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Freshfields Bruckhaus Deringer

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Vodafone UK / Three UK

Response to the CMA's Provisional Findings dated 13 September 2024 (*Response)*

4 October 2024

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This Response to the CMA's Provisional Findings (including any attachments and annexes) contains confidential and competitively sensitive information relating to the Parties to which Part IX of the Enterprise Act 2002 applies. The commercial interests of the Parties would be significantly harmed were their confidential information and data to be disclosed. The CMA is requested not to disclose any confidential information or data of the Parties to any third party without prior written consent from the relevant party.

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In addition, annexes expressly marked "Confidential" are confidential to the party or parties to whom the annex relates and should not be shared with the other party to the transaction or with third parties.

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1. Introduction

1.1 This submission responds to the Provisional Findings dated 13 September 2024 ("**PFs**") in relation to the anticipated joint venture between Vodafone Group plc ("**Vodafone**") and CK Hutchison Group Telecom Holdings Limited ("**CK Hutchison**", and together with Vodafone, the "**Parties**") to combine their operating businesses in the UK, respectively Vodafone UK Limited ("**VUK**") and Hutchison 3G UK Limited ("**3UK**") (the "**Transaction**").

1.2 As the Parties have explained in their previous submissions, the Transaction is essential to unlocking transformational investment in network performance (both capacity and quality) in the UK mobile market. This will provide substantial overall benefits to all customer groups and businesses in the UK and enhance the rivalry and competitive pressure across the retail and wholesale mobile services markets. The Parties are fully committed to implementing the Joint Business Plan ("**JBP**") and the Joint Network Plan ("**JNP**"), which underpin the Transaction, as the only means to deliver this transformation.

1.3 The Transaction will reverse the trend of the UK lagging behind other similar countries in terms of the capacity, coverage and quality of service of its mobile networks. The PFs recognise as much, noting that the Transaction "*could improve the quality of mobile networks and bring forwards the deployment of next generation 5G networks and service*".[1]

1.4 The Parties strongly disagree with the PFs that the Transaction may result in a substantial lessening of competition ("**SLC**") in the retail mobile services market and the wholesale mobile services market. By all measures, the Transaction is pro-growth, pro-customer and pro-competition. By contrast without the Transaction, the prevailing conditions of competition will continue to deliver sub-optimal outcomes for UK customers and businesses, and competition between MNOs will only increasingly weaken in the counterfactual.

(a) Faced with exponential growth in traffic, the competitive strength of 3UK and VUK is likely to deteriorate (in particular, relative to BTEE and VMO2). The Parties are at a growing competitive disadvantage against much larger players.[2]

(b) Both Parties have provided extensive evidence to demonstrate why, given the future challenges facing the mobile market in the UK, they do not have sufficient scale ([REDACTED]) and do not [REDACTED] today to compete effectively. Both the PFs and third parties recognise the importance of scale in this market.[3]

1.5 The PFs highlight concerns about VMO2's network quality falling behind and indeed, absent the Beacon 4.1 benefits which are contingent on the Transaction, VMO2's position in the counterfactual will also be weaker relative to BTEE's. Even though VMO2's ROCE is sufficiently above WACC that it is able to invest to close the gap

[1] PFs, paragraph 6.

[2] Merger Notice, Figure 2.4.

[3] PFs, paragraphs 8.114, 8.110 and Appendix C.

with BTEE, it is constrained by its spectrum position and the significant boost to its network performance from the merger-specific spectrum transfer under Beacon 4.1 will not be available in the counterfactual.

1.6 In a number of important respects, the PFs continue to mischaracterise or fail to engage with the extensive evidence concerning retail and wholesale competition and the Parties' likely ability and incentive to compete in the counterfactual. While the PFs acknowledge the credibility of the JBP and the likelihood of delivery of some of the claimed efficiencies, much of the Parties' extensive submissions on efficiencies has yet to be properly taken into account or has been inappropriately discounted. The PFs contain statements on which the CMA is seeking to rely in reaching its preliminary conclusions that are based either on mistakes, mischaracterisations or misunderstandings of the realities of the relevant markets or the evidence before it.

(a) As set out in further detail in **PF Annex 4**, the PFs' quantitative assessment of merger effects disregards the rivalry enhancing efficiencies ("**REEs**") – including capacity and quality improvements, which will drive other providers to compete more strongly with MergeCo – that will be generated by the Transaction. This cannot be justified in circumstances where the PFs accept that at least *some* of the REEs are both timely and likely, in addition to being capable of benefitting customers.

(b) The PFs are incorrect to consider the CMA's own modelling as the only reliable source of quantitative evidence. Alongside the complete omission of REEs, the model is – by construction – unable to fully assess the benefits of the Transaction. There are significant limitations in the methodology set out in the PFs and it is therefore unsurprising that its analysis leads to numerous implausible results with respect to consumers' valuation of network quality, including that a significant proportion of customers have a negative willingness to pay for certain quality attributes, suggesting that they would rather pay more for less quality or a smaller data allowance. This is clearly incorrect. In addition, the CMA's modelling includes a coding error which leads to an overstatement of anticompetitive effects due to loss of rivalry and an understatement of the impact of REEs, and which must be corrected.

(c) There is no proper basis for the CMA's unqualified dismissal of the Parties' merger simulation models and therefore positive weight must be placed on these models. As explained in the Parties' detailed responses, the results from these models are robust to the key criticisms set out in the PFs and their conclusions are consistent with those from the CMA's own model when accounting for REEs, which demonstrate that the Transaction is strongly pro-competitive.

(d) The comprehensive evidence submitted by the Parties, including the capacity- and quality-focused merger simulation models, shows that, once all the key likely effects are accounted for, the Transaction will substantially increase consumer welfare. Even if only the improvements of download speeds and coverage achieved on Day 1 are taken into account in the CMA's own merger simulation model, the SLC is fully eliminated and the Transaction is predicted to substantially increase consumer welfare (by over £500 million). Importantly,

consumer welfare will also increase for consumers in **all income groups**, including those on the lowest incomes. When the impact of MergeCo's higher capacity is also taken into account (in addition to the quality benefits above), total consumer welfare increases by over £950 million.

(e) This unbalanced approach to economic analysis leads the PFs to underestimate the REEs and therefore the overall impact of the Transaction. These provisional conclusions cannot therefore be maintained in the CMA's Final Report.

1.7 The Transaction is the only available and viable option to create the necessary synergies and cost savings to fund the transformational investment in network that the UK requires.

(a) The huge increase in network capacity, minimal resulting congestion and improved quality of service that the Transaction will create and sustain into the future will enable and incentivise MergeCo to offer competitive services in both the retail and wholesale mobile services markets and to compete significantly more effectively than either Party can on a standalone basis. MergeCo and VMO2 (through the spectrum and sites provided by Beacon 4.1) will bring new capacity to the market, and this will benefit UK consumers by applying downward pressure on prices – it is almost always the case that increased supply reduces prices.

(b) The concern in the PFs appears to be that MergeCo's network will be "too good" post-Transaction – i.e. UK consumers will not value the quality, coverage and consistency of service that MergeCo will deliver. The Parties strongly disagree with this surprising view. Creating a best-in-class network is at the heart of the Transaction. Customers will benefit from substantially improved network quality, receiving wider coverage, faster download speeds, lower latency, and access to Advanced 5G use cases. Low-income consumers will benefit from the greater reliability and improved indoor and outdoor coverage as well as the downward pressure on quality-adjusted prices (and hence on nominal prices for basic packages).

(c) Absent the Transaction, contrary to the views expressed in the PFs, the Parties will remain sub-scale, unable to fund the levels of capital investment in infrastructure required to meet the future needs of customers and close the quality gap, and without the ability to compete effectively with the two market leaders, BTEE and VMO2. Indeed, the recently published Draghi Report recognises the critical need for scale in mobile networks and the role that consolidation needs to play to deliver higher rates of investment in connectivity.[4]

[4] The future of European competitiveness – A competitiveness strategy for Europe, 9 September 2024, page 31. See https://commission.europa.eu/document/download/97e481fd-2dc3-412d-be4c-f152a8232961_en?filename=The%20future%20of%20European%20competitiveness%20_%20A%20competitiveness%20strategy%20for%20Europe.pdf.

1.8 These points are developed further below and in the detailed responses to chapters of the PFs set out at **PF Annexes 1 to 4**.

2. The Transaction will not lead to an SLC in the retail mobile services market

2.1 Despite the significant body of evidence to the contrary, the PFs reiterate the mistaken perception that the retail market is dominated by MNOs, in which the market leaders, BTEE and VMO2, compete less aggressively than the Parties, and where the fastest growing operators (the MVNOs) pose only a limited competitive constraint. This is contrary to the available evidence and divorced from the real dynamics of competition observed in the retail market, including the weaker competitive position of the Parties. The PFs have not taken into account the clear, consistent and extensive evidence provided by the Parties that contradicts these provisional conclusions.

2.2 There is a mismatch between the conditions of competition described in the PFs and the realities of the retail mobile services market. As set out in more detail in **PF Annex 1**:

(a) **The PFs understate the importance of network performance as a driver of competition in the retail mobile services market**. The CMA's own surveys, third-party evidence and the Parties' own evidence all corroborate the fact that network performance is a key competitive parameter and a critical driver of customer choice – *particularly* for those in underprivileged and marginalised communities (whose only means of connecting to the internet may be via their mobile device, such that (indoor) coverage and service reliability are particularly critical). The importance of network quality for all customer groups will only increase as demand for data continues to grow. It is not a mere hygiene factor.

(b) **The PFs' analysis of the Parties' customer bases is at odds with market reality**. The PFs simultaneously *overstate* the Parties' competitive position and *understate* the competitive significance of MVNOs – empirically, the fastest growing operators and key drivers of price competition in the consumer segment. In addition, the PFs do not appropriately reflect the extent of the [REDACTED] – and ignore VUK's [REDACTED] competitive position, notwithstanding the Parties' clear evidence that [REDACTED].

