

TELEFÓNICA UK LIMITED RESPONSE TO:

“Annual Licence Fees for UK Broadband’s 3.4 GHz and 3.6 GHz spectrum”

CONFIDENTIAL

25 February 2019

I. INTRODUCTION

1. Telefónica UK Limited (“Telefónica”) welcomes the opportunity to respond to Ofcom’s consultation on Annual Licence Fees (“ALFs”) for UK Broadband’s 3.4 GHz and 3.6 GHz spectrum¹ (“the Consultation”).
2. We agree with Ofcom’s broad policy approach, specifically, that:
 - the same ALFs should apply for 3.4 GHz and 3.6 GHz spectrum, as frequencies in the two bands are effectively perfect substitutes for 5G deployment;
 - ALFs for 3.4 GHz should be applied in full immediately; and
 - ALFs for 3.6 GHz should be phased in, with full rates applying no later than 1 July 2020.
3. However, we believe that Ofcom’s specific proposals would fail to give effect to its own policy objectives in three key respects:
 - i. **The proposed fee level is below market value.** The 2018 PSSR auction established a market clearing price of £37.824m per 5 MHz and a floor on payments by winning bidders, including H3G. This is the best possible estimate of market value currently available and the value that should be used to set H3G’s ALFs unless and until new information becomes available. Ofcom has a duty to set ALFs conservatively in situations, such as 900 MHz and 1800 MHz, where there is reasonable uncertainty over benchmarks. No such uncertainty applies here. Ofcom’s proposal to use a different, lower price would mean a c.20% discount for H3G relative to other operators.
 - ii. **The methodology used to determine the fee level is irrational and discriminatory.** Ofcom gives no proper justification for preferring Marginal Opportunity Cost (MOC) methodology to the market clearing price; the benefits and risks of each approach, as identified by Ofcom, weigh clearly in favour of using the market clearing price, and Ofcom gives no reason for concluding otherwise. Moreover, the proposed MOC methodology to identify market value based on the bids submitted in the PSSR auction fails to meet Ofcom’s statutory duties with regards to regulatory predictability, safeguarding competition, proportionality, efficiency and non-discrimination. In particular, for the purposes of setting ALFs, any methodology consistent with Ofcom’s statutory duty not to discriminate between operators should lead to the same estimate of market value regardless of the identity of the licence

¹ <https://www.ofcom.org.uk/consultations-and-statements/category-2/annual-licence-fees-3.4-ghz-3.6-ghz-spectrum>

holder. The MOC methodology fails this basic test of non-discrimination.

- iii. **Ofcom unlawfully proposes not to revisit fees after the 3.6 GHz auction.** Ofcom has previously said that the price of 3.6 GHz spectrum in the next auction is a relevant – indeed, Ofcom appears to agree with Telefónica, the ‘best’ – benchmark for ALFs. Not only that, but in its decision to vary H3G’s UKB licence on 14 December 2018, Ofcom awarded H3G new rights of use at 3600-3605 MHz, which are of strategic importance and which would otherwise have been available in the 3.6 GHz auction, on the basis that these would be priced in light of the results of that auction and were a simple “swap” for spectrum that would be released into the auction. Given the delay in the auction, we agree that ALFs should be applied on H3G before the auction, based on the 3.4 GHz result. Nevertheless, this is not a good reason to ignore a forthcoming benchmark that will be exceptionally relevant. Ofcom must expressly preserve an option to revise ALFs if the auction produces a price outcome that is materially higher or lower than the 3.4 GHz price. To do otherwise (i) could lead to a situation in which H3G is paying a price well above or below market value, and (ii) would destroy the foundations of Ofcom’s argument that the award of 3600-3605 MHz to H3G is compliant with the Authorisation Directive, giving grounds for challenging that award also. And for Ofcom simply to adopt its usual approach of saying that ALFs will not be revisited for five years unless exceptional circumstances arise is irrational in circumstances where it knows that the forthcoming auction will necessarily produce highly relevant evidence.
4. Ofcom’s proposals as to the ALFs for H3G’s UKB holdings would therefore, if adopted, be both wrong on the merits and unlawful. Moreover, they would justify an appeal to the Competition Appeal Tribunal against Ofcom’s decision to vary the UKB licence so as to award the 5 MHz of 3600-3605 MHz, and an application to extend time for the purposes of such an appeal.
5. Ofcom has a statutory duty not to discriminate between operators. Granting spectrum to H3G at a price lower than that paid by other operators – especially in a situation where it has larger, non-fragmented holdings than other operators that are better suited for optimal 5G deployment – would be discriminatory, in breach of Ofcom’s statutory duty. Similarly, closing off the option to revisit fees after the 3.6 GHz award could mean an even larger discount for H3G going forward. This, in our view, is bad policy, contradicts what Ofcom has said it would do, previously, and would be contrary to Ofcom’s statutory duties to ensure an efficient allocation of spectrum (which, according to Ofcom, requires setting ALFs at market value in this band) and ensure regulation is not discriminatory.

6. If Ofcom adopts its proposed fee methodology and rules out any revision to ALFs following the 3.6 GHz auction, H3G would be much less vulnerable to the impact of rising prices in the forthcoming award of 3.6 GHz, which in turn would make it easier for it to engage in price driving or strategic bidding for toehold quantities, designed to create a barrier to defragmentation and/or increase resale value of existing holdings. Closing off opportunities for such behaviour by H3G, which is likely to be a seller of 3.4-3.8 GHz spectrum rather than a buyer going forwards, should be a priority for Ofcom².
7. Ofcom is conducting a parallel consultation on the design of the 700 MHz and 3.6 GHz auction, and Telefónica is preparing its response. We urge Ofcom not to make any decision on ALFs for H3G's spectrum until it has reviewed that response. The revisions to Ofcom's approach on ALFs that we outline in this response are an important element in a package of changes to the auction design that we will put forward. We will present arguments that such changes are essential to preserve the integrity of the award process and maximise the likelihood of an efficient, pro-competitive auction outcome.

II. QUESTION 1: DO YOU AGREE WITH OUR PROPOSAL TO SET ALFS IN RESPECT OF UKB'S 3.6 GHZ SPECTRUM AT THE SAME RATES AS FOR UKB'S 3.4 GHZ SPECTRUM?

