated. As is recognised in the Consultation, neither polar case is likely to be a proper representation of reality. ALFs will be subject to change over the relevant time period (i.e. the 20 years over which the benchmark lump-sum values are being annualised). Such changes will transfer some of the relevant risk to Government as the recipient of ALFs, as any such change would seem likely to be based on changes to the market value of the spectrum over time. This would suggest it would be appropriate to assume that the Government shares the risk and use one of the intermediate discount rates shown in Table 4.1 of the Consultation.

Ofcom's entire logic for taking the most extreme assumption that Government bears none of the risk, within this analytical framework, is set out in paragraphs 4.24 and 4.25. The two reasons put forward in these paragraphs for using the cost of debt as one "polar" extreme are:

- it is hard to identify objectively the relevant share of risk which the Government is, in effect, assuming (as this depends on assumptions being made on inherently uncertain variables); and
- Ofcom considers it appropriate to take a conservative approach, given its views on the asymmetry of risk.

However, taking a conservative approach is not the same as **deliberately setting ALFs below Ofcom's view of the appropriate level**. The Consultation states (at paragraph 4.24) that the cost of debt "could understate the discount rate", but this is not the logic of the preceding paragraphs. The fact that the relevant degree of risk sharing will lie between the two polar cases identified means that the relevant discount rate **must** lie between the limits of cost of debt and WACC. But Ofcom's conclusion turns this into a conditional statement, with no appropriate justification, and on this basis identifies the conservative approach as being one which sets the discount rate at the very bottom of the potential range which will certainly be below the true rate under Ofcom's own framework.

This then relates to the point that it is hard to decide objectively the appropriate degree of risk sharing between Government and the MNOs as this depends on making judgements about future policy. Many regulatory settings require judgements about the future to be made and Ofcom cannot simply avoid doing this in this context by stating it is hard to do; that would be an abrogation of their duties. Ofcom should be able to exercise its regulatory judgement on the appropriate range in which such risk sharing could reasonably fall rather than deliberately set it at the bottom extreme of the range which is guaranteed to be below the right value with complete certainty.

We consider it particularly important to clarify this principle of what discount rate is appropriate because similar issues may arise for Ofcom when the 3G licence fees are established for the period beyond 2021 and potentially when scaling auction values to annual charges in other cases, such as 28GHz fixed link licences for the period beyond 2015 and the existing 3.4GHz mobile broadband licence (if it is extended beyond expiry) beyond 2018.

Question 4. Do you have any further comments on our revised proposals?

The consequences of the delay in conducting the UK 4G auction, the time taken to develop and issue the first consultation proposals, the need for a subsequent consultation and these further consultation proposals, taken together, mean that the new fees will not start until some 5 years after the Government's Directions were issued back in 2010. In the period between the auction in 2013 and the 2015 introduction of fees, the affected MNOs will have avoided about £0.4bn in additional spectrum charges that would have been due if market rates had been applied.. We estimate that even considering only the additional estimated 6 month delay arising from conducting this further consultation alone represents a cost avoidance of c. £90m in licence fees for the affected operators. In this context, and noting that the Government's Directions to Ofcom requires fees to be revised to reflect full market value, it is not clear why a complicated phase-in arrangement for the new fees is necessary or is consistent with the Directions to Ofcom. We do not think that the 50% discount in fees increase in the first year is compatible with the Government's Directions which clearly state that the annual charge should be set at a level that reflects full market value, not some fraction of full market value. Moreover, if Ofcom were true to the spirit of the Directions, they would seek to recoup some of the missed charges in future payments.

The delay in charging for the 900 / 1800MHz spectrum at full market value puts BT at an unfair disadvantage to our mobile competitors. We have paid full market value for our spectrum at the time of the 2013 award whereas our competitors currently do not face equivalent full market value for all spectrum used. This has the potential to distort competition and is thus detrimental to consumer interests.

One argument that may be advanced in support of lower charges is that high fees will inhibit the ability to invest in network infrastructure. We consider that this aspect was part of the considerations when setting the policy to charge full market value when the legislation was developed and that the requirement to pay substantially higher fees was known for many years. We appreciate that the market based fees are quite onerous but any move away from these should be an explicit policy and applied equally to all mobile operators holding spectrum. For the avoidance of doubt, we do not advocate high spectrum fees as a revenue raising measure, but rather our concerns are in terms of fairness and the efficient distribution of spectrum.