(c) Market evidence does not support the PFs' hypothesis that smaller MNOs (including 3UK and VUK) have a stronger ability or incentive to compete aggressively (as compared to their larger rivals). The PFs assert that operators face a trade-off between the short-term benefit of winning new customers against the cost of reducing the profitability of their existing customer base and incorrectly conclude that this cost "*is likely to be greater for mobile operators with larger existing bases than those with smaller existing bases*", and therefore that MergeCo would be less incentivised to compete aggressively than 3UK and VUK in the counterfactual.[5] The PFs focus on this alleged incentive to the exclusion of much more important considerations affecting MNOs' ability and incentive to compete, notably the fact that (i) the Parties'

[5] PFs, paragraph 8.180(a).

lack of scale and [REDACTED] is already weakening their ability and incentive to invest and compete against much larger MNOs, as shown by the comprehensive evidence provided by the Parties, including their internal documents setting out the [REDACTED], and (ii) an MNO's available capacity, which determines its marginal cost of serving additional customers – a key determinant of an MNO's incentive to compete, given that capacity-constrained MNOs have less of an ability and incentive to price aggressively.[6]

The PFs' hypothesis is further undermined by the prices observed in the retail mobile services market and the experience of the Parties – for example, (a) VUK was the [REDACTED] MNO throughout most of 2020-2022 and was the [REDACTED] for several quarters in 2023, despite having [REDACTED] among MNOs,[7] and (b) 3UK [REDACTED], but consistently [REDACTED] – demonstrating that the alleged low prices [REDACTED].

(d) **3UK does not have the ability or incentive to compete aggressively and sustainably, today or in the counterfactual**. The PFs disregard extensive submissions made by the Parties in this regard. For example, as explained in more detail in **PF Annex 1**, the description of 3UK's competitive and financial position at paragraphs 8.118 to 8.122 of the PFs is factually incorrect, and unsupported by the evidence and 3UK's internal documents. Unlike the two scale players, 3UK's financial performance has [REDACTED] over time – it earned around [REDACTED] of the two leading MNOs' total EBITDA, while still needing to invest similar levels of capex to build and maintain a nationwide mobile network. This has resulted in [REDACTED] and returns below the cost of capital, preventing further extensive investment in network performance required to improve 3UK's network reputation. The PFs suggest that 3UK has experienced "*significant recent growth*" (by selectively focusing on narrow revenue streams) and that its network quality has improved; statements that are a material distortion of 3UK's underlying performance: [REDACTED].

(e) **VUK does not have the ability or incentive to compete aggressively and sustainably, today or in the counterfactual**. As explained in more detail in **PF Annex 1**, the description of VUK's competitive position does not reflect the reality of VUK's limited capability in the retail market.

(i) VUK is demonstrably sub-scale, has [REDACTED] (reflected in its [REDACTED] competitive position), and [REDACTED]. The Parties have provided clear evidence that VUK's [REDACTED]. Since the shutdown of VUK's 3G network, a significant proportion of VUK's rural customers (and customers travelling to/through rural areas) are only served by a 2G network (22.7% of rural households across the

[6] See paragraph 2.2(j)(iii) below and **PF Annex 3.**

[7] See Figure 3.6 of the Parties' Phase 2 Initial Submission; [REDACTED].

UK, rising to 28.4% in Wales, do not have a good enough signal for indoor 4G coverage).[8]

(ii) The CMA's characterisation of VUK's financial performance is wholly misleading – in particular its suggestion that VUK is making "significant" investment in its network. In fact, [REDACTED].

(iii) VUK's ambition to improve its position [REDACTED] is [REDACTED].

(f) The PFs wrongly suggest that 3UK and VUK compete closely in the retail mobile services market and will continue to do so in the future. This finding is incorrect and not corroborated by the extensive body of evidence, including by all three sources of diversion ratios presented in PF Annex 1 and the CMA's own survey. In fact, in the event of a 10% price increase, only 14% of VUK's customers switching to a different provider would choose 3UK. Materially higher shares would divert to each of BTEE (28%), VMO2 (22%) and the MVNOs in aggregate (19%). If 3UK were to raise prices by 10%, only 19% of 3UK's lost customers would choose VUK. A higher share would divert to BTEE (26%), VMO2 (22%) or the MVNOs in aggregate (21%). MNP data and GfK survey evidence tell a similar story.

(g) What matters, however, is not a narrow focus on whether the Parties can be considered "close competitors", but rather whether the Transaction would be likely to result in customers in the retail mobile services market being worse off than in the counterfactual. The PFs fail to recognise that the relevant counterfactual is a future in which the widening gap in network performance increases further, weakening competition from the Parties. The comprehensive evidence submitted by the Parties, including the capacity- and quality-focused merger simulations, shows that, once all the key likely effects are accounted for, the Transaction will substantially increase consumer welfare. Competition will ensure that price-sensitive customers (including customers from low income groups) benefit from the Transaction, given that it will provide MergeCo (and VMO2 through Beacon 4.1) with the ability and incentive to offer bigger data bundles at all price points. The pro-competitive impact of the Transaction is discussed in greater detail in PF Annex 3, and the Parties respond to the PFs' criticisms of the quality- and capacity-focused merger simulation analyses in detail in PF Annex 4.

(h) The claim that BTEE and VMO2, the clear market leaders, are weak competitors is at odds with the fact that these MNOs generated 87% of annual positive mobile cashflows between 2020 and 2022 due to their large mobile customer bases. They also account for the highest share of diversion away from both VUK and 3UK. The PFs correctly identify that BTEE and VMO2 have a large presence in the supply of retail mobile services and strong brands, in particular BTEE, which has consistently had the highest network quality and

[8] Ofcom rural coverage data, January 2024.

corresponding reputation, as corroborated by third-party evidence.[9] BTEE and VMO2 (despite its apparent capacity constraints) provide a strong constraint on both 3UK and VUK across price and network quality and will continue to constrain MergeCo going forward – but they do not currently face a third challenger with the scale to invest in network performance and to drive competition in the retail mobile services market.

(i) The PFs' assertion that MVNOs pose only a limited constraint is contradictory to the consistent evidence provided in the Parties' submissions, the Parties' internal documents and in third-party evidence. MVNOs offer some of the cheapest tariffs across the market, including for unlimited tariffs and very large data allowances – both full and light MVNOs offer plans with unlimited data at lower prices than their host MNOs, pursue a range of strategies, compete in all subsegments, and as a result have a growing share of supply in the retail mobile market, increasing to [10-20]% of the overall retail services market and [20-30]% of the consumer segment as at December 2023. Even if Tesco Mobile were considered part of VMO2 rather than an independent MVNO (which the Parties do not believe is justified), MVNOs in aggregate have a larger combined share of supply of the overall retail market by subscribers ([10-20]%) than 3UK ([10-20]%), having grown from [REDACTED] subscribers in March 2016 to [REDACTED] subscribers as at December 2023. They are also the fastest-growing operators, having gained in aggregate over [REDACTED] subscribers in the consumer retail segment in the period 2020-2023. The PFs find that the constraint from MVNOs is limited but ignores that MVNOs in aggregate attract a significant and increasing share of leavers from the Parties (and considerably more than either of the Parties between themselves).[10] The PFs provide evidence of the strength of MVNOs' bargaining power, noting that many MVNOs receive parity of access to the same network capabilities as host MNOs' own customers.[11]

(j) The Transaction will be pro-competitive and MergeCo will continue to face strong competitive pressure from BTEE, VMO2 and the MVNOs:

(i) The PFs conclude that the Transaction is likely to lead to an increase in retail prices. This conclusion is based on flawed quantitative analyses. The PFs' quantitative assessment of merger effects disregards all of the REEs generated by the Transaction. Instead, the analysis in the PFs focuses only on the theoretical impact of the loss of rivalry between the Parties. As explained in further detail in **PF Annex 4**, an analysis that excludes all of the efficiencies cannot be justified given that it cannot accurately determine the overall competitive effect of the Transaction or the Parties' post-Transaction incentives to compete, particularly in circumstances where the PFs accept that a key part of the REEs are both timely and likely, in

[9] PFs, paragraph 8.241.

[10] PFs, paragraph 13.26 and Tables 8.27 and 8.29.

[11] PFs, paragraphs 9.187 and 9.192.

addition to being capable of benefiting customers. This cannot be a sound basis to conclude that there is an SLC on the balance of probabilities.

(ii) The Parties have provided substantial evidence which demonstrates the offsetting impact of REEs on any theoretical incentive for MergeCo to increase prices and (as noted above) address the CMA's reservations regarding their two merger simulation models in **PF Annex 4**.

(A) Once REEs are accounted for, the CMA's own analysis shows that no SLC will remain with the implementation of the JNP. Even if only the improvements of download speeds and coverage achieved on Day 1 are taken into account in the CMA's own merger simulation model, the SLC is fully eliminated and the Transaction is predicted to substantially increase consumer welfare (by over £500 million). Importantly, consumer welfare will also increase for consumers in all income groups, including those on the lowest incomes. As illustrated in **Figure 2.1** below, when the impact of MergeCo's higher capacity is also taken into account (in addition to the quality benefits above), consumer welfare increases by over £950 million.

(B) The PFs are incorrect to consider the CMA's modelling as the only source of quantitative evidence. Alongside the complete omission of REEs, the model is – by construction – unable to fully assess the benefits of the Transaction. There are significant limitations in the methodology set out in the PFs and it is therefore unsurprising that its analysis leads to numerous implausible results with respect to consumers' valuation of network quality, including that a significant proportion of customers have a negative willingness to pay for certain quality attributes, suggesting that they would rather pay more for less quality or a smaller data allowance. This is clearly incorrect. In addition, the CMA's modelling includes a coding error that must be corrected. As shown in **PF Annex 4**, once corrected, the adverse impact on consumer welfare provisionally identified in the PFs is significantly reduced and, once REEs are factored in, the net benefits to consumers increase to £1.2bn per year.

(C) The PFs are incorrect to give the Parties' merger simulation models no weight at all. The results from these models are robust to the key criticisms set out in the PFs and their conclusions are consistent with those from the CMA's own model when accounting for REEs, which demonstrate that the Transaction is strongly pro-competitive.

Figure 2.1: The impact of adding REEs to the CMA's economic modelling[12]

(iii) As set out in **PF Annex 3**, contrary to the PFs' allegations, the benefits of MergeCo's greater capacity and cost efficiencies can be expected to be passed through because MergeCo will increase its profits by doing so.

(iv) The Parties welcome the PFs' recognition of the JNP's potential to deliver quality improvements and greater capacity.[13] However, the JNP will deliver much more extensive quality and capacity improvements than recognised in the PFs, as well as cost efficiencies which will generate downward pricing pressure. The PFs' view that network capacity and costs have no impact on retail prices is untenable. In reality, UK consumers will benefit from the additional capacity that MergeCo (and VMO2 through Beacon 4.1) will bring to the market, because capacity investments and costs are the fundamental drivers of the huge reduction in the price per GB paid by retail consumers over time. The CMA's focus should be on the fundamental drivers of market prices (capacity and capacity costs).

(v) Further, as set out in section 3 below, the Transaction will *increase* competition in the wholesale market, creating a strong third wholesale competitor and enhancing VMO2's competitiveness via Beacon 4.1, providing greater choice for MVNOs and enabling MVNOs to become stronger competitors in the retail mobile services market. MergeCo's (and VMO2's) greater capacity will put downward pressure on wholesale prices.