8. Yes, Telefónica agrees that the fees for all spectrum in the 3.4 and 3.6 GHz ranges subject to ALFs should be set at the same rate. From a technology and deployment perspective, both sub-bands are perfect substitutes for delivering 5G services. The constraints on H3G's use of the 3.6 GHz band that Ofcom outlines in the Consultation are temporary – and most will cease to apply by 30 June 2020, so should have no impact on the level of ALFs.
9. Any approach that did not treat the two bands equally would be contrary to best practice across Europe. In Table 1, we present a survey of nine Western European countries that have already announced plans for allocating this spectrum to mobile. Observe that six out of eight countries have awarded or plan to award the 3.4-3.8 GHz band as a single harmonised band. By implication, all these regulators believe that the value of spectrum at 3.4 GHz and 3.6 GHz is sufficiently similar that they can be treated as a single category of lots in an auction with the same clearing price.

Table 1: Approach to 3.4-3.8 GHz allocation in Western European countries

Country	Allocation Year	Spectrum in 3.4 GHz and 3.6 GHz sub-bands awarded as a single category?	Common spectrum caps across 3.4-3.6 GHz and 3.6-3.8 GHz?
Austria	2019	✓	✓
Finland	2018	✓	✓
Germany	2019	✓	NA ¹
Ireland	2017	✓	✓
Italy	2018	NA ²	✓
Spain	2018	NA ²	✓
Sweden	2020-2023	✓	? ¹
Switzerland	2019	✓	✓

Notes: ¹ Germany has not set a spectrum cap for the combined 3400-3700 MHz band; and Sweden has not made a decision yet on spectrum caps for the band. ² For legacy reasons, 3.6 GHz was sold separately from already allocated 3.4 GHz in Italy and Spain.

10. Like the UK, both Spain and Italy have sold 3.6 GHz spectrum in a separate award from 3.4 GHz. However, this approach was dictated by past allocations. The fact that both countries have embraced spectrum caps that link 3.4 GHz and 3.6 GHz implies that they consider the bands to be closely related. Furthermore, the Spanish Ministry has announced its intention to reconfigure

the entire 3400-3800 MHz so that all four operators will have contiguous holdings of 80 MHz or more. This plan is predicated on the idea that spectrum in the two sub-bands is interchangeable.

11. We agree with Ofcom that it best achieves its statutory duties by setting ALFs at market value for both UKB's 3.4 and its 3.6 GHz holdings. To ensure that ALFs is at market value, Ofcom should update it in light of new information. The upcoming 3.6 GHz auction will provide a highly relevant new benchmark for the market value of UKB's 3.6 GHz and its 3.4 GHz spectrum holdings (as they are perfect substitutes).

III. QUESTION 2: DO YOU HAVE ANY VIEWS ON OUR PROVISIONAL CONCLUSION TO USE THE MARGINAL OPPORTUNITY COST TO OTHER USERS TO CALCULATE THE LUMP SUM VALUE FOR THE PURPOSES OF SETTING ALFS FOR THESE BANDS? PLEASE PROVIDE ANY EVIDENCE YOU HAVE TO SUPPORT YOUR POSITION.

12. Telefónica strongly objects to Ofcom’s proposal to use the so-called “marginal opportunity cost to other users” (MOC) method to calculate the lump-sum value for the purposes of setting ALFs for H3G/UKB’s spectrum. Unlike the 900 MHz and the 1800 MHz band, there is an observed market price for 3.4 GHz spectrum, determined in an auction. This is the price paid by BT, H3G and Vodafone in the PSSR auction, i.e. £37.824 per 5 MHz³. This price should be applied to all spectrum in the 3.4 GHz and 3.6 GHz bands held by H3G/UKB. Applying any other methodology would be contrary to Ofcom’s statutory duties, including the requirement, in all cases, to have regard to the principles of transparency, accountability, proportionality and consistency; and to promote competition and optimal use of spectrum.
13. In the following paragraphs, we first discuss the key principles that Ofcom should apply when setting ALFs, in order to adhere to its statutory duties, and then analyse Ofcom’s approach in light of these principles.
14. We identify five serious deficiencies in Ofcom’s analysis:
 - i. Ofcom’s consultation discloses no rational basis to prefer MOC over the market clearing price.
 - ii. Ofcom fails to consider whether the price achieved for 3.4 GHz spectrum in the recent auction is likely to over- or understate the value of 3.4 GHz and 3.6 GHz spectrum for the purposes of setting H3G/UKB’s ALFs.
 - iii. The proposed price discount for H3G relative to the prices paid by operators in the PSSR award is neither necessary nor proportionate.
 - iv. Ofcom’s proposed MOC methodology to determine market value is inconsistent with its statutory duties.
 - v. Ofcom has failed to consider that its proposed methodology exposes other operators to H3G strategically driving up their price in the upcoming 3.6 GHz auction.
15. We request that Ofcom revisit its analysis in light of these deficiencies. We are confident that this will lead Ofcom to conclude that it should:

³ Telefónica paid more: £39.7m.

(1) set the ALFs rate for H3G/UKB's holdings at £37.824 per 5 MHz (i.e. the market price from the PSSR award); and

(2) keep open an option to review the level of ALFs in case the forthcoming UK award of 3.6 GHz reveals a market price that is substantially higher or lower than the 3.4 GHz price in the PSSR auction.

Irrationality of Ofcom's choice of MOC over the market clearing price

16. Ofcom considers whether to base its approach on MOC or the market clearing price at §§3.31-3.43 of the consultation document. First, Ofcom takes the view that in principle both MOC and the market clearing price are capable of securing the optimal use of spectrum (§3.31). It therefore proceeds to consider the relative risks of each approach (§§3.32)ff.:

- As for the market clearing price, Ofcom identifies at §3.34 that there is '*little risk*' of proceeding on this basis leading to ALFs being set at excessively high levels, because of the information available from the recent spectrum auction. As regards the possible effect of H3G setting higher retail prices, Ofcom considers that this is answered by the fact that ALFs at the market clearing price would only represent an input cost for the UKB 3.4 GHz spectrum at the same level as the input cost for the 3.4 GHz spectrum that both H3G and other MNOs won in the PSSR auction: §3.35.
- As for MOC, Ofcom identifies the risks as: a possibility that ALFs in respect of essentially the same spectrum could become different for different operators, a result that may disincentivise trading (§§3.37-3.38) and is discriminatory and unfair (§3.41(a)); a risk of competitive distorting (§3.41(b)); and an increased administrative burden (§3.41(b)).