In summary, Ofcom's current proposals amount to a £1.6bn discount and 20 year loan:

1. MNOs who have used the spectrum, paying far below its market value for decades, will now get a further £1.2bn discount over the next 20 years over and above a fair and reasonable calculation based on WACC;

2. They will not be penalised for the fact that Ofcom were slow to act on the Directions and will get the benefit of a further £0.4bn in missed charges that will not now be recouped;

3. Instead of an upfront payment that all bidders in the recent 800/2600MHz had to make, they have a 20 year loan from HM Treasury;

4. They will not have to actually pay the full amount if they hand the spectrum back.

These proposals will not deliver a level playing field, nor fulfil the Government's Directions on the setting of ALFs; therefore they will not deliver appropriate value to end consumers. We believe that the original proposals were very close to the appropriate value. If Ofcom wish to consider a range between the 2.6% debt rate and one based on WACC, we would suggest a figure close to the top of the range as that is closest to the correct value.

ANNEX 1

LUMP SUM VALUE OF SPECTRUM: £3,606m

Cost of debt based calculation

2.6% (real, after-tax) and 2% CPI discount rates

	Year	ALF (£m)	Inflation discount %	Real price (£m)	Real discount rate%	Discounted fee (£m)
1	*2015*	**246.2501**	1.000	246.3	1.000	246.3
2	*2016*	**251.1751**	1.020	246.3	1.026	240.0
3	*2017*	**256.1986**	1.040	246.3	1.053	233.9
4	*2018*	**261.3226**	1.061	246.3	1.080	228.0
5	*2019*	**266.5491**	1.082	246.3	1.108	222.2
6	*2020*	**271.88**	1.104	246.3	1.137	216.6
7	*2021*	**277.3176**	1.126	246.3	1.166	211.1
8	*2022*	**282.864**	1.149	246.3	1.197	205.8
9	*2023*	**288.5213**	1.172	246.3	1.228	200.5
10	*2024*	**294.2917**	1.195	246.3	1.260	195.5
11	*2025*	**300.1775**	1.219	246.3	1.293	190.5
12	*2026*	**306.1811**	1.243	246.3	1.326	185.7
13	*2027*	**312.3047**	1.268	246.3	1.361	181.0
14	*2028*	**318.5508**	1.294	246.3	1.396	176.4
15	*2029*	**324.9218**	1.319	246.3	1.432	171.9
16	*2030*	**331.4203**	1.346	246.3	1.470	167.6
17	*2031*	**338.0487**	1.373	246.3	1.508	163.3
18	*2032*	**344.8096**	1.400	246.3	1.547	159.2
19	*2033*	**351.7058**	1.428	246.3	1.587	155.1
20	*2034*	**358.7399**	1.457	246.3	1.629	151.2
	Actual	**5983.231**	Real	**£4,925**	DCF	**3901.692**
					TAX adjusted	3606.00

WACC based calculation

5.1% (real, after-tax) and 2% CPI discount rates

	Year	ALF (£m)	Inflation discount %	Real price (£m)	Real discount rate%	Discounted fee (£m)
1	*2015*	**308.1948**	1.000	308.2	1.000	308.2
2	*2016*	**314.3587**	1.020	308.2	1.051	293.2
3	*2017*	**320.6459**	1.040	308.2	1.105	279.0
4	*2018*	**327.0588**	1.061	308.2	1.161	265.5
5	*2019*	**333.6**	1.082	308.2	1.220	252.6
6	*2020*	**340.272**	1.104	308.2	1.282	240.3
7	*2021*	**347.0774**	1.126	308.2	1.348	228.7
8	*2022*	**354.0189**	1.149	308.2	1.417	217.6
9	*2023*	**361.0993**	1.172	308.2	1.489	207.0
10	*2024*	**368.3213**	1.195	308.2	1.565	197.0
11	*2025*	**375.6877**	1.219	308.2	1.644	187.4
12	*2026*	**383.2015**	1.243	308.2	1.728	178.3
13	*2027*	**390.8655**	1.268	308.2	1.816	169.7
14	*2028*	**398.6828**	1.294	308.2	1.909	161.4
15	*2029*	**406.6565**	1.319	308.2	2.006	153.6
16	*2030*	**414.7896**	1.346	308.2	2.109	146.1
17	*2031*	**423.0854**	1.373	308.2	2.216	139.1
18	*2032*	**431.5471**	1.400	308.2	2.329	132.3
19	*2033*	**440.1781**	1.428	308.2	2.448	125.9
20	*2034*	**448.9816**	1.457	308.2	2.573	119.8
	Actual	**7488.323**	Real	**£6,164**	DCF	**4002.66**
					TAX adjusted	3606

Note: According the formula in Annex 10 of the consultation, the actual ALF will be slightly higher than shown to reflect the CPI index increase since March 2013.

The present value of the "saving" to the MNOs (combined) is c **£1.2bn** as a result of Ofcom using 2.6% rather than 5.1% discount rate.
The delay between the 2013 auction and introducing full market value fees in 2015 represents a saving to the MNOs of c. **£0.4bn**
The 50% discount for 1st year phase in represents a saving of c. **£90m**