2.3 For all of these reasons, contrary to the provisional conclusion in the PFs, there will be no substantial lessening of competition in the retail mobile services market. The

[12] The impact of adding in quality improvements and cost efficiencies separately does not sum to the impact of adding both effects together as these effects interact with one another when added to the modelling.

[13] See, for example, PFs, paragraph 78 and paragraphs 14.21-14.22, 14.69, 14,82, 14.190-14.194, 14.201, 14.216, 14.237 and 14.238.

Transaction will add significant new capacity to the market, with MergeCo having at least [REDACTED]% more capacity than VUK and 3UK combined as of 2029. This will give MergeCo a strong incentive to fill its capacity by competing to attract as many customers as possible, stimulating greater competition in the retail (and wholesale) mobile services market. MergeCo's vastly improved quality of service will benefit customers directly, and MergeCo's improved offering will force BTEE and VMO2 to compete harder. As noted above and described further in section 9 of PF Annex 1, the Transaction will create a high-investment equilibrium, stimulating a pro-competitive response from BTEE and VMO2. As recognised in the PFs, including by VMO2 and MVNOs, Beacon 4.1 will make VMO2 an even stronger rival, substantially increasing its network capacity. This will boost dynamic competition in the retail mobile services market to the benefit of consumers.

3. The Transaction is pro-competitive in the wholesale market and will result in three credible players competing aggressively for MVNO customers

3.1 The Transaction will be transformative and pro-competitive for the wholesale market. The PFs find that VMO2 is selective in participating in wholesale tenders, likely due to its lack of available network capacity – several MVNOs have expressed concerns to the CMA about VMO2's current network quality falling behind. In practice, [REDACTED] that they do not consider 3UK a credible network host, and therefore a credible competitor in the wholesale market (despite their self-interested submissions to the CMA).

3.2 By contrast, the Transaction will (i) create an MNO that is both able and incentivised to compete more aggressively in the wholesale market, and (ii) as acknowledged by the PFs in paragraph 9.268(g), enable VMO2 to become a stronger competitive constraint post-Transaction as a result of Beacon 4.1. The Transaction will substantially increase both MergeCo's and VMO2's network capacity so both operators will be incentivised to monetise their spare capacity by competing for more wholesale traffic. Additionally, MergeCo and VMO2 will improve their quality of service, which will benefit customers of MVNOs on their networks, significantly improve overall competition for MVNO business, and increase the competitive pressure on BTEE in the retail and wholesale markets. The PFs:

(a) recognise at paragraph 14.145 that evidence from internal documents supports the fact that incremental network costs are taken into account in wholesale pricing; and

(b) acknowledge at paragraphs 9.22 and 9.23 that network quality is a key factor for MVNOs. Five MVNOs out of thirteen told the CMA that network quality was the most important factor (over price, strategic fit and technical ability to service) compared with six out of thirteen citing price as the most important factor.

3.3 The characterisation of 3UK as playing an important role in the wholesale market cannot credibly be supported in light of the evidence before the CMA. The PFs have come to their conclusion because they mischaracterise [REDACTED] as "opportunities" – and therefore as "wins" – and by relying on self-interested comments from certain MVNOs which have an incentive to use the CMA process to advance their

commercial positions. The commercial reality is that 3UK is widely perceived by MVNOs not to be a realistic competitive threat in the wholesale market. 3UK has [REDACTED]. This fact speaks for itself. It is not credible for MVNOs to assert that 3UK is an essential player in the wholesale market when they are not prepared to be hosted on 3UK's network. As set out further in **PF Annex 2**, this characterisation is at odds with [REDACTED], and supported by comments made by third parties cited in the PFs that 3UK's network quality is poor.

3.4 The CMA should accord greater weight to the objective evidence of both who the MVNOs invite to tender for their business and, more importantly, with whom the MVNOs choose to contract. The objective evidence demonstrates clearly that MVNOs do not significantly value 3UK's participation in the wholesale market. However, the PFs are selective and inconsistent in their approach to interpreting and analysing MVNO "opportunities" data:

(a) The PFs place undue weight on the competitive experience of five large MVNOs – this is unjustified. These MVNOs are a disparate group of companies in terms of subscriber numbers, their target customers and buyer power. Further, by restricting their tender analysis to the five largest MVNO opportunities, the PFs:

(i) disregard that larger MVNOs have particularly significant bargaining power, are typically protected by long term contracts, use formal tender processes to play MNOs off against each other and will typically receive bids from all MNOs that they approach, which enables them to secure attractive terms;

(ii) do not acknowledge the impact of the wide range of MVNOs that have entered the retail market in the last ten years (a reflection of the fact that entry barriers for MVNOs are lower than ever); and

(iii) do not factor in the real growth and potential expansion of existing MVNOs. This approach excludes an analysis of which MNOs are winning emerging MVNOs and are, therefore, competing most aggressively.

(b) The PFs incorrectly suggest that 3UK created significant competitive tension across several opportunities. In doing so, the PFs mischaracterise various instances of recent contract renewals with VUK or 3UK (e.g. [REDACTED]) as "tenders" or "opportunities" for which the Parties both competed. For example, the PFs incorrectly consider that 3UK has won [REDACTED]% of all MVNO opportunities. In addition, the CMA has refused the Parties' request to provide access to the documents it expressly relies on in the PFs in reaching its provisional views in relation to 3UK's competitive position. The Parties have endeavoured to respond to the relevant arguments in the PFs based on the extracts provided in **PF Annex 2**, but it is not possible for their external advisers to comment meaningfully or make informed submissions on the information without accessing the full evidence relied upon in the PFs. This is especially the case given that many of the comments made appear to be

transparently self-interested and have not been subjected to rigorous testing by the CMA, unlike the evidence submitted by the Parties.

(c) The "opportunities" data shows that BTEE and VMO2 are active and successful competitors in the wholesale market. Notwithstanding the statement at paragraph 9.62(d)(ii) that VMO2 is more selective in the opportunities it participates in than the other MNOs (due to increasing capacity constraints), VMO2 continues to host the two largest MVNOs on its network, Sky Mobile and Tesco Mobile (serving 8.7 million subscribers).[14] The PFs acknowledge that "*BTEE is an active participant*" in the wholesale market and, "*has been successful in winning MVNO opportunities*",[15] which is consistent with the PFs' findings that BTEE has won the most recent opportunities of any MNO. MergeCo will continue to face strong competitive constraint from both BTEE and VMO2 post-Transaction.

(d) There has been no competitive interaction between the Parties in more than [REDACTED]% of the opportunities that have taken place over the last four years. This is irrefutable evidence that the Parties cannot credibly be described as close competitors, a finding that is further supported by the Parties' internal documents.

3.5 The Parties agree with the provisional conclusion that there is limited transparency in the wholesale market, which increases MNOs' incentives to submit competitive offers.[16] However, the PFs do not present any compelling evidence in support of their conclusions that MNOs' competitive incentives may be impacted by the size of their retail base, cannibalisation concerns, and relationships with existing customers. The suggestion that fewer references to [REDACTED] – references to [REDACTED] in internal documents cannot be meaningfully quantified and compared in this way.

(a) It is not correct that the Parties are incentivised to compete due to their smaller retail base and that larger MNOs compete less aggressively. When pricing deals for MVNOs, a key focus of MNOs is network economics. MNOs are highly incentivised to secure wholesale business which provides predictable revenues and cashflows as well as allowing the MNO to spread network costs across a wider subscriber base.

(b) The CMA does not produce compelling evidence to show that MNOs' incentives to compete for MVNOs can be affected by existing relationships with other MVNOs. It relies solely upon one example from [REDACTED] which is specific to the circumstances in question and not reflective of competitive incentives beyond this one example.

(c) Despite the Parties' numerous submissions that the cannibalisation concern amounts to a prediction that MergeCo will engage in input foreclosure, the PFs continue not to engage with this submission other than to express

[14] Phase 2 Initial Submission, paragraph 4.12.

[15] PFs, paragraph 9.57(e).

[16] PFs, paragraph 9.21.

disagreement.[17] The PFs do not present any economic analysis that would be required to substantiate a concern on this basis. To the contrary, the Transaction will substantially increase both MergeCo and (through the Beacon 4.1 arrangements) VMO2's network capacity and quality, leading to more and better choice for MVNOs and therefore the prospect of improved access terms and more competitive pricing for MVNOs.

3.6 The PFs continue to place insufficient weight on MVNOs' strong and increasing buyer power which will continue post-Transaction due to their growing scale and technology advancements. The bargaining power of MVNOs, corroborated by third-party evidence in the PFs, has increased significantly over the years as they rapidly increase their customer bases. The fact that MVNOs are the cheapest and fastest growing operators is indicative of the commercially advantageous terms secured at the wholesale level; both larger and smaller MVNOs can secure favourable wholesale access agreements including parity of access terms and pricing, allowing MVNOs to compete aggressively and undercut MNOs on price in the retail market. The CMA's investigation confirms that any barriers to switching are not significant nor are they often a determinative factor for MVNOs when selecting an MNO host. Technological advancements will continue to increase the ease with which MVNOs are able to switch MNO host. The threat of switching is therefore a clear incentive for aggressive wholesale competition.

4. Rivalry Enhancing Efficiencies delivered by the Transaction will more than offset any anti-competitive effect

4.1 REEs are at the heart of the Transaction because investment in network performance is the bedrock of retail and wholesale competition. The Transaction creates a third MNO with the scale and ability to compete sustainably and deliver a best-in-class network, which will deliver a step change in network performance and rivalry. This is the only route to achieving a long-term sustainable future for both of the Parties and would simply be impossible on a standalone basis.

4.2 The PFs acknowledge that investment in mobile networks requires a long-term perspective and that, in principle, there are underlying economic reasons why a merger of MNO networks may lead to REEs.[18] Importantly, the PFs recognise that the JBP is a credible integration plan and that a significant part of the REEs – namely greater coverage and capacity through MOCN and 1800 MHz spectrum sharing from Day 1, greater reliability from site densification in the early years and the quality increases in VMO2's network as a result of Beacon 4.1 – are likely and timely.

4.3 However, the PFs raise two main areas of challenge in relation to: (i) the Parties' incentives to deliver the full JBP / JNP; and (ii) the sufficiency of the claimed REEs, in particular around the capacity benefits, indoor coverage and certain quality improvements such as higher speeds and latency, as well as the extent to which consumers (including those on lower incomes) value better quality.

[17] PFs, paragraph 9.209.

[18] PFs, paragraphs 14.19 and 14.20.