17. The risks of MOC as identified by Ofcom are on the face of it obviously more numerous and more substantial than those connected using the market clearing price. Yet Ofcom at §3.43 says that '*on balance*' it prefers MOC without any explanation of why the arguments in favour of MOC outweigh those in favour of the market clearing price. Indeed the only positive argument in favour of using MOC identified by Ofcom is "*that is the measure we generally focus on when considering fees for mobile spectrum*": but insisting on following the '*general*' approach when Ofcom's own analysis weighs in favour of using the market clearing price (in the unusual circumstances where reliable, direct evidence of the market clearing price is available) defies common sense. Ofcom's proposed decision to prefer the MOC to the market clearing price is thus lacking in objective justification, irrational and would if implemented be unlawful.

Failure to analyse whether benchmark overstates or understates market value

18. We agree with Ofcom that the only relevant benchmark for the time being is the UK PSSR auction. This auction ticks all the relevant boxes as a benchmark: the 3.4 GHz spectrum being sold is in the same frequency band and covers the same geographic area as H3G/UKB's spectrum; the auction was completed recently (less than one year ago); and bidding was competitive. When such an excellent benchmark exists, there is no need for Ofcom to consider benchmarks from other countries. (Moreover, both lower and higher prices for equivalent spectrum have been observed in Europe⁴, so we see no reason why Ofcom should be concerned about the validity of the PSSR award as a measure of market value.)
19. We also agree that Ofcom should set the ALFs based on an estimate of market value. This was the approach taken by Ofcom when setting ALFs for 900 MHz and 1800 MHz, and Ofcom's right to set fees on this basis under UK and EU law has been affirmed.
20. The prior ALFs process also identified the important principle that, where there is uncertainty over the market value, Ofcom should take a conservative approach when estimating said value. That was the case with 900 MHz and 1800 MHz, where value had to be estimated based a series of indirect, non-UK benchmarks. However, the situation with 3.4 GHz and 3.6 GHz is quite different. In this case, there is a direct UK benchmark and thus no equivalent uncertainty regarding the market value of the spectrum.
21. Notwithstanding the obvious quality of the UK 3.4 GHz auction benchmark, we find it odd that Ofcom has not gone through the exercise of analysing whether the benchmark *overstates or understates the value of 3.4 GHz for the purposes of setting ALFs*. This is an exercise that Ofcom performed for every benchmark used for setting ALFs for 900 MHz and 1800 MHz.
22. If Ofcom was to undertake this exercise, we anticipate that it would conclude that the benchmark is highly credible, but that there is both a risk of understatement and overstatement.
23. There are a number of reasons why the price paid by other UK operators for holdings of 40-50 MHz in the 3.4 GHz might understate the value of H3G/UKB's holdings:
 - H3G/UKB's holdings are significantly larger than the holdings that other operators managed to acquire in auction. In particular, H3G is

⁴ For example, when adjusted for licence duration and population, the price achieved in the recent Swiss auction was around 20% of the price paid in the UK whereas the Italian auction achieved prices that were more than twice as high as those in the UK.

the only operator with access to the optimal 100 MHz contiguous bandwidth preferred 5G.⁵ The per MHz market value of a 100 MHz contiguous block is potentially larger than that for smaller non-contiguous blocks of 40-50 MHz.

- Although the PSSR auction in theory offered the opportunity for another bidder to secure a large contiguous block, this was never a likely outcome given the presence of at least three strong bidders competing for 150 MHz. BT, Telefónica and Vodafone likely each independently recognised that they could not win more than 60 MHz and may have conditioned their bids accordingly. The auction therefore did not necessarily reveal the true value of a 100 MHz+ block.
- All bidders also knew that there would be another opportunity to acquire substitute spectrum in the 3.6 GHz auction, and this will have influenced their bids. For example, Telefónica had high expectations that: (a) there would be more than 120 MHz available in the 3.6 GHz award because Ofcom would require H3G to return more of its 3.6 GHz spectrum;⁶ and (b) like other regulators in Europe, Ofcom would be proactive in helping the industry defragment the band. Such reasonable expectations may have reduced valuations for 3.4 GHz.

24. On the other hand, Ofcom should also consider the possibility that H3G's acquisition of 3.4 GHz may have been based on strategic rather than intrinsic value considerations, and that this could have inflated prices in the PSSR auction. One possibility is that H3G may not have anticipated such an easy ride with respect to renewing its 3.6 GHz holdings and thus acquired an additional 20 MHz at 3.4 GHz to mitigate against this risk. Another possibility is that H3G may have been seeking additional spectrum as a way of blocking rivals from securing larger contiguous blocks, thus enhancing its own commercial advantage in the downstream market and/or the secondary market for spectrum.

25. In short, the factors that potentially drive understatement reflect the inferior 5G spectrum positions of other operators relative to H3G, whereas those that drive potential overstatement relate to possible strategic bidding by H3G. Ofcom does not have the evidence to reach a conclusion on the extent to which any of these drivers influenced prices, so by themselves they are not a

⁵ For a discussion of the advantages of large contiguous bandwidths for 5G, please see Telefónica's previous response to the Ofcom consultation on Variation of UK Broadband's Spectrum Access Licence for 3.6 GHz Spectrum in 2018.

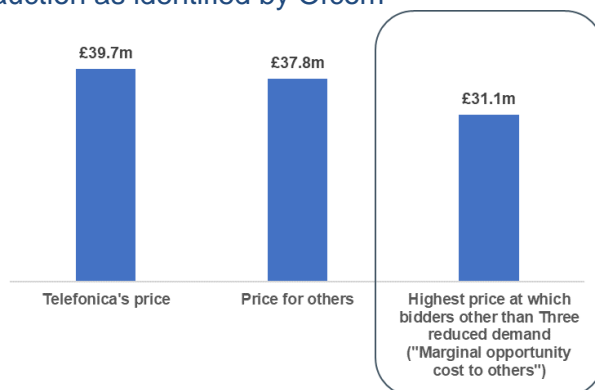
⁶ We are surprised and deeply disappointed that Ofcom did not use UKB's request to vary its licence as an opportunity to realign spectrum holdings in the entire 3.4 – 3.8 GHz band after the 3.6 GHz auction. We also maintain that Ofcom should consult on whether it is appropriate for UKB to have any of its 3.6 GHz spectrum renewed and, if it is, how much spectrum it should return given the limited nature of its original property rights and Ofcom's statutory duty to ensure that spectrum is used efficiently. Our position on UKB's licence variation is set out in detail in our submission to Ofcom's consultation on Variation of UK Broadband's Spectrum Access Licence for 3.6 GHz Spectrum in 2018.

rationale for deviating from using the PSSR price as a straight benchmark. Nevertheless, they strongly reinforce the arguments we set out below that (a) it would be grossly unfair to set H3G's ALFs at a lower price than the minimum price paid in the PSSR auction; and (b) the 3.4 GHz award should not necessarily be the final word in setting H3G's ALFs.

The proposed discount for H3G is neither necessary nor proportionate

26. In the Consultation, Ofcom identifies three different price benchmarks from the PSSR award that it considers potentially relevant when setting ALFs for this band, as illustrated in Figure 1.

Figure 1: Relevant prices for 5 MHz of 3.4 GHz spectrum from UK PSSR auction as identified by Ofcom



Notes: Ofcom's proposed approach is highlighted in box.

27. The middle price of £37.8m per 5 MHz is the price paid by three of the four winning bidders in the PSSR auction, and represents the market clearing price. This is the price level that would in any conventional analysis be identified as a conservative estimate of the market price of the spectrum:
- H3G decided to bid for 6 lots at a price of £37.8m, but when outbid and asked to bid for 6 lots again at £39.7m, it decided to drop to 4 lots instead which closed the auction.
 - H3G's marginal valuation for a 5th and 6th lot thus determines the clearing price for all bidders. Its marginal can be anywhere between £37.8m and £39.7m. To ensure its estimate is conservative, Ofcom can take the lower of the two.
28. The higher price of £39.7m per 5 MHz is the price paid by Telefónica. As Ofcom says, the fact that we had to pay more than others for equivalent spectrum was "due to the mechanics of the auction", and the result of us losing a random draw. This was the result of what we regarded was a flaw in Ofcom's rules that needlessly exposed bidders to the risk of paying a full bid increment

above the market price.⁷ To imply, as Ofcom does, that this higher price was the result of “*Telefónica’s bidding decisions*” is, we feel, misleading, as other than drop demand for spectrum at a price we were willing to pay, there was no way we could have avoided this unfair outcome.

29. As Telefónica’s price was above the market clearing level, Ofcom is correct not to use this value when setting ALFs. To do so, would be “doubling down” on Ofcom’s initial error with respect to not adopting a uniform price rule for an auction format that obviously suited such a rule. Nevertheless, we are deeply concerned that Ofcom thinks it acceptable practice to have implemented auction rules that resulted in Telefónica being overcharged for spectrum won at auction; and now proposes that it undercharges another operator, H3G, for larger quantities of equivalent spectrum.
30. Ofcom’s third, lowest price and preferred benchmark is based on an analysis of the bids received for 3.4 GHz spectrum in the PSSR auction. Ofcom noted that H3G was the last bidder to drop demand in the auction and that the final prices for all bidders were thus determined by H3G’s marginal losing bids. Hence, if Ofcom were to use the market clearing price to set ALFs, it could be argued that H3G had set its own ALFs price. Our view is that, in the context of the 3.4 GHz award, this is a positive feature of the auction design and should not be a concern. Nevertheless, Ofcom proceeds to go back through the bid history to identify the highest price at which a bidder other than H3G dropped demand for 3.4 GHz. This is a price of £31.1m per 5 MHz, the price that Telefónica bid for 55 MHz.
31. This price, which Ofcom describes as “*the marginal opportunity cost to other users*” (MOC) is the price that Ofcom proposes to use to set the ALFs. Ofcom argues that any price above this level may exceed the willingness to pay of H3G or any other user for a marginal unit of H3G’s 3.4-3.6 GHz holdings. Consequently, it says there is a risk that if the spectrum was priced at this level, it might be returned to Ofcom and thus lie fallow, which would be inefficient. Ofcom further argues that adopting this approach would be consistent with the “conservative” approach that it adopted in setting ALFs for 900 MHz and 1800 MHz.
32. These arguments are used to justify selecting a lump sum value for setting H3G’s ALFs that is 18% to 22% below the prices paid by other UK operators for equivalent spectrum.
33. It is Telefónica’s view that such a discount is neither necessary nor proportionate. The situation is not equivalent to 900 MHz and 1800 MHz. In that case, Ofcom was valuing entire bands, and there would be no immediate

⁷ Telefónica pointed out this flaw to Ofcom prior to the auction, in its consultation responses, but Ofcom chose not to fix it. Telefónica was subsequently the unfortunate victim of this unsatisfactory auction rule.

mechanism available to deal with an outcome in which prices were set too high and spectrum returned. The situation at 3.4-3.8 GHz is quite different. Ofcom is well aware that H3G has unusually large holdings in this band (more than any other European operator and more than will be necessary for optimal 5G deployment in the medium term). If the spectrum was priced above H3G's own marginal value, this would presumably spur it to try and trade surplus spectrum.

Thirdly, H3G is most unlikely to deploy meaningfully spectrum above 100 MHz for many years. Thus if it was ultimately obliged to return the spectrum to Ofcom, it could be promptly be re-priced and re-auctioned, either within the forthcoming 3.6 GHz award or on terms reflecting the outcome of that award. Such a set of events could facilitate efficient reallocation and more timely deployment than the current allocation (it may also facilitate band defragmentation).

The proposed methodology to determine market value is inconsistent with Ofcom's statutory duties

34. The following directives are relevant to Ofcom's decision on ALFs:
- Article 13 of the Authorisation Directive (Directive 2002/20/EC) states that spectrum fees must be objectively justified, transparent, non-discriminatory and proportionate in relation to their intended purpose and must take into account the objectives in Article 8 of the Framework Directive.
 - Article 8 of the Framework Directive (Directive 2002/21/EC) requires national regulatory authorities to apply objective, transparent, non-discriminatory and proportionate regulatory principles by (amongst other things): ensuring that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services.
35. In particular, Article 8 of the Framework Directive states that:
- "2. The national regulatory authorities shall promote competition in the provision of electronic communications networks, electronic communications services and associated facilities and services by inter alia:*
- a) ***ensuring that users, including disabled users, elderly users, and users with special social needs derive maximum benefit in terms of choice, price, and quality;***
 - b) ***ensuring that there is no distortion or restriction of competition in the electronic communications sector, including the transmission of content;***

- c) ...
- d) *encouraging efficient use and ensuring the effective management of radio frequencies and numbering resources.*"

and

"5. The national regulatory authorities shall, in pursuit of the policy objectives referred to in paragraphs 2, 3 and 4, apply objective, transparent, non-discriminatory and proportionate regulatory principles by, inter alia:

- a) *promoting **regulatory predictability** by ensuring a consistent regulatory approach over appropriate review periods;*
- b) *ensuring that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services;*
- c) *safeguarding competition to the benefit of consumers and promoting, where appropriate, **infrastructure-based competition**;*
- d) *promoting **efficient investment and innovation** in new and enhanced infrastructures, including by ensuring that any access obligation takes appropriate account of the risk incurred by the investing undertakings and by permitting various cooperative arrangements between investors and parties seeking access to diversify the risk of investment, whilst ensuring that competition in the market and the principle of non-discrimination are preserved."* [emphasis added]

36. Ofcom's proposed methodology fails to meet several of these objectives:

- It fails to encourage an efficient use of spectrum. As set out in paragraph 33, an ALFs set at the same level that other operators paid at auction has a much better chance of achieving an efficient allocation of spectrum in the 3.4 – 3.8 GHz band.
- It fails to provide regulatory predictability. The proposed methodology is a significant deviation from the method that Ofcom used to derive market value of 800 MHz and 2.6 GHz spectrum for the purposes of determining ALFs for 900 and 1800 MHz. That methodology produced a consistent price for all operators with holdings in the same band, whereas (as we explain below) this methodology implies a bidder-specific price. When setting ALFs for 900 MHz and 1800 MHz, Ofcom experimented with a similarly discriminatory method, the Additional Spectrum Methodology, but discarded it in favour of a method that identified a common estimate of market value independent of the identity of the licence holder). Reverting now to a methodology similar to one that Ofcom already rejected introduces unnecessary uncertainty over how Ofcom may interpret results from future spectrum auctions for the purposes of setting ALFs.
- It fails to ensure that there is **no distortion of competition**. Given that other operators acquired 3.4 GHz spectrum in the PSSR auction, setting the ALFs on H3G's 3.4 GHz spectrum below the market

clearing price has differential financial effects on operators. Ofcom acknowledges that this means H3G effectively receives a discount which in turn may have an adverse impact on competition. Ofcom argues that “*the scale of the difference in fees compared to the market clearing price suggests that any risk to competition is likely to be fairly limited*”.⁸ However, the scale of the impact is immaterial as Article 8 requires Ofcom to set fees such that it ensures that there is absolutely no distortion to competition (i.e. not even a limited risk of distorting competition).

- It fails to ensure that in similar circumstances there is no discrimination in the treatment of operators. We recognise that there are circumstances in which different prices may be applied for equivalent spectrum, and that some auction formats may result in asymmetric prices. Nevertheless, in the context of administrative fee setting, it is a straightforward interpretation of the European directives that a regulator must have strong arguments for deviating from the standard approach of charging the same price for the same thing to all operators. Ofcom has failed to identify such arguments in the Consultation document.
37. Ofcom’s proposed MOC methodology also fails any reasonable test of non-discrimination. It grants H3G a considerable discount of between 18% and 22% compared to the prices other operators had to pay for equivalent spectrum in the PSSR auction. MOC may also result in Ofcom setting different ALFs for multiple operators in the same band, which is obviously discriminatory if spectrum holdings are fungible. For example, suppose that Telefónica, Vodafone or BT had acquired some of UKB’s holdings before the auction. Applying the MOC methodology would have led Ofcom to set a higher price for these operators, i.e. £37.8m (based on H3G’s losing bid) rather than £31.1m (based on Telefónica’s losing bid). Our view is that any methodology consistent with Ofcom’s statutory duty not to discriminate between operators must be based on establishing a common estimate of market value regardless of the identity of the licence holder.
38. When setting ALFs for 900 and 1800 MHz, Ofcom determined a common market price for 800 and 2.6 GHz spectrum based on the bids submitted in the 2013 auction. It used the same common market price estimate to then derive ALFs for all holders of 900 MHz and all holders of 1800 MHz spectrum. We strongly agree with this aspect of Ofcom’s methodology as it ensures that all licence holders face the same annual fees for equivalent spectrum. We note that this principle was applied regardless of the size of holdings in each band. For example, Telefónica and Vodafone pay the same price for 1800

⁸ §3.41 refers.

MHz spectrum as BT and H3G, despite having much smaller holdings that are not in in the preferred 5 MHz block configuration. For the purposes of setting H3G/UKB's ALFs, the equivalent approach to 900 MHz and 1800 MHz is to apply the (common) market-clearing price in the PSSR auction.

39. Ofcom acknowledges that its proposal may be discriminatory when it says that:

“[to] set ALFs for Three/UKB’s spectrum in this band at a lower level would introduce a differential between Three/UKB and the other MNOs, in respect of spectrum which is otherwise equivalent. This could be said to be unfair: different operators would be paying different amounts for equivalent spectrum”; and

“H3G could be considered to be effectively receiving a discount or “subsidy” relative to the other MNOs who acquire their 3.4 GHz or 3.6 GHz spectrum at auction.”⁹

Telefónica strongly agrees with both these points. We do not see how a reasonable regulator could implement ALFs not based on the market price set in the PSSR auction.

Proposed methodology exposes other operators to H3G strategically driving up their price for 3.6 GHz spectrum in the upcoming auction

40. If Ofcom adopts its proposed fee methodology and rules out any revision to ALFs following the 3.6 GHz auction, H3G would be much less vulnerable to the impact of rising prices in the forthcoming award of 3.6 GHz. This, in turn, would make it easier for H3G to engage in price driving or strategic bidding for toehold quantities, designed to create a barrier to defragmentation and/or increase resale value of existing holdings. Closing off opportunities for such behaviour by H3G, which is likely to be a seller of 3.6 GHz spectrum rather than a buyer going forwards, should be a priority for Ofcom.
41. There are two risks to the integrity of the next award if H3G is free to bid additional 3.6 GHz spectrum without any risk of impacting the fees its pays for equivalent spectrum:
- *H3G inefficiently wins spectrum.* In any auction (including the CCA format) where bidders are buying many lots, bidders must consider the risk that bidding too strongly for spectrum they ultimately do not win will drive up their final price. Bidders that need to acquire more spectrum are thus at a disadvantage, and there is a risk that they will inefficiently concede spectrum to bidders that only need to buy small quantities. This situation may have already happened in the 3.4 GHz

⁹ §3.41 refers.

auction, where H3G managed to win 20 MHz despite already having large holdings. It is again a risk for the 3.6 GHz award.

- *H3G engages in price driving.* As H3G does not obviously need any more spectrum in the 3.6 GHz band, it may alternatively engage in price driving behaviour. It might do this, for example, to put budget pressure on rivals and perhaps secure concessions at 700 MHz, or just to gain a commercial advantage. We are particularly worried about this risk, as BT, Telefónica and Vodafone all have predictably high demand for expanding their spectrum holdings in this core 5G band. The risk of price driving is made worse by the proposal to use a CCA format which Ofcom acknowledges is more vulnerable to price driving than the SMRA¹⁰, because bidders that price drive are not exposed to winning a subset of their fake demand.

42. There are two actions that Ofcom could take in relation to ALFs to reduce these risks:

- *Make provision to revise fees if necessary.* Ofcom should reserve the right to revise ALFs following the conclusion of the 3.6 GHz auction in case prices are significantly higher or lower than the 3.4 GHz award. This is the right approach, as (a) the 3.6 GHz auction is obviously a relevant benchmark that will be available imminently; and (b) not adjusting prices in this case would mean that the government is needlessly foregoing revenues or that H3G is being unfairly overcharged.
- *Use the market price not MOC.* Even if Ofcom had a provision to allow fees to change, using MOC could incentivise H3G to overbid. This is because H3G will only expect incremental bids for spectrum to set its own price if they are successful.

43. It occurs to us that Ofcom may be concerned that preserving an option to revise fees after the 3.6 GHz auction could depress H3G's demand in the auction. Ofcom should not attach significant weight to such an argument. Experience from the PSSR auction shows that this risk did not stop H3G from bidding and winning spectrum in the 3.4 GHz auction. Further, H3G already has huge quantities of spectrum in the band and, based on intrinsic value, it more likely to be a seller than buyer of spectrum. Provided Ofcom sets a robust reserve price, the likelihood of choking off demand from H3G based on intrinsic value is low. A far greater concern is that H3G engages in price driving or strategic bids for toehold quantities designed to create a barrier to defragmentation and/or increase resale value of existing holdings. This could lead to a highly inefficient allocation of spectrum and therefore result in a

¹⁰ Ofcom, Award of the 700 MHz and 3.6-3.8 GHz spectrum bands, 18 December 2018, §7.82.

breach of Ofcom's statutory duties. Adopting a market price (not MOC) and preserving an option to revisit fees is the best approach to deter such strategic behaviour.

44. Finally, we also note that Ofcom's proposal not to consider 3.6 GHz fees when setting the price for 3.6 GHz spectrum is inconsistent with its position in June 2018 when it consulted on the variation of UKB's licence:

*"We have previously said that we would consider reflecting the opportunity cost of mobile use in the licence fee that UK Broadband pays for its spectrum in the 3.6 – 3.8 GHz band. In reviewing this fee, we would expect to take into account the bids and prices in the award of 3.6 – 3.8 GHz spectrum (provided the award is not materially delayed), along with any other relevant evidence."*¹¹ [emphasis added]

In its Decision on the licence variation dated 14 December 2018, Ofcom recorded at §5.3 in relation to licence fees for the varied licence that *"Telefónica agreed [with Ofcom] that 3.6 GHz award receipts will ultimately be the best benchmark for setting fees for these holdings"*. There was no suggestion in the 14 December 2018 decision that Ofcom had changed its mind from the position set out in the June 2018 consultation paper, or that it was not agreed that the results of the 3.6 GHz award would not be the 'best' benchmark for setting fees.

45. Indeed, the view that ALFs for H3G's varied holdings would be set on the basis of the results of the 3.6 GHz auction appears to us to be fundamental to Ofcom's conclusion that its variation of UKB's licence, to permit H3G to use 5 MHz of new spectrum at 3600-3605 MHz, is consistent with the Authorisation Directive. At §4.167-4.158 of the Decision, Ofcom decides that the award of the 5 MHz at 3600-3605 MHz involves no new grant of rights for the purposes of the Authorisation Directive because it (1) involves a straight swap of those frequencies with frequencies at 3680-3689 MHz, which will be released into the 3.6 GHz award and available to all to bid for, and (2) there will be no material difference between the frequencies. While we disagreed with Ofcom's argument, it was a tenable argument so long as fees for H3G's holdings as varied would be set on the basis of the auction results. If, however, the link between the price for the spectrum at 3600-3605 MHz and the results of the forthcoming auction is broken, as Ofcom now proposes, the argument becomes wholly untenable: there is no "swapping" of like for like if the spectrum which H3G obtains under the "swap" is priced with disregard for the market price payable for equivalent spectrum in the auction. This not only involves unjustified discrimination against others who are bidding in the auction as compared with H3G, but fundamentally undermines Ofcom's suggestion that the award of 3600-3605 MHz to H3G by administrative

¹¹ Ofcom, *Variation of UK Broadband's Spectrum Access Licence for 3.6 GHz spectrum*, §5.4.

allocation is compatible with the Authorisation Directive and creates grounds for challenging that award. We consider that the Competition Appeal Tribunal would agree that Ofcom's change of position (if Ofcom persists in it) represents exceptional circumstances justifying an extension of time for an appeal against the 14 December 2018 Decision.

46. The reason given by Ofcom not to review the fees following the award of 700 MHz and 3.6 – 3.8 GHz auction is to promote certainty.¹² Telefónica is strongly of the view that eschewing the possibility of revising the fees in the light of the highly relevant information that the forthcoming auction will generate, is far too high a price for such certainty. Certainly, Vodafone, BT and Telefónica are afforded no certainty at all in respect of the price that they will need to pay for additional spectrum in this band, which will be set in the forthcoming auction. Further, Ofcom does not offer any explanation at all as to why it proposes to reverse its previous position, set out very clearly in June 2018.
47. We agree that Ofcom does not need to wait for the 3.6 GHz auction to happen before revising the fees, as there is already an excellent benchmark for the lump sum value of this spectrum: the 3.4 GHz award, where H3G set the price for all operators. Waiting is not a good option, as not applying fees now would suppress H3G's incentive to trade and create an incentive for them to delay the auction. However, this in no way changes the logic that the outcome of the 3.6 GHz auction will also be a valuable benchmark for setting fees going forward. Ofcom must therefore preserve an option to revise ALFs for 3.4 GHz and 3.6 GHz if necessary.

¹² §5.14 refers

IV. QUESTION 3: DO YOU AGREE WITH OUR PROPOSED APPROACH TO ANNUALISATION?

48. We agree that Ofcom should adopt exactly the same methodology for annualisation as used for deriving ALFs from lump sum values for 900 MHz and 1800 MHz. Any changes in approach adopted for 3.4 GHz and 3.6 GHz should in principle be applied also to 900 MHz and 1800 MHz. If material errors are identified, then there should be consideration whether it is necessary to apply these on a retrospective basis. Other changes, if material, may justify revisiting fees for 900 MHz and 1800 MHz, and Ofcom should consult again, if necessary.
49. We believe that Ofcom **overstates the discount rate in the upper polar case by not applying the liquidity adjustment** to the cost of debt included in the WACC (upper polar case) in the same way that it is used in the lower polar case.
50. In the lower polar case, Ofcom first derives a pre-tax nominal MNO loan rate (“cost of debt”) of 2.8% based on a comparable sample of bond yields¹³ (A 5.17) but then makes two adjustments to the reference interest rate on MNO bonds, namely:
1. A 10bps adjustment for inflation protection: To “*reduce this [rate] by 10bps for an inflation risk premium, consistent with the 2015 Statement, to account for the fact that the government would not bear inflation risk. This is due to the inflation indexation of ALFs, whereas corporate bonds without inflation indexation (i.e. fixed interest securities) are likely to trade at yields which include an expected compensation for inflation risk.*” (A 5.18)
 2. A 40bps adjustment for the absence of liquidity risk aversion on the government’s behalf: Ofcom writes: “*NERA argues that the risk of the ALFs cash flows is driven by the “default risk” associated with the payments. **Liquidity risk is not associated with the cash flows coming from the MNOs to the government, and so should not be included in the discount rate.** (...) we agree with NERA that the government may not need to be compensated for the liquidity risk that might be implicitly captured in bond yields used to derive the discount rate in the lower polar case. The main risk the government needs compensation for in the lower polar case is default risk.*” (A5.47 & 5.48; emphasis added)

¹³ Bonds expose an investor to similar risk as loans. Hence as there is no publicly available data on loan costs using bond data represents a sensible proxy.

51. We welcome Ofcom's recognition that the government does not need to be compensated for inflation and liquidity risk in the lower polar case because it is protected from inflation by ALFs indexation and liquidity risk is not related to the cash flows associated with the "investment". However, we disagree with not applying the adjustment in the upper polar case.
52. It is consistent for Ofcom to consider inflation risk as requiring compensation in the upper polar case (because payments are no longer linked to inflation) but we see no rationale for removing the liquidity risk adjustment. In the upper polar case, Ofcom assumes that *"if, hypothetically, the ALFs payments were set up in such a way that they varied in response to changes in market value of the spectrum, reflecting changes in the underlying cash flows derived from the use of the spectrum, then the licensee's risk associated with paying ALFs would be reduced (since ALFs payments would be positively correlated with its cash flows derived from the use of spectrum). Instead, the risk is transferred to **the government which would be receiving a stream of annual payments varying in line with the variation of the cash flows of the licensee.**"* (A 5.8b, emphasis added)
53. What changes between the lower polar case and the upper polar case is the allocation of cash flow risk and cash flow risk only. The liquidity risk adjustment in the lower polar case is unrelated to the cash flow profile per se but rather an adjustment for the *type of investor*. Ofcom explicitly states that *"the government may not need payment of a liquidity risk premium" without referencing the cash flow risk profile*. Corporate bond investors require a liquidity risk premium, because they may want to divest prior to the bond reaching its maturity date. The liquidity risk premium compensates the bond investor for the risk that if she wishes to sell the bond at a time of poor market liquidity, she may have to choose between selling the bond at a discount or deferring the sale. The UK government bears no comparable risk, neither in the hypothetical scenario corresponding with the lower polar case nor in the hypothetical scenario corresponding with the upper polar case. The UK government will not "divest" its claim to future ALFs payments, i.e. the government will not transfer the claim to ALFs payments to a third party. Consequently, the government need not be compensated for a risk that poor liquidity might reduce the revenues from such a hypothetical transfer. This argument is independent of the specific cash flow profile of ALFs payments, i.e. it applies in the upper polar case as well as in the lower polar case, because in both cases the government is the counterparty to the ALFs. With that in mind, Ofcom not applying the risk adjustments in the upper polar case represents not a misapplication of regulatory judgment but a logical error.
54. Therefore, Ofcom should apply the liquidity adjustment when calculating the cost of debt in the upper polar case. Instead of setting the pre-tax nominal cost of debt to 2.8%, Ofcom must apply a 40bps adjustment for the absence

of liquidity risk, consistent with the lower polar case. Hence, the pre-tax nominal cost of debt in the upper polar case should be set to 2.4%. All else equal, this would reduce the upper polar case, i.e. the post-tax real WACC from 4.2% to 4.1%.

55. We further believe that Ofcom's approach **overstates the degree of risk sharing** by using a sharing factor of 25% that is based on the same stylised example that was behind its choice for the 900/1800 MHz statement. In the consultation on ALFs payments for the 900/1800 MHz spectrum, we submitted a procedure, developed by NERA, to estimate the appropriate risk-sharing adjustment based on an option pricing model. That model found a risk-sharing adjustment of at most 20% to be appropriate.
56. Some of Ofcom's arguments in support of the continued use of 25% in the 900/1800 MHz statement contradict Ofcom statements in other areas. Extending the time horizon to look at older asset volatilities for BT Group to support the 25% risk sharing factor appears misplaced for the following reasons:
 - i. In its Table A5.4, Ofcom presents asset volatilities – one of the main inputs to the option pricing model – for Telefónica, Vodafone, and BT. Ofcom argues that the range of risk-sharing adjustments supported by the option pricing model becomes wider when a horizon of up to 5 years is considered and that Ofcom's proposed 25% is "*close to the middle of the range of implied risk-sharing adjustments*" (para A5.107). However, this finding is entirely driven by BT Group. The asset volatilities of Telefónica and Vodafone do not support a 25% risk-sharing adjustment even at a 5-year horizon, as is evident from Table A5.4. The top end of the range spanned by Telefónica and Vodafone is 23%, whereas the midpoint is about 18%.
 - ii. All evidence that might support a risk-sharing adjustment of 25% or higher is based on the asset volatility of BT Group: 25%, 33%, and 32% for the 1-year, 2-year, and 5-year horizons respectively. However, Ofcom has previously found that what it calls BT Group's "Other UK Telecoms part" (which include its mobile activities) is less risky than BT Group as a whole (para A5.22). This implies that asset volatilities and the implied risk-sharing adjustments of BT Group as a whole are likely to overestimate what is appropriate for a UK MNO (para A5.108). Moreover, BT Group's asset volatility (and hence the risk-sharing adjustment it could support in theory) has been higher historically than in the more recent past, as illustrated by Ofcom's Table A5.4. This is primarily driven by BT Group's acquisition of EE, which was cleared by the CMA in January 2016. Prior to the acquisition of EE, BT Group did not have a large mobile business segment. Hence, the figures based on

BT Group with a time frame longer than 1 year are even less of an appropriate comparator for a pure-play UK MNO.

- iii. Ofcom acknowledges that Vodafone is more mobile focused than BT Group, which would clearly make it a more suitable comparator for a pure-play UK MNO. Ofcom notes that Vodafone derives the vast majority of its revenues from overseas. However, this cannot serve as a reason to discount Vodafone as a comparator for a UK MNO, as Ofcom found that **“there is not a mechanistic link between the geographic revenue mix of parent groups and their credit ratings”**, i.e. their business risk (para A5.21). In summary, Ofcom’s expansion of NERA’s analysis, i.e. widening the time frame, corroborates the finding that a risk-sharing adjustment of 25% is **not** supported by the option pricing methodology.
57. Ofcom should therefore consider a lower risk sharing factor in combination with an adjusted upper polar case when determining the appropriate discount rate for annualization. These comments apply not only to the determination of ALFs for 3.4 GHz and 3.6 GHz but apply to all mobile spectrum bands where ALFs are used. Ofcom should therefore revisit the discount rates used for 900 MHz and 1800 MHz.

V. QUESTION 4: DO YOU AGREE WITH OUR PROPOSAL TO INTRODUCE ALFS FOR UKB'S 3.4 GHZ SPECTRUM IMMEDIATELY, AND TO PHASE IN THE REVISED ALFS FOR UKB'S 3.6GHZ SPECTRUM IN TWO STEPS AS DESCRIBED?

58. Telefónica supports the general principle that operators should only have to pay for spectrum when it is usable. It is also important that Ofcom treats all operators fairly.
59. With respect to 3.4 GHz, we strongly support the proposal that fees be applied immediately. Other operators have already paid in full for spectrum in the same band, and the spectrum is also now usable. Any delay in applying fees would discriminate against operators who acquired spectrum in the PSSR auction rather than through spectrum trading,
60. With respect to 3.6 GHz fees, we recognise that there are some limitations on the use of 3.6 GHz spectrum prior to 30 June 2020. Therefore, we have no objection to a phasing in of fees prior to this date, providing the reduction is proportionate to the scale of the restrictions. We agree with Ofcom that fees from 1 July 2020 onwards should be applied in full for the same reasons as stated above for 3.4 GHz.

VI. QUESTION 5: DO YOU AGREE WITH OUR PROVISIONAL CONCLUSION THAT FEES SET BASED ON OUR ESTIMATE OF MARKET VALUE WILL BEST MEET OUR STATUTORY DUTIES?

61. We agree with the general principle that H3G/UKB's ALFs should be set based on market value. However, as previously discussed, Ofcom has failed to identify the correct market value in the Consultation document. As highlighted in Section III, Ofcom's impact assessment fails to consider its broader statutory duties, in particular its obligation not to discriminate between operators. Ofcom's proposal to price ALFs below the observed market clearing price and not to preserve an option to revisit fee levels following the 3.6 GHz auction also exacerbates incentives for H3G to engage in strategic bidding in that auction. This in turn violates Ofcom's obligations to adopt a coherent set of spectrum rules design to promote an efficient, pro-competitive allocation of frequencies for mobile use.

VII. QUESTION 6: DO YOU HAVE ANY OTHER COMMENTS THAT YOU WISH TO MAKE IN RESPECT OF THE PROPOSALS THAT WE MAKE IN THIS CONSULTATION?

62. We note that Ofcom's decision on ALFs could have a significant impact on bidder behaviour in and thus the outcome of the forthcoming UK 700 MHz and 3.6 GHz combined award. Ofcom is conducting a parallel consultation on the design of that auction, and Telefónica is preparing a response, due March 12. We urge Ofcom not to make any decision on ALFs for H3G's spectrum until it has reviewed our response. The revisions to Ofcom's approach on ALFs that we outline in this paper are an important element in a package of changes to the auction design that we will put forward. We will present arguments that such changes are essential to preserve the integrity of the award process and maximise the likelihood of an efficient, pro-competitive auction outcome.