Vodafone response to the CMA issues statement in the anticipated joint venture between Liberty Global Plc and Telefónica S.A.

Issues statement response Vodafone

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1. Executive summary

1. Vodafone welcomes the opportunity to present its views to the Competition and Markets Authority ("CMA") on its statement of issues regarding the anticipated joint venture between Liberty Global Plc and Telefónica S.A. to merge their operating businesses in the UK, Virgin Media Inc. ("Virgin") and O2 holdings Limited ("O2").

2. We support the CMA's decision to refer the proposed merger of Virgin and O2 for an in-depth Phase 2 investigation. Vodafone believes this proposed merger will lead to a substantial lessening of competition ("SLC") in UK telecoms markets. The vertically-integrated merged entity, with its network ownership economics in both fixed and mobile and cross-selling opportunities, would have both the incentive and ability to foreclose competition from competing operators. In particular, Vodafone believes that (as the CMA has identified in its Issues Statement) the merged entity will have the ability and incentive to engage in an input foreclosure strategy, both in terms of network access and at the wholesale level, which if unconstrained could lead to reduced network investment and an overall detrimental impact on consumer experience and ultimately less consumer choice

3. We have [CONFIDENTIAL] concerns regarding:
   - The wholesale supply of passive fibre leased lines for the provision of mobile backhaul and [CONFIDENTIAL].
   - The wholesale supply to, and the resulting competitiveness, of the MVNO market and the impact on retail competition.

Mobile backhaul

4. Virgin is the only wholesale supplier of mobile backhaul services in the UK that offers both the product most suitable for mobile backhaul transmission - in particular as consumer demand for data dramatically increases - and has network in the locations where we and other mobile operators require the service.

5. The only other network operator with network in the geographic locations to offer mobile backhaul services, BT Openreach, does not offer the dark fibre access product we require. This is despite repeated requests by us, [CONFIDENTIAL] and their wholesale fixed competitor (Virgin) offering the product. Vodafone believes this is because BT, as a vertically-integrated mobile and fixed operator does not, on balance, have the incentives to supply and therefore support other mobile operators. We did understand at the time of the BT/EE merger that Ofcom would, in its next market review, require BT Openreach to supply dark fibre access at regulated cost reflective prices. This, in part mitigated our concerns stemming from that merger at that time, however this has not been forthcoming. Prior to the BT/EE merger the capacity demand from the majority of mobile base stations could be met using the regulated and price controlled Ethernet active 1Gbit/s product therefore the demand from the industry for dark fibre products only really started to emerge around 2015/16.

6. With a combined BT/EE the incentives for BT Openreach to commercially supply dark fibre services for mobile backhaul and the incremental revenue

this would generate for BT Group is outweighed by the additional competitive advantage the mobile division of BT, EE, enjoys as a result of being the only operator with 'owner economics' in mobile backhaul services. EE can increase backhaul capacity and network speed without incurring incremental external costs. This is illustrated by the fact EE is already installing higher capacity 10Gbit/s backhaul capacity at each 5G network upgrade.[1] When Ofcom proposed dark fibre [CONFIDENTIAL], however when Openreach dark fibre was withdrawn due to an appeal from BT we were forced to reconsider[2] and [CONFIDENTIAL]. The availability of Virgin dark fibre has again enabled us [CONFIDENTIAL].

7. This same supply side dynamic will be true for the merged Virgin and O2 business if this transaction occurs. An integrated mobile and fixed telecoms operator has reduced incentives to supply fixed wholesale inputs to other mobile operators on terms that will enable them to credibly compete. Currently a stand-alone Virgin has the incentives to not only supply dark fibre, but to supply it on competitive pricing and quality terms in order to compete with BT Openreach and as part of a broader wholesale partnership with Vodafone. Post-merger those incentives will be changed, with the merged entity having (i) an incumbent 'purchaser' for its transmission products and an incentive to prioritise its own demand for transmission; and (ii) reduced incentives to offer such transmission on competitive terms given the changed competitive dynamic between other MNO's, including Vodafone, and the

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[1] https://the-mobile-network.com/2019/05/ee-announces-5g-launch/

[2] The appeal from BT required Ofcom to re-examine its business connectivity market definition, this therefore impacted the resulting remedies

merged entity as compared to that which existed between the MNO's and a stand-alone Virgin.

8. In addition, this merger will also reduce the incentives for the merged entity to work with other mobile operators to enjoy network synergies through network sharing partnerships. We have, through the Beacon network sharing agreement with O2, divided the country into East and West and are each responsible for the transmission of mobile traffic in different parts of the country. This reduces the scope of both our and O2's overall mobile transmission requirements. This Beacon partnership is built on commonality of incentives and mutual understanding, for example with respect to [CONFIDENTIAL]. Post-transaction however, these incentives will no longer be fully aligned; [CONFIDENTIAL].

The MVNO market

9. O2 currently provides wholesale mobile services to a large number of MVNO operators. The only way to ensure the long-term health of the wholesale mobile market is to ensure the supply of wholesale mobile network services remains competitive. However, if this merger goes ahead, the market dynamic will be changed and the merged entity will have changed incentives to supply these services.

10. Mobile network quality and characteristics can be used as a source of competitive advantage therefore all mobile operators face mixed incentives when considering whether to wholesale their network. The supply of wholesale services to MVNO's however gives mobile operators increased scale. This increased scale can be used to more efficiently spread the large pool of fixed network costs incurred with running a mobile network and enable mobile operators to invest more in the quality of their network. It is these economies of network costs that gives mobile network operators the incentives to supply wholesale products to MVNOs that become their competitors in the retail market. Through this transaction, O2 will gain increased scale, which can be further expanded by cross-selling mobile products to Virgin customers. This would reduce O2's need to externally wholesale their mobile network products.

11. The fact that, post-transaction, the merged entity will not only compete with MVNO's in offering retail mobile services, but will also compete with some MVNO's in the provision of fixed and pay-TV products, further impacts its incentives to supply. Even if the merged entity were to continue to provide

wholesale mobile services to these MVNO's post-transaction, it will have the incentive, and ability, to engage in at least partial input foreclosure and degrade the service it offers to them or otherwise frustrate the supply arrangements.

12. In the alternative, should the merged entity continue to supply wholesale mobile services to all operators in its current MVNO portfolio, it will have circa 80% of the MVNO market (by wholesale revenue). This effectively gives control of MVNO's network services and quality to O2/Virgin, which they could use to detriment the consumer offering from this part of the market and, over the longer term, could result in a less competitive wholesale market given the impact that hosting MVNO's has on sub-scale operators scale and ability to invest in their own networks.

13. We believe the two specific theories of input foreclosure harm identified by the CMA - input foreclosure in the supply of wholesale mobile services to MVNOs and input foreclosure in supply of wholesale leased lines to MNOs - [CONFIDENTIAL], competition in UK telecoms markets post-merger will be reduced.

14. [CONFIDENTIAL], the CMA must have regard to the fact that creation of the joint venture, will create a dynamic whereby the market will be dominated by two large-scale fixed network owners, on whom the remaining operators - Vodafone and Three - will be reliant for wholesale supply of key mobile inputs. This, combined with the merged entity's network, customer scale advantages and their cross-selling opportunities, could directly impact [CONFIDENTIAL].

2. Input foreclosure in the supply of passive fibre leased lines to mobile operators

15. Our Beacon agreement with O2 gives us the responsibility for the backhaul transmission of [CONFIDENTIAL] mobile base station sites in the UK that we share with O2 in the west of the country. [CONFIDENTIAL] of these currently use microwave links, however [CONFIDENTIAL] we will seek, where possible, to upgrade these to fibre in the future.

16. In addition, we are responsible for the transmission for another [CONFIDENTIAL] sites, which are Vodafone only sites. We have rolled out Vodafone only transmission sites because we have different coverage strategies and network requirements in major cities. [CONFIDENTIAL].. This is because increasingly capacity requirements and demands from consumers drive the need for increasing numbers of mobile cell sites.

17. This means that currently we are responsible for mobile backhaul transmission at [CONFIDENTIAL] sites in the UK. Virgin and BT Openreach can both serve approximately 52% of these sites with fibre mobile backhaul products. However sourcing mobile backhaul from other suppliers is more problematic due to the limited geographic scope of other suppliers' networks. The network with the next largest geographic footprint in areas where we require mobile backhaul is CityFibre and they can provide mobile backhaul at only approximately [CONFIDENTIAL] of these sites. Therefore, only approximately [CONFIDENTIAL] of our current mobile backhaul demand can be satisfied and competed for by three

operators. [CONFIDENTIAL] due to their limited network scope and the costs incurred to enable us to procure network services from suppliers and connect to their network.

18. We are therefore highly reliant on BT Openreach and Virgin for the provision of mobile backhaul services at the vast majority of our mobile backhaul cell sites. The market for the supply of mobile backhaul services is not competitive today. This joint venture will reduce the incentives to supply on competitive terms for one of the two suppliers, Virgin. This will make sourcing these backhaul products at pricing that is close to the efficient cost even more challenging for mobile operators. This will negatively impact the competition in the market for the supply of wholesale mobile backhaul products and lead to increased costs for mobile operators.

19. [CONFIDENTIAL].. This is for three reasons:
    - Firstly, because consumer consumption of mobile data is increasing year on year, and this will continue with the roll-out of 5G. However, mobile consumers generally will not and do not pay increased retail prices for increasing volumes of data. Our network costing structure must be able to match these general retail demand dynamics, and
    - Secondly because post-merger we will be competing against vertically-integrated mobile operator(s) that enjoy infrastructure owner economics and will not be subject to these increased costs as consumer demands increase, and
    - Thirdly because, by supplying passive, dark fibre products instead of active ethernet products, the wholesale supplier enjoys reduced costs as they are supplying effectively a ‘simpler’ product (requiring no external

electronic boxes) leaving the supplied entity to provide the electronic and other fibre management parts of the service. (which the supplied entity can generally do more effectively)

20. Our current plan is to [CONFIDENTIAL].

21. In five years' time, we plan to procure approximately [CONFIDENTIAL] dark fibre circuits from Virgin for mobile backhaul purposes. We had hoped that Virgin's willingness to supply dark fibre access services would place pressure on BT Openreach to also supply dark fibre services nationally. [CONFIDENTIAL]. Having supply competition between BT Openreach and Virgin could help to push the market price of dark fibre towards the efficient cost incurred to supply.

22. The following table shows the current prices we pay for BT Openreach active 1Gbit/s products, these are the products currently most commonly used for mobile backhaul transmission. In the table, we also show the 'upgrade' products available with the associated pricing, these are the products that are available when we need to upgrade our current 1Gbit/s backhaul transmission links. [CONFIDENTIAL].

Table 1: Fibre products pricing

[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]

23. As the table shows our current mobile backhaul spend is based on [CONFIDENTIAL]. However, as consumers' mobile capacity, demands increase and 5G is adopted, the backhaul capacity that this carries is no longer suitable and therefore these links require upgrading.

24. As the table above shows, the upgrade options currently available in the market are (1) Openreach 10Gbit/s Ethernet active backhaul links priced at nearly [CONFIDENTIAL] the price, (2) Virgin media dark fibre links currently [CONFIDENTIAL] and (3) Regulated BT Openreach dark fibre for which Ofcom has consulted on setting the price at approximately £1,500. However regulated dark fibre access is currently proposed to only be available in a very small geographic area in the UK and [CONFIDENTIAL].

25. There are other ways in which mobile backhaul transmission can be delivered which we have detailed in our response to the CMA's RFI's. It is possible where a mobile operator has network to self-supply backhaul transmission. It is also possible to build network between mobile base stations and it is possible to use BT Openreach's regulated duct and pole access product to, in part reduce the cost of building transmission network. However the huge capital expenditure hurdle that is required in order to roll-out network, the time taken to roll-out network and the practical building complications mean that extending network to meet mobile backhaul transmission requirements is [CONFIDENTIAL].

26. The table below shows the volume of upgrades required over the next five years.

Graph 1: [CONFIDENTIAL]

27. [CONFIDENTIAL].

28. Given the upgrade requirements over the next five years, we are [CONFIDENTIAL] concerned that our mobile backhaul transmission costs will increase [CONFIDENTIAL].

29. Mobile backhaul costs currently account for approximately [CONFIDENTIAL] of our total mobile network costs. We currently spend approximately [CONFIDENTIAL] each year on mobile backhaul costs, with network upgrades, additional cell site requirements and increased capacity requirements [CONFIDENTIAL]. However, future cost estimates and forecasts are highly dependent on the use, availability and pricing of mobile backhaul products in the market.

30. [CONFIDENTIAL], the merged entity will have the ability and incentive to frustrate supply or cease to supply on terms which are price competitive, and about the impact this will have on the competitive dynamics of UK telecoms markets. We would therefore urge the CMA to consider addressing the risk of input foreclosure in the supply of mobile backhaul products from Virgin [CONFIDENTIAL]..

3. Input foreclosure in the supply of wholesale mobile services to MVNOs

31. There are currently three significant MVNO's; Sky, Virgin and Tesco Mobile which together have circa. more than 10 million customers. MVNO's not only provide increased competition in the retail market, they are also critical to a MNO's ability to add scale (which has greater value to smaller scale MNOs who need to increase economies of scale). The scale that MVNO's add to mobile network operators is increasingly important in a market such as the UK where convergence is increasing rapidly and there is a growing divide between the scale of the two largest converged mobile operators (if this joint venture is allowed to proceed) and the scale of the other two mobile network operators. Across their fixed and mobile customer base both Virgin/O2 and BT/EE, have more than double the number of retail customers compared to both Vodafone and Three UK.

32. Post-transaction, we believe the current levels of fixed-mobile convergence in the market will increase. Our initial projections, as stated in our response to the CMA's RFI, suggest that approximately [CONFIDENTIAL] of the market will be converged by 2030. This has huge implications for fixed and mobile operators that do not have network owner economics (i.e. are not truly converged) in either fixed or mobile services but need to retail these services in order to be able to compete for the converged part of the market. Within a very short timeframe, it will be difficult for a mobile or fixed operator to continue to remain competitive and compete for a significant portion of the market without selling a converged mobile, broadband and TV offering or without the integrated economics that such fully converged operators inevitably have.

33. As the CMA recognises in the issues statement, the merged entity will have changed incentives to supply MVNO services compared to a stand-alone O2, particularly where fixed MVNO's are concerned. No longer will O2 have a strong incentive to gain scale through the supply of their wholesale mobile network products. The merged entity will gain scale through the joint venture, and will be able to achieve further increases in network efficiencies and scale by cross-selling. Indeed the supply of wholesale mobile products has mixed incentives for mobile operators. On the one hand, they enable mobile operators to gain scale by improved network economies but on the other hand, they enable increased competition in the retail network from operators that share your network characteristics, a feature that may otherwise be used as a source of competitive advantage.

34. The concentration of all of the significant MVNO's on one network also has the potential to lead to poor consumer outcomes, as healthy vibrant competition in wholesale markets is very important to ensuring retail competition. Competition in wholesale markets can ensure ongoing wholesale product support and customer support for the retailing entity together with ongoing quality of service improvement and maintenance during lifetime of contract. This quality, high service level and supplied customer care is driven by the wholesale suppliers desire to compete and retain their wholesale customer, without competition in the market all these outcomes reduce. And, without the scale that MVNO's can provide to the otherwise sub-scale network operators, [CONFIDENTIAL].

35. As recognised by Ofcom in the fixed market, true enduring competitive wholesale supply can only be guaranteed by having competing network operators that have the scale and scope to be true competitors. However, telecoms is a high fixed cost, high barriers to entry market. This is true of both fixed and mobile networks but also, for mobile networks, investment cycles are shorter and technology upgrades happen more frequently. This joint venture will create a market dynamic whereby, although there are four UK MNO's, two of these will be large-scale operators with large-scale fixed networks, upon which the other two MNO's rely for wholesale access. Having considerable power in the market, these large-scale operators will have mixed incentives to supply the other mobile operators with wholesale products. Regulation is therefore key in order to strike the balance between ensuring operators can gain the scale needed to invest in networks and improve network quality whilst also ensuring other operators in the market are not damaged by the power and control that these large-scale fixed operators will have.

36. [CONFIDENTIAL]. It is of utmost importance for the health of the whole UK telecoms market that a range of wholesale fixed network and wholesale mobile network products continue to be available to enable operators without network owner economics and the associated scale to compete for the increasing number of converged consumers.

4. Conclusion

37. If this transaction proceeds, as mentioned above the UK market will be dominated by two operators that serve more than double the number of fixed and mobile customers compared to their nearest competitor.

38. Procuring wholesale network products gives operators that do not have network or only have network in one part of the market (fixed or mobile) the ability to provide converged retail services. If converged network operators are allowed to follow an input foreclosure strategy and frustrate supply of these wholesale products to other operators in an increasingly converged market, the competitiveness of the overall market will suffer.

39. Returns in UK telecoms markets are low, debt ratios are high and mobile network costs are set to increase substantially. This is driven by the need to replace Huawei technology, additional network security requirements being imposed and the roll-out of 5G technology, together with the need for additional 5G infill sites. However, the benefits for society of upgraded mobile technology are wide and meaningful. Fixed networks in the UK also require fibre investment and upgrading to ensure the ever-increasing technology needs of the UK are met.

40. In considering [CONFIDENTIAL] the two clearly identified theories of harm, the CMA should consider this overarching longer-term potential harm for UK telecoms markets and focus on ensuring any remedies enable other competing operators in the market to credibly compete with the two very large-scale vertically-integrated operators by securing competitive wholesale access in both fixed and mobile markets. This will help ensure a more competitive enduring landscape, to the ultimate benefit of consumers.