4.4 The PFs' doubts are misplaced: the Parties are fully incentivised to deliver the JBP and the analysis in the PFs fails to demonstrate otherwise. This has been demonstrated by the Parties' willingness to commit to its full delivery. Once REEs are properly taken into account, all quantitative analyses produced by the CMA and the Parties show that the Transaction is pro-competitive and will increase consumer welfare.

4.5 For completeness, below and in more detail in **PF Annex 3**, we set out how the significant REEs generated by the Transaction meet each of the six cumulative criteria for the CMA's assessment of whether the REEs prevent SLCs in the relevant markets.

4.6 Criteria 1: Rivalry enhancing in the relevant markets – The Parties welcome the PFs' finding at paragraphs 14.173 to 14.176 that the efficiencies generated by delivery of the JBP and JNP are, in principle, rivalry enhancing in the relevant Markets. As noted below with respect to sufficiency, the PFs err in dismissing the REEs arising from lower incremental costs and certain key quality improvements of the Transaction.

4.7 Criteria 2: Likelihood – the REEs are highly likely to eventuate. The Parties will deliver the full JBP / JNP as they are both able (as recognised by the PFs at paragraphs 14.179 to 14.182) and highly incentivised to do so, contrary to the findings in the PFs, because:

(a) The PFs miss the fundamental driver behind the JBP, which is the opportunity enabled by combining the Parties' network and spectrum assets to create the UK's best network and the large commercial benefits associated with that best network position.

(b) In developing the JBP, the Parties have determined that the [REDACTED]. The experience of BTEE, which has held the "best network" title in the UK for years, demonstrates that there is a clear economic benefit to network quality leadership. The PFs do not engage with the more relevant evidence from the Parties' commercial decisions as well as previous examples of consolidation that indicate that in the long-term, returns to investment in network quality exceed savings from scaling back the JBP.

(i) The JBP has an inherent logic to it as the commercially rational (and self-funded) plan to create a best-in-class network which cannot be matched by competitors. This requires network leadership across quality parameters and geographies. Particular quality aspects, such as coverage in mid and low areas, are valuable not only for their direct benefits but in achieving the best-in-class network, i.e. its benefits are greater than the sum of its parts. Further, the JBP benefits have been estimated on a conservative basis including with respect to key likely benefits such as [REDACTED].

(ii) The evaluation of MergeCo's strategic network options was [REDACTED]. The scaled-back scenario ("**SBS**") modelling was developed to assist the CMA's merger inquiry but its purpose was to produce quantitative evidence to illustrate the commercial logic underpinning the delivery of the full JBP / JNP as MergeCo's optimal network strategy.

(iii) The PFs challenge certain assumptions behind the specification of the SBS, including by carrying out a sensitivity analysis on the incentive modelling. The CMA's sensitivity analysis is not appropriate for assessing the Parties' incentives. The CMA has taken an already conservative plan and applied a series of downward adjustments to the expected increase in profits from delivering the JBP compared to a scaled back scenario. Such an asymmetric approach, which considers downside risks to the benefits but does not take into account potential upsides, provides no information on the Parties' expectations of their profits from delivering the JNP, and hence the incentive to deliver the JNP. Similarly, the PFs do not engage with the fact that, during the design of the JBP, [REDACTED] rejected that option on the grounds that it would not achieve 'best network' nationwide.

(c) As acknowledged by the PFs at paragraphs 14.190 to 14.194, MOCN and spectrum sharing from Day 1 are likely to deliver benefits, and site densification due to the initial network integration is also likely. These Day 1 benefits will over time be replaced and improved by full network integration, which must occur to realise deal synergies. The PFs note that "*some degree of site densification relative to either Party's standalone networks is likely, particularly given the inevitability of network integration*".[19] The integration imperative means that the Parties are therefore incentivised to continue to implement the JNP.

4.8 Criteria 3: Timeliness – The Parties welcome the statements at paragraphs 14.195 to 14.199 of the PFs that the REEs the CMA consider likely to be realised would be sufficiently timely. In particular, (a) Day 1 benefits are likely to occur shortly after closing, and are relatively easy to implement; (b) some degree of network integration will be timely; and (c) the rivalry-enhancing network performance improvements of the spectrum transfer to VMO2 (pursuant to Beacon 4.1) are likely to occur within the short-to-medium term. These benefits will continue to accrue as the JNP is delivered.

4.9 Criteria 4: Sufficiency – the Transaction gives rise to substantial REEs which are sufficient to offset any SLCs:

(a) **The standalone networks in the counterfactual would not be able to manage increasing congestion cost-effectively**, contrary to the claim in the PFs. The PFs err in finding that the Parties' approach to measuring and reporting congestion overstate the true extent of congestion on the standalone networks, and that the Parties are incentivised to continue to manage congestion at least as effectively as they do today. In reality, relative to MergeCo and competing MNOs, the standalone networks will face [REDACTED] in managing congestion and capacity constraints in the context of rapid traffic growth and in maintaining their network performance. The Parties need to try and stay ahead of the curve and increase capacity to onboard new customers while data demand keeps growing.

[19] PFs, paragraphs 55, 14.192 and 14.197.

(b) **Cost efficiencies**: **The Transaction will result in substantial capacity benefits**, leading to a lower incremental cost of serving additional subscribers and creating an incentive for MergeCo to monetise its capacity and placing downward pressure on pricing, for both MergeCo and VMO2 (as a result of Beacon 4.1). By comparison, in the counterfactual, as capacity constrained MNOs, the Parties will have less incentive to price aggressively.[20] The PFs err in doubting the impact of incremental cost of capacity on prices.

(i) There is a wealth of commercial and economic evidence showing that large gains in capacity will lead to customers across the market benefiting from getting more data for less. Basic economic theory shows that profit-maximisation will drive firms to pass on incremental cost reductions where they can attract customers and obtain additional revenues which exceed the cost of supplying those customers. The history of mobile pricing in the UK and elsewhere shows that investments in expanding capacity and the deployment of new, more efficient technology have driven substantial price reductions over time, particularly in the price per gigabyte. As explained above, the CMA's focus should be on the fundamental drivers of mobile market outcomes. The CMA's own quantitative analyses (GUPPI and merger simulation) rely on an economic model in which marginal costs (including the opportunity costs of serving additional customers, as the PFs explicitly recognise) drive price setting. It is not tenable for the CMA to insist, against basic economic principles and all the evidence provided, that MNOs disregard the costs of adding capacity when determining the prices of their tariffs.

(ii) Both merger simulations submitted by the Parties as well as the CMA's own merger simulation show that when the cost efficiencies are taken into account, the Transaction does not lead to any significant price increases.

(c) **Quality efficiencies**: MergeCo will deliver extensive quality improvements compared to the standalone Parties in the counterfactual:

(i) Network quality is a key parameter of competition, as acknowledged by the PFs.[21] As the Parties have consistently demonstrated, including in **PF Annex 1** and **PF Annex 3**, the weight of evidence shows that network quality is a critical driver of customer choice. In addition to Compass Lexecon's demand estimation based on a discrete choice consumer survey and evidence from the Parties' leaver surveys, this includes the CMA's own surveys, which find that 57%-60% of the Parties' customers would have chosen a different provider if the

[20] See Case M8792. T-Mobile/ Tele2 in which the EC concluded at paragraph 524: "*Generally, however, if Tele2 NL were to become capacity constrained, it is likely that this will also have an effect on Tele2 NL's pricing strategy. […] Therefore, the competitive situation of Tele2 NL is likely to be further aggravated by such [network] costs which will give rise to incentives to price less aggressively*".

[21] PFs, paragraph 8.136.

network was a bit less reliable. However, the PFs instead place weight on the responses of two ambiguously worded survey questions and the CMA's own demand estimation, which is by construction incapable of adequately capturing consumers' willingness to pay for network quality, is subject to a number of further methodological flaws, and hence yields highly implausible results (e.g. that better 5G coverage and speeds make customers worse off, or that most customers do not derive any value from larger data packages).

(ii) The PFs are incorrect to suggest that low-income customers do not value quality. On the contrary, coverage and service reliability is particularly important to underprivileged and marginalised communities as the costs of being digitally excluded are considerable – as explained in further detail in PF Annex 1, those who are the least digitally capable save five times less money than those online and are 14 times more likely to struggle after a financial shock.[22] Improving mobile connectivity for these customers will yield substantial economic and social benefits.

(iii) As the CMA recognises in the PFs, the Transaction will deliver an improvement in network performance. Customers will receive substantial benefits from the quality improvements that the Transaction will deliver, including better outdoor and indoor 4G and 5G coverage, improved speeds even in locations and at busier times when the standalone networks would deliver inadequate speeds for common use cases and better latency benefiting the large share of the population engaged in mobile gaming as well as business-critical applications.

(d) Once REEs are properly taken into account, all quantitative analyses produced by the CMA and the Parties show that the Transaction is pro-competitive and will increase consumer welfare. The CMA's GUPPI and merger simulation analyses do not attempt to take account of any efficiencies, even those recognised in the PFs as both likely and timely.[23] Such a key methodological omission is incompatible with the CMA's own provisional findings on the impact of REEs and cannot be accepted as a basis on which, on the balance of probabilities, an SLC is found. The PFs cannot justifiably claim these price increases without taking steps to incorporate the efficiencies in its GUPPI and merger simulation analyses. In fact, once REEs are properly accounted for, all quantitative analyses produced by the CMA and the Parties show that the Transaction is pro-competitive and will increase consumer welfare:

(i) Once the GUPPI analysis is adjusted for REEs, the GUPPI estimates are negative or close to zero.

[22] See Lloyds Bank, 2023 Consumer Digital Index, page 5.

[23] See, for example, PFs, paragraphs 50, 14.69, 14.81, 14.82, 14.153 and 14.181.

(ii) The CMA's demand estimation suffers from serious methodological flaws that imply that it will, by design, underestimate the importance of network quality to consumers. Nevertheless, as already explained at paragraph 2.2(j) above, even the CMA's own merger simulation predicts that, once REEs are factored in, the merger is welfare-increasing and the efficiencies more than offset any anti-competitive effects. In particular, even if only the improvements in download speeds and coverage achieved from Day 1 are accounted for in the CMA's own merger simulation model, this leads to a prediction that such efficiencies will outweigh any SLC and the Transaction will substantially increase consumer welfare (by over £500 million). Importantly, this prediction holds for all customers, including those on very low incomes. As explained above, and in further detail in **PF Annex 4**, once the full REEs are factored in, consumer welfare is much higher as a result of the Transaction.

(iii) The Parties' merger simulation models show that the REEs are more than sufficient to offset any upwards pricing pressure from the GUPPI effect. These models demonstrate that, once the REEs are properly accounted for, the Transaction is pro-competitive and will substantially increase consumer welfare. As shown in **PF Annex 4**, the PFs' criticisms of these analyses are not justified and the results from these models are robust to these criticisms.

4.10 Criteria 5: Merger-specificity – the Parties welcome the PFs' conclusion at paragraph 14.245 that the efficiencies in the JBP are not likely to be brought about by other means.

4.11 Criteria 6: Benefits to UK customers – the Parties welcome the PFs' conclusion at paragraph 14.246 that the REEs which would be likely to be delivered would directly benefit customers in the UK. The Transaction will materially improve everyday mobile experience for millions of customers as a result of the step-change in network performance, including increased high-quality coverage, reliability and high speeds nationally.

4.12 Beyond its pro-competitive effect in the retail and wholesale mobile services markets, the Transaction's transformational impact on network performance in the UK will benefit the economy at large. The Parties have provided detailed analysis and quantification of material relevant customer benefits ("**RCBs**") that will improve in real terms everyday user experience and enable new industry applications and enhance productivity across healthcare, public sector, broadcasting, automotive, energy, transport, etc.[24]

5. The Transaction will not result in an SLC relating to the MBNL or Beacon network sharing arrangements

MBNL – impact on constraint from BTEE

[24] [REDACTED].

5.1 The Parties' welcome the PFs' conclusion that MergeCo's involvement in MBNL would not harm BTEE's ability to exert a competitive constraint in the retail and wholesale markets, and in particular agree with the PFs' findings that MergeCo would not have the ability to block and/or delay BTEE's upgrades, or reduce the extent of site sharing post-2031.[25] As acknowledged by the PFs, the [REDACTED].

5.2 However, the Parties do not agree with the PFs' erroneous suggestion that MergeCo would have some ability to limit the constraint by BTEE in the period before 2031, by increasing BTEE's costs (by blocking or reducing funding, or by overloading MBNL sites). The PFs do not properly take into account the clear evidence in relation to MergeCo's ability to:

(a) **Block or reduce funding**: As acknowledged by the PFs, there is an [REDACTED].[26] [REDACTED].[27] At paragraphs 11.44 and 11.45, the PFs correctly conclude that certain avenues through which BTEE has submitted that MergeCo could block and/or limit funding are highly unlikely or not possible. However, at paragraph 11.43, the PFs incorrectly suggest that MergeCo may have "some ability" to limit and/or block the funding of MBNL:

(i) Both shareholders have approved a business plan [REDACTED]. It is highly unlikely that changes will be needed to the business plan, and in the event that any changes are required, they are likely to be minor, given MBNL's scope. This means that there is no realistic ability for MergeCo to harm BTEE by blocking or limiting the funding of MBNL.

(ii) The PFs state that some types of funding are not covered by the business plan but do not present any evidence of the types of funding that are not covered by the business plan process, or any other evidence to support how BTEE could be harmed as a result.

(b) **Overload MBNL sites**: The PFs correctly conclude at paragraph 11.106 that BTEE's analysis of its costs as a result of MergeCo blocking or overloading MBNL sites appears to have been overestimated. However, the PFs disregard or do not fully engage with the Parties' submissions at paragraph 11.103 that [REDACTED]. For these reasons, MergeCo would not have any realistic ability to overload MBNL sites.

5.3 The evidence demonstrates, and the CMA must accordingly conclude, that MergeCo has no ability to harm BTEE by frustrating the functioning of MBNL in the period before or after 2031.

Beacon – impact on constraint from VMO2

[25] PFs, paragraph 11.150.

[26] [REDACTED].

[27] [REDACTED] and Parties' Initial Phase 2 Submission, paragraph 5.12. [REDACTED].

5.4 The Parties' welcome the PFs' conclusion that MergeCo's involvement in Beacon would not harm VMO2's ability to exert a competitive constraint in the retail and wholesale markets.[28]

5.5 However, the Parties do not agree with the PFs' erroneous finding that MergeCo has the ability to use its participation in Beacon to disrupt the effective functioning of the Beacon network sharing arrangement. The PFs cite three potential mechanisms for harm,[29] however the PFs fail to adduce any evidence as to the likelihood of these circumstances arising, and do not address previous submissions by the Parties as to why these do not reflect the reality in which the Beacon arrangements exist.[30]

5.6 The PFs then detail the ability of the contractual protections contained in Beacon 4.1 to mitigate against these mechanisms for harm:

(a) *duration of the Beacon contracts*: The PFs note that Beacon 4.1 extended the term of Beacon to [REDACTED]. The PFs also correctly consider that therefore "*VMO2 may have sufficient notice to protect its commercial position*".[31]

(b) *clarity of the contractual protections*: The PFs note that the Beacon 4.1 Agreements set out precise obligations, mechanisms and timelines for both parties, particularly in relation to the integration of MergeCo's network into Beacon and VMO2's access to 3UK sites. [32]

5.7 Despite this, the PFs go on to conclude (without evidence or detailed reasoning) that the CMA places limited weight on these contractual protections given they might not protect all ways in which Beacon 4.1 could be disrupted, and they could be renegotiated or breached.

5.8 The evidence therefore demonstrates, and the CMA must accordingly conclude, that MergeCo has no ability to harm VMO2 by frustrating the functioning of Beacon. The PFs' alleged mechanisms for harm do not reflect the reality in which the Beacon arrangements exist and any residual risk is mitigated by the contractual safeguards.

Information sharing

5.9 The Parties also welcome, and agree with, the PFs' finding that the Transaction does not give rise to an SLC resulting from the sharing of commercially sensitive information via MergeCo's participation in both network sharing arrangements. This conclusion is undeniably correct and the only possible conclusion open to the CMA on the evidence before it.

[28] PFs, paragraph 10.106.

[29] PFs, paragraph 10.34.

[30] See, for example, [REDACTED].

[31] PFs, paragraph 10.37.

[32] PFs, paragraph 10.39.

6. Conclusion

6.1 The PFs continue to mischaracterise the available evidence, basing their findings on a failure to understand of the Parties' positions and the competitive dynamics in the retail and wholesale mobile services markets that is not supported by the evidence base, unbalanced and divorced from the reality of the current and future needs of customers and the UK economy.

6.2 The PFs proceed on the incorrect basis that the standalone networks will deliver higher network performance than the reality, and overestimate the importance of the Parties in both the retail and wholesale mobile services markets, whilst severely underestimating the competitive constraints exerted by other competitors. In light of the extensive evidence provided, the CMA should conclude that the gap in network performance capabilities between the Parties and BTEE will further increase in the coming years, therefore casting doubts on the Parties' ability to sustain sufficient competitive pressure – in particular because capacity constrained MNOs have less incentive to price aggressively. VMO2 is also capacity constrained (for different reasons), but this will be resolved by Beacon 4.1 (including the spectrum transfer), which will only occur if the Transaction proceeds.

6.3 The Transaction presents a once in a generation opportunity to bring about a transformation in the quality of the UK's mobile network infrastructure. UK consumers and businesses are disadvantaged by poor mobile network quality and slow 5G rollout, especially outside of urban areas. In light of the previous and current Government's infrastructure and growth ambitions for the UK, it is clear that this counterfactual of lower investment in network performance – the bedrock of retail and wholesale competition – poorer mobile quality and higher prices is not good enough. By contrast, the Transaction, supported by the positive impact of Beacon 4.1 on VMO2's network quality and capacity, will transform this lacklustre dynamic into a high investment, high competition equilibrium, which will benefit all customers at both retail and wholesale levels.

6.4 The Parties urge the CMA to recognise fully the risks of preserving the current dysfunctional market structure and poor network performance across most of the market, afford due weight to the substantial rivalry-enhancing efficiencies and customer benefits that the Transaction will deliver and approve the Transaction.

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ME/7064/23 – Vodafone UK / Three UK

Provisional Findings: Parties' response to Chapter 8 on TOH1 (PF Annex 1)

1. The PFs mischaracterise competition in the retail mobile services market

1.1 The PFs continue to describe a retail market dominated by MNOs, one in which the market leaders, BTEE and VMO2, compete less aggressively than the Parties and the fastest growing operators (the MVNOs) pose only a limited constraint. As the Parties explained in [REDACTED], this view of the retail mobile services market is not supported by the evidence and does not objectively describe the real dynamics of competition in the retail market and the competitive position of the Parties on the basis of the evidence available to the CMA.

1.2 Contrary to the view expressed in the PFs, that the Parties would have strong growth prospects absent the Transaction, the reality is that both 3UK and VUK are clearly constrained in their incentive and ability to compete sustainably due to lack of scale and [REDACTED], which is increasingly weakening their effectiveness as competitors in the retail market. By contrast, BTEE and VMO2 are the market leaders, generating the lion's share of the cashflows in the industry and with BTEE leading network quality competition. MVNOs are the fastest growing operators in the retail market, acting as strong and growing competitive forces, responsible for nearly all growth in the market in recent years, and leading competition on price. The PFs again overlook this fundamental feature of the retail mobile services market.

1.3 The PFs suggest that prices could rise after the Transaction because (i) the merger will result in a larger operator, which in the CMA's view will have weaker incentives to compete aggressively than the Parties do now; and (ii) removing the competitive constraint that the Parties exert on each other may increase MergeCo's incentive to raise prices. This conclusion relies on flawed empirical analyses which do not account for the efficiencies that the Transaction will deliver. As explained in further detail in **PF Annex 4**, an analysis that does not factor in the merger-specific efficiencies is unable to provide an accurate assessment of the Parties' post-Transaction incentives to compete and to determine the overall competitive effect of the Transaction, which has rivalry-enhancing efficiencies at its very core.

1.4 This response addresses a wide range of key points, broadly in the order raised by the PFs, to demonstrate the clear mismatch between the conditions of competition described in the PFs and the realities of the retail mobile services market – in particular, how the market can be expected to operate going forward absent the Transaction:

(a) parameters of competition in the retail mobile services market (Section 2):

(i) the importance of network quality as a driver of competition in the retail mobile services market, alongside price;

(ii) third-party evidence supporting the importance of network quality;

(iii) the growing demand for data that is expected to further increase the importance of network quality for consumers;

(iv) the importance of network quality in underprivileged and marginalised communities.

(b) the Parties' customer bases (Section 3):

(i) the PFs shares of supply analysis overstates the Parties' competitive position;

(ii) the PFs dismiss the extent of the [REDACTED], which is [REDACTED];

(iii) the PFs ignore VUK's [REDACTED] competitive position; and

(iv) the PFs mischaracterise the competitive position of the Parties' competitors;

(c) the mischaracterisation of the Parties' future prospects and factors impacting competitive influence (Section 4):

(i) smaller MNOs do not have a stronger ability or incentive to compete aggressively;

(ii) scale is critical in UK mobile telecommunications;

(iii) 3UK does not have the ability or incentive to compete aggressively and sustainably;

(iv) VUK does not have the ability or incentive to compete aggressively;

(d) the Parties' current competitive positioning (Section 5):

(i) pricing;

(ii) network quality;

(iii) brand and customer satisfaction

(iv) the Parties' weak competitive position will worsen in the counterfactual;

(e) the Parties are not close competitors (Section 6):

(i) data from the CMA's survey of the Parties' customers supports the conclusion that they are not close competitors;

(ii) switching ratios confirm that the Parties are not close competitors;

(iii) diversion ratios from the Parties' and CMA econometric analysis show that the Parties are not close competitors;

(iv) third-party evidence demonstrates that the Parties are not close competitors.

(v) internal documents similarly show that 3UK and VUK do not compete closely;

(vi) the Parties are not close competitors in the business segment, operating in entirely different sub-segments;

(vii) the PFs' closeness analysis should be considered in the context of the pro-competitive impact of the Transaction;

(f) the strength of BTEE and VMO2 (Section 7):

(i) the PFs understate the leading MNOs' market positions;

(ii) BTEE and VMO2 are strong competitors;

(iii) BTEE and VMO2 do not face a challenger with sufficient scale;

(g) the importance of MVNOs (Section 8):

(i) MVNOs compete aggressively and differentiate on price;

(ii) MVNOs can, and do, compete on network quality

(iii) access to the MergeCo network will make MVNOs more competitive;

(iv) MVNOs compete strongly across the entirety of the retail mobile services market; and

(v) the Parties' internal documents demonstrate that they consider MVNOs – including smaller MVNOs – to be strong and important competitors;

(h) post-merger constraints (Section 9):

(i) MergeCo's incentives with respect to pricing;

(ii) the expected competitive reaction of BTEE and VMO2;

(iii) Competition will ensure that price-sensitive customers benefit from the Transaction;

(iv) MNOs' independent decisions to increase prices in recent years; and

(v) the impact of the Transaction on wholesale competition.

2. Parameters of competition

2.1 This section addresses the most important parameters of competition in the retail mobile services market. In particular, it discusses:

(a) the importance of network quality as a driver of competition in the retail mobile services market, alongside price;

(b) third-party evidence supporting the importance of network quality;

(c) the growing demand for data that is expected to further increase the importance of network quality for consumers;

(d) the importance of network quality in underprivileged and marginalised communities.

The importance of network quality as a driver of competition in the retail mobile services market, alongside price

2.2 The Parties have provided a significant body of evidence[1] throughout the investigation which shows that network quality is an important competitive parameter in the retail mobile services market and a critical driver of customer choice – customers value more than just a bare "*minimum level of quality*".[2] The PFs draw incorrect conclusions and understate the value of network quality by relying heavily on a narrow subset of the overall body of evidence which is open to different interpretations. In particular, the PFs largely rely on the following evidence:

(a) 76% of respondents to the CMA's survey of the UK population indicated they were unwilling to pay more for a faster network, and 59% of respondents stated that they were unwilling to pay more for a more reliable network.[3] However, as pointed out in [REDACTED],[4] no weight should be given to this evidence. The questions posed to the survey participants are too indeterminate to elicit meaningful responses – in particular, the size of the quality improvement for which they are expected to pay more was not explained to participants, nor were they told how much more they would have to pay for improvements. In these circumstances, and given that customers are already paying for tariffs that they consider should provide good network quality, the answers to these questions cannot reliably be interpreted as zero willingness to pay and may simply reflect customers' reluctance to state that they would pay for something when neither the amount they would have to pay nor the quality improvement they would receive is specified. This was a clear error in the survey questions.

(b) Based on the CMA's demand estimation, the PFs conclude that the analysis conducted shows "*some*" willingness-to-pay for "*certain*" network quality parameters.[5] However, as explained in further detail in **PF Annex 4**, the CMA's chosen approach to modelling is by construction unable to render reliable estimates of consumer quality valuation and subject to several significant methodological flaws. It is therefore unsurprising that it yields a number of implausible results – for example, it finds that consumers of all ages value 5G speeds negatively, and the median consumer does not attach any value to a larger data allowance.

(c) Ofcom considers that there is currently limited evidence of customer willingness to pay a premium for services that rely on 5G SA capabilities. However, 5G SA applications are still in their infancy; as the PFs themselves note, consumer attitudes may evolve as the mobile industry develops.[6] For example, a 2014 study for the UK Government found that 4G services at the

[1] See [REDACTED]; Initial Phase 2 Submission, paragraph 3.31; [REDACTED].

[2] PFs, paragraph 33.

[3] PFs, paragraphs 33-34.

[4] [REDACTED].

[5] PFs, paragraph 14.235.

[6] PFs, paragraph 34.

time were not valued more highly than 3G services, except by a subgroup of respondents.[7] However, 4G services are key for mobile broadband use, and Ofcom found that, by 2018, the majority of time spent on the internet was on mobile devices, with 78% of UK adults owning a smartphone.[8] The Parties reiterate their previous submissions to the CMA on the range of studies anticipating substantial economic benefits from Advanced 5G use cases in a range of sectors, including healthcare, smart grids, rail and road travel, agriculture, tourism, and energy.[9]

2.3 The characterisation of network quality as a secondary parameter of competition is at odds with the reality of the retail mobile services market. As the PFs recognise, 3UK is both the lowest priced of the four MNOs and the one with the smallest subscriber base.[10] At the same time, BTEE has the UK's best network and, given the lack of a challenger to its network quality, charges a price premium. The PFs' conclusion that most customers care about price and do not value quality above a basic minimum is therefore inconsistent with the market evidence put forward in the PFs.

2.4 Contrary to what has been argued in the PFs, all the evidence indicates that network quality is important to customers and is a key parameter of mobile competition.

2.5 As the Parties explained in [REDACTED],[11] quality is found to be important in the CMA's surveys of (i) the UK population and (ii) the Parties' customers (jointly, the "**CMA surveys**"). The PFs do not adequately engage with the findings regarding the importance of network quality:

(a) Both CMA surveys confirm that network quality and price are the two most important factors taken into account by customers when choosing a provider.[12] 51% of the UK's general population surveyed named network quality as a reason for choosing their current provider (price was mentioned by 72%).[13] The results are similar for VUK and 3UK customers. Of the VUK customers surveyed, 63% named price and 59% named network quality as reasons for choosing VUK,[14] showing that price and network quality are valued roughly equally by VUK customers. As noted in the CMA's survey of the Parties' customers, "*Vodafone brand customers were more likely [than Three brand customers] to say they chose their provider due to network reliability*"[15] – this is to be expected given 3UK's poor network quality in many parts of the UK,

[7] Rand, "Estimating the value of mobile telephony in mobile network not-spots", page 48.

[8] Ofcom Communications Market 2018: Summary.

[9] [REDACTED].

[10] PFs, paragraphs 8.104 and 8.149(b).

[11] [REDACTED].

[12] See DJS presentation on the CMA's survey of the Parties' customers, slides 14 and 15; DJS presentation on the CMA's survey of the UK population, slide 19.

[13] DJS presentation on the CMA's survey of the UK population, slide 19.

[14] DJS presentation on the CMA's survey of the Parties' customers, slide 14.

[15] DJS presentation on the CMA's survey of the Parties' customers, slide 14.

but nevertheless 53% of 3UK's customers named network quality as a reason for choosing 3UK.[16]

(b) 60% of VUK customers (and 57% of 3UK customers) surveyed indicated that they would have chosen a different provider or purchased no tariff at all if the network had been a bit less reliable at the time of purchase.[17] The proportion of quality-marginal customers (i.e. customers who would switch if the network they were using was a bit less reliable) was significantly higher for both Parties than the proportion of price-marginal customers (i.e. customers who would switch if there was a 10% price increase in the tariffs they are currently purchasing).[18] These figures demonstrate that network quality is very important to the Parties' customers.

2.6 Compass Lexecon's demand estimation based on the Parties' discrete choice consumer survey, which the PFs incorrectly dismiss, as explained in **PF Annex 4**,[19] similarly confirms that customers attach substantial value to specific improvements in network quality.[20] The demand estimation shows that customers' tariff choices are impacted significantly by the KPI considered in the model and that, on average, customers would be willing to pay more for improvements in network quality. In particular, consumers would be willing to pay:

(a) £2.31 extra per month (approximately 17% of ARPU) for an additional 15pp of residential areas covered with high-speed 5G;

(b) £1.73 extra per month (13%) for 5Mbps of additional minimum speed below 10Mbps and £0.33 extra per month (2%) for 5Mbps of additional minimum speed above 10Mbps, such that a change for example from 5Mbps to 15Mbps of speed would be valued on average at £2.06 per month (15%);

(c) £1.51 extra per month (11%) to be able to play fast-paced games 90% of the time; and

(d) £0.35 extra per month (3%) for 1pp fewer places without minimum signal of 2 Mbps, such that for example 5pp fewer places without minimal signal quality would be valued on average at £1.75 per month (13%).

The quality efficiencies therefore benefit customers directly. The Compass Lexecon quality-focused merger simulation estimates that the quality improvements create a market-wide consumer welfare gain of £1.8 billion per year. The CMA's criticisms of that analysis are unjustified, as explained in further detail in **PF Annex 4**.

[16] DJS presentation on the CMA's survey of the Parties' customers, slide 14.

[17] DJS presentation on the CMA's survey of the Parties' customers, slide 20.

[18] DJS presentation on the CMA's survey of the Parties' customers, slides 18 and 20.

[19] PFs, paragraph 8.40.

[20] [REDACTED].

Third-party evidence supports the conclusion on the importance of network quality

2.7 The importance of network quality for consumers purchasing retail mobile services in the UK is further demonstrated by third-party evidence:

(a) Based on the responses to the CMA's competitor questionnaire, reliability of network is the second most important factor determining consumer choice of mobile services.[21] Nearly all of the Parties' competitors agreed that the reliability of a network is an even more important factor than the price of mobile services.[22]

(b) The results of the CMA's competitor questionnaire also confirm that the key reasons consumers switch providers of retail mobile services are broadly in line with the factors considered by them when making relevant purchases.[23] Nearly all respondents identified bad network quality as one of the key reasons behind consumers switching providers.[24]

(c) Further evidence from third parties indicates that network quality is one of the most important parameters of competition. For example, internal documents provided by BTEE emphasise the importance of network quality to customers, stating that "*customers are willing to pay more for the quality on BTEE's network*".[25] One third party noted that there is a "*balance between value for money and network reliability, where there is a minimum level of network quality a provider needs to meet in order to be credible to customers*".[26]

2.8 The importance of network quality is further demonstrated by evidence provided by MVNOs in respect of parameters of competition at the wholesale level. The CMA notes that five out of 13 MVNOs stated that network quality is the most important factor they consider, compared with six out of 13 citing price as the most important factor.[27] In particular, MVNOs confirmed to the CMA that network quality is important because it forms part of their retail customer proposition[28] and one large MVNO confirmed to the CMA that network quality can affect brand perceptions.[29]

[21] PFs, paragraph 8.54(a).

[22] PFs, paragraph 8.54(a).

[23] PFs, paragraph 8.55.

[24] PFs, paragraph 8.55.

[25] PFs Appendix C, paragraph C.27(e).

[26] PFs, paragraph 8.56.

[27] PFs, paragraph 9.22(b)

[28] PFs, paragraph 9.23.

[29] PFs, paragraph 9.23(a).

The importance of network quality will become even more prominent as demand for data continues to grow

2.9 As the Parties previously explained in [REDACTED],[30] the importance of network quality as a parameter of competition will only increase as demand for data continues to grow. The PFs do not engage with these submissions and incorrectly conclude that "*there is uncertainty about the future rate of growth of mobile data which itself reflects uncertainty over future applications and technological developments*".[31] However:

(a) Data demand has continued to grow strongly, at a rate of 24.1% between 2022 and 2023. This follows a consistent trend of high growth rates, with 28.8% between 2020 and 2021, 34.9% between 2019 and 2020, and 34.3% between 2018 and 2019.[32] Ofcom's "low" demand scenario, cited by the CMA at paragraph 5.11 of the PFs, implies a more than seven-fold increase in traffic within the next decade.[33]

(b) The data collected by Ofcom, notably on complaints in relation to poor connection quality and loss of service, clearly indicates that consumers attach significant value to network quality.[34] Ofcom recognises that although price continues to be a basis for competition, the importance of network quality is progressively increasing and expected to become a more important factor with customers' dependence on mobile services growing over time.[35] MNOs will therefore have to invest to increase capacity and provide the network quality needed to meet future customer needs.[36]

(c) Even if the rate of data demand growth has declined slightly in recent years,[37] it remains high and the third-party evidence cited by the CMA supports the Parties' position that data demand will continue to grow and MNOs will need to continue to invest to keep up with this demand.[38]

(d) In terms of actual data, VUK network traffic is [REDACTED]. [REDACTED].

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[30] [REDACTED].

[31] PFs, paragraph 8.61.

[32] Ofcom's Telecommunications Market Data Update Q4 2023, page 14, Table 2, and Telecommunications Market Data Update Q4 2022, page 14, Table 2; Telecommunications Market Data Update Q4 2021, page 14, Table 2; Telecommunications Market Data Update Q4 2020, page 14, Table 2; and, Telecommunications Market Data Update Q4 2019, page 14, Table 2.

[33] Ofcom's future approach to mobile markets and spectrum: Conclusions paper, paragraph 4.5. Under the low-growth scenario, traffic increases by 25% until 2030 and then by 20% between 2030 and 2035.

[34] PFs, paragraph 8.57.

[35] PFs, paragraph 8.57.

[36] Ofcom's future approach to mobile markets and spectrum Conclusions paper, 6 December 2022, paragraph 1.8.

[37] PFs, paragraph 5.11.

[38] PFs, paragraph 5.13.

The importance of network quality in underprivileged and marginalised communities

2.10 In the context of the PFs' claim that "*to obtain a 5Mbps increase in download speed on the network they currently use, a high income, middle aged subscriber might be willing to pay more per month than a low-income, young subscriber on the same network*",[39] the Parties submit that network quality is especially important in underprivileged and marginalised communities (particularly in rural communities where connectivity is worst), as the costs of being digitally excluded are considerable. A report to the CMA found that service reliability is particularly important for consumers with low incomes.[40] This is not surprising given that a significant proportion of rural households do not even have 4G coverage indoors and so have to rely on 3G (in the case of 3UK) or 2G (in the case of VUK) coverage.[41] Furthermore, VUK's research with Development Economics and YouGov in October 2022 found that the cost to working families of not being connected amounted to £286 per month.[42] Low-income families may find it easier and more efficient to rely on services provided online, such as applying for Universal Credit, where there are sanctions for missed appointments, registering as homeless or for free school meals. This becomes even more significant when considering that individuals who are the least digitally capable save five times less money than those online and are 14 times more likely to struggle after a financial shock.[43]

2.11 Improving network quality across the UK will also be important to bridge the digital urban-rural divide. Over half (46%) of the constituencies that are both rural and fall within the 40% most deprived areas in the country are classified as 5G total not-spots, compared to just 2.7% in predominantly urban constituencies with a similar degree of deprivation.[44] Consistent with this finding, the CMA's surveys find that respondents located in rural areas are most concerned with network quality across a range of questions.[45]

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[39] PFs, paragraph 8.43.

[40] "*In addition, consumers who have unreliable internet access or who are less confident online have emerged as groups who are likely to be excluded from the full benefit of the internet as a gateway product. This includes consumers on low incomes who rely on their available mobile data rather than paying for a separate broadband connection… While not being completely excluded, these consumers would struggle to use services such as price comparison websites as it would take them too long to complete forms*" (BritainThinks, "Getting a good deal on a low income", 2018, page 48).

[41] Since the shutdown of VUK's 3G network on 27 February 2024, a significant proportion of VUK's rural customers (and customers visiting rural areas) are only served by a 2G network (22.7% of rural households across the UK rising to 28.4% in Wales do not have indoor 4G coverage). See Connected Nations update: Spring 2024 - Ofcom (data as at January 2024).

[42] YouGov research and forecasts by Development Economics for Vodafone, Closing the digital divide: bridging the gap for a connected future, 6 October 2023.

[43] See Lloyds Bank, 2023 Consumer Digital Index, page 5.

[44] See WPI Economics, Connecting the Countryside, November 2023, page 3.

[45] PFs, paragraphs 8.31-8.33.

Given all of the evidence above, network quality is therefore a critical parameter of competition

2.12 It follows that the significant body of evidence provided by the Parties to the CMA to date, supported by third-party feedback, clearly demonstrates the importance of network quality to consumers. While there may be some fluctuation in the precise growth rate year-by-year, it is undeniable that data demand is growing significantly over time and will be of increasing importance to customers going forward. The fact is that capacity needs double every few years. Mobile networks need to anticipate and meet this demand, and the CMA should recognise the consequences of this increasing demand for data as part of its assessment of the Transaction. The PFs have not done so. The new UK Government has recognised that 5G has the potential to transform mobile connectivity by, amongst other things, tackling the challenges of surging data demand, and has recognised a commitment to national 5G coverage by 2030 in its manifesto. As explained in Section 4 below, the Parties do not have the scale to invest sufficiently to keep pace with the investment challenge of advancing technology and growing demand for data. By contrast, MergeCo will have the ability and incentive to roll out a best-in-class network capable of delivering on these objectives.

3. Customer bases

3.1 This section addresses the limitations of the PFs' analysis of the Parties' customer bases. In particular:

(a) its shares of supply analysis overstates the Parties' competitive position;

(b) it does not recognise the extent of the [REDACTED], which is [REDACTED];

(c) it ignores VUK's [REDACTED] competitive position; and

(d) it mischaracterises the competitive position of the Parties' competitors.

The PFs' assessment of shares of supply overstates the Parties' competitive position

3.2 The PFs' assessment of shares of supply consistently overstates the competitive position of the Parties while simultaneously downplaying the competitive significance of MVNOs – the fastest growing operators and the key drivers of price competition in the consumer segment of the mobile services market.

3.3 The PFs continue to present shares of supply at the *network* level, "*by allocating to each MNO their own revenue and subscribers as well as those of the MVNOs hosted on their respective networks*".[46] The PFs present shares at network level because, according to the PFs: (i) price and network quality are important parameters of competition and (ii) network quality is determined primarily by competition between the MNOs, while the ability of MVNOs to compete effectively on price depends on the wholesale terms granted by their hosted MNO.

3.4 However, as the Parties explained in [REDACTED], this approach to calculating the shares of supply is at odds with commercial reality.[47] MVNOs are entirely independent

[46] PFs, paragraph 8.67.

[47] [REDACTED].

competitors and are not controlled by their host MNOs: they determine their own competitive strategy, including branding, customer service and cross-selling strategies, and they set prices independently. In circumstances where MVNOs are the main drivers of competition on price, the assumption that they are controlled by their host MNOs is not supported by the evidence. Indeed, as the CMA's own pricing analysis shows,[48] MVNOs frequently undercut MNOs, including their host MNOs, on price. Therefore, shares of supply that group MVNOs with their host MNOs are uninformative of competitive conditions in the retail mobile services market. The PFs do not explain why they disregard the Parties' submissions on this point, simply concluding that presenting shares of supply at the network level "*is a useful indicator of the conditions of competition*".[49]

3.5 The conclusions drawn by the PFs from the analysis of share of supply data continue to overstate the Parties' competitive strength in the following respects:

(a) The PFs state that MergeCo would be the largest mobile operator in the overall retail mobile market and the second largest by subscribers. This fails to acknowledge the Parties' largely [REDACTED] shares of supply over recent years, and in particular VUK's [REDACTED], with its share of supply by revenue in the overall retail market [REDACTED] from [REDACTED]% in 2016 to [REDACTED]% in 2023.[50]

(b) The PFs assert that MergeCo would have a particularly strong position in certain subsegments, namely the PAYM SIMO, PAYM data-only and business retail subsegments. The strength of the Parties' position in these subsegments is overstated. In particular, the Parties' position in the PAYM data-only segment is in part attributable to 3UK's FWA offering which, as the Parties previously submitted, has a [REDACTED].[51] Further, to the extent that MergeCo may have a strong combined position in the business retail subsegment, this is driven for the most part by VUK's offering, with [REDACTED] increment of [REDACTED]% attributable to 3UK.

(c) The PFs present shares of supply by data allowance and note that the Parties have a material presence in the segment for tariffs with unlimited data allowances, with VUK in particular having a strong presence in categories of tariffs with large data allowances.[52] However, a segmentation of the market by data allowance is inappropriate and divorced from commercial reality: all operators can and do offer tariffs across a wide range of data allowances.. The PFs do not contain any arguments to justify this segmentation. While the PFs consider that competitive constraints may vary within certain subsegments, the

[48] Phase 1 Decision, Section 5.4.1.4.1.

[49] PFs, paragraph 8.67.

[50] [REDACTED].

[51] [REDACTED].

[52] PFs, paragraphs 8.104-8.105.

examples discussed in the PFs relate to type of customers or, to some degree, types of mobile service products (for example, pre-paid vs post-paid).[53]

(d) Further, the PFs' conclusion that the Parties "*compete particularly closely in the 500GB+ unlimited category*"[54] is inaccurate and backward-looking as it fails to account for the more recent developments in the SIMO market: for example, the PFs indicate that Sky Mobile is not present in the 500GB+ / unlimited category, but it has recently launched an unlimited data plan.[55] The Parties have analysed their MNP port-in data, as a proxy for gross adds, across various data allowance packages. This analysis shows that [REDACTED]. This [REDACTED] that contradicts the PFs' conclusion that the Parties compete "*particularly closely*" in the 500GB+ unlimited category. Specifically:

(i) As shown in **Figure 3.1** below, VUK has primarily acquired [REDACTED]. This result is [REDACTED] the CMA's conclusion that VUK has a strong presence in the unlimited data tariffs.[56]

Figure 3.1 – [REDACTED]

[REDACTED]

Source: [REDACTED]

(ii) In any event, it is excessive to consider unlimited data plans as those with 500GB+ data allowance only. Such categorisation is at odds with the current consumer reality: 100GB typically covers all standard mobile handset internet usage for most users.

(iii) As for 3UK, as shown in **Figure 3.2** below, it has historically [REDACTED]. While this segment has been [REDACTED] – with the [REDACTED] – it remains [REDACTED] of 3UK's new customer acquisitions.

Figure 3.2 – [REDACTED]

[REDACTED]

Source: [REDACTED]

(e) For VUK, [REDACTED].

3.6 Conversely, the PFs continue to *understate* the competitive position of MVNOs, qualifying their impressive growth by stating that "*even when combined, independent*

[53] PFs, paragraphs 6.10-6.14.

[54] PFs, paragraph 8.85.

[55] https://www.ispreview.co.uk/index.php/2024/07/sky-mobile-uk-launching-first-4g-and-5g-unlimited-data-plan.html (accessed: 29 September 2024).

[56] PFs, paragraph 8.105.

MVNOs still supply a small proportion of retail mobile subscribers".[57] As the Parties explained in [REDACTED],[58] this characterisation is factually incorrect, inconsistent with the PFs' view diminishing the importance of absolute market shares (rather than shares of gross and net adds) since they only capture an operator's competitive strength to a certain degree and at odds with competitive realities – the PFs do not address the Parties' previous submissions on this point.

3.7 Contrary to the view expressed at paragraph 8.107 of the PFs, MVNOs' combined share of subscribers should not be characterised as small, at [10-20]% of the overall retail services market and [20-30]% of the consumer segment. Even if Tesco Mobile is excluded (which the Parties do not believe is justified as it operates independently of VMO2), MVNOs in aggregate have a larger combined share of supply of the overall retail market by subscribers ([10-20]%) than 3UK ([10-20]%), having grown from [REDACTED] subscribers in March 2016 to [REDACTED] subscribers as at December 2023. Between 2021 and 2023, the share of supply by subscribers for MVNOs (excluding Tesco Mobile) grew by [0-5] pp, significantly faster than 3UK's [0-5] pp growth (as explained at paragraph 8.17 below) and faster than VUK's [REDACTED] shares.

3.8 The PFs claim that the three largest MVNOs by subscribers other than Tesco Mobile (Sky Mobile, Lebara and Lyca Mobile) do not operate in all consumer retail subsegments. This is inconsistent with the fact that MVNOs pose strong competitive constraints across *all* consumer retail subsegments, as explained in Section 8 below.

3.9 Further, the Parties continue to disagree with the PFs' provisional conclusion in relation to the competitive position of Tesco Mobile. The PFs note the Parties' previous submissions in [REDACTED], but continue to conclude that VMO2 and Tesco Mobile cannot be treated as fully independent competitors "*[c]onsistent with previous decisions and based on the evidence we have seen*", without explaining why they disregard the evidence submitted by the Parties:[59]

(a) Firstly, the Parties disagree with the PFs' characterisation that Tesco Mobile is not "independent" from VMO2. Tesco Mobile has a different management team, a strong and distinct brand, and a different and differentiated commercial, pricing and marketing strategy to VMO2. Tesco Mobile operates entirely separately from VMO2, with ring-fenced employees and no visibility over VMO2's mobile propositions. All of Tesco Mobile's channels, including retail, online and contact centre, are operated through Tesco – it is a Tesco-led business (as can be seen from the fact that Tesco Mobile is a core part of the Tesco Clubcard loyalty offering).[60] Tesco will require Tesco Mobile's prices to be set to maximise its competitiveness and profitability. Internal documents further demonstrate that the Parties consider [REDACTED].[61]

[57] PFs, paragraph 8.107.

[58] [REDACTED].

[59] PFs, paragraph 5.103.

[60] https://www.tescomobile.com/why-tesco-mobile/clubcard (accessed: 27 September 2024).

[61] [REDACTED].

(b) The PFs are internally inconsistent and contradictory in relation to the competitive position of Tesco Mobile. Elsewhere in the PFs, Tesco Mobile's shares of supply by data allowance are presented separately from VMO2's, and the PFs liken Tesco Mobile to independent MVNOs, noting that "*similarly to independent MVNOs, Tesco Mobile has a stronger presence in the smaller data categories*".[62]

(c) The PFs acknowledge that "*upon expiration of the JV, Tesco Mobile will be a contestable wholesale customer*".[63] As set out at paragraph 4.2 of **PF Annex 2**, Tesco Mobile *is* already a contestable MVNO and an independent competitor to VMO2.

(d) The PFs acknowledge that Tesco Mobile offers "*a wider tariff offering and position[s] [itself] to compete more against the MNO's main brands*".[64]

The PFs do not recognise the extent of the [REDACTED], which is [REDACTED]

3.10 The PFs' assessment continues to understate the [REDACTED] and does not recognise that [REDACTED] is the primary reason for it.

3.11 The PFs state that "*market shares by gross adds in the PAYM subsegment show 3UK appears to perform more strongly than its market shares by subscribers suggest*".[65] While this view relies upon shares of supply by gross adds, as the Parties explained in [REDACTED], net adds are more informative of competitive dynamics in the market today, as they show which operators are growing and which operators are not. The PFs, however, consider that "*gross adds, churn rates and net adds are all useful measures in understanding competitive dynamics*". While the Parties agree that gross adds "*indicate how effectively mobile operators compete for new or switching customers*", gross adds cannot be analysed in isolation.[66] As noted at paragraph 8.92(e) of the PFs, 3UK has the highest rates of churn of all MNOs. These high churn rates have offset 3UK's gross adds in the core business, resulting in stagnant shares of supply over time.

3.12 As explained in [REDACTED], 3UK's persistent high churn is likely related to customers' poor network experience.

(a) Customers' poor network experience is a key driver of churn. 3UK's internal analysis, [REDACTED]. **Figure 3.3** below presents the internal assessment of this analysis.

Figure 3.3: [REDACTED]

[REDACTED]

[62] PFs, paragraph 8.84(c)(iii).

[63] PFs, paragraph 9.36.

[64] PFs, paragraph 13.26.

[65] PFs, paragraph 8.104.

[66] PFs, paragraph 8.100.

Source: [REDACTED]

(b) [REDACTED].

Table 3.1: Postcode area level churn by ranking of number of network interactions, adjusted for size of customer base

Rank of postcode areas by number of network-related customer care interactions, adjusted for size of customer base	Number of network-related customer care interactions / Average customer base	Annualised Churn Rate %
Top 10	[REDACTED]	[REDACTED]
11 - 20	[REDACTED]	[REDACTED]
21 - 30	[REDACTED]	[REDACTED]
31 - 40	[REDACTED]	[REDACTED]
41 - 50	[REDACTED]	[REDACTED]
51+	[REDACTED]	[REDACTED]

Source: [REDACTED].
Note: [REDACTED].

(c) Improved network quality resulting from site upgrades is associated with lower customer churn. **[REDACTED]**.[67] **[REDACTED]**.

Figure 3.4: [REDACTED]

[REDACTED]

Source: [REDACTED]
Notes: [REDACTED]

3.13 The PFs note a number of reservations concerning these analyses. However, the PFs' criticism is unfounded for the following reasons:

(a) The PFs note that the analysis shows that [REDACTED] did not lead to the majority of customer churn. However, this is unsurprising: [REDACTED]. In any event, this does not affect the fact that there are [REDACTED].

(b) The PFs note that the analysis does not control for other factors that may affect the churn rates in a given area. However, this would only affect the results of the analysis if these other factors were systematically correlated with the [REDACTED]. The PFs present no evidence that there are any factors of this kind, and there is no reason to believe that any such factors exist.

(c) **Figure 3.4** above shows the rate of churn in areas [REDACTED]. The PFs note that this analysis does not control for other factors that may affect the churn rates in a given area. Again, this would only affect the results of the analysis if these other factors were systematically correlated with the [REDACTED]. The

[67] [REDACTED].

PFs have not presented evidence that there are any factors of this kind, and there is no reason to believe that any such factors exist.

3.14 The PFs state that 3UK has "*high gross adds and stronger net adds than BTEE and VUK*" in the PAYM subsegment,[68] but also acknowledge that the "*stronger net adds*" are driven by growth in FWA, which the Parties submit has a [REDACTED]. Given that 3UK has been forced to cut its network investments to pre-2020 levels, [REDACTED]. As noted in the PFs, when FWA is excluded, 3UK's PAYM net adds in 2022 and 2023 were negative.

3.15 The PFs further acknowledge that 3UK "*performs less strongly in the pre-paid subsegment than the PAYM subsegment, with substantial subscriber losses for its Three brand but also with significant gains for its sub-brand, SMARTY*".[69] The PFs find that the Three brand had large negative net adds each year from 2020 to 2023 (with the exception of 2022), contributing to the [REDACTED].

The PFs ignore VUK's [REDACTED] competitive position

3.16 As previously explained to the CMA, VUK's competitive position is [REDACTED]:

(a) VUK's share of supply by subscribers has [REDACTED] since 2020 at the overall retail level and has [REDACTED] at the consumer retail level.[70] VUK's shares in consumer retail segment at mobile operator level remained constant between 2020 ([REDACTED]%) and 2023 ([REDACTED]%) (see Table 8.10 of the PFs). VUK's shares in the overall retail market at mobile operator level have been progressively decreasing from [REDACTED]% in 2020 to [REDACTED]% in 2023 (see Table 8.9 of the PFs).

(b) In the PAYM subsegment, VUK has a [REDACTED].[71] By the CMA's own logic, [REDACTED]. As explained above, however, it is important to consider [REDACTED].[72]

(c) As a result, VUK has been [REDACTED] in the PAYM subsegment: as provided in the PFs, VUK's net adds have been [REDACTED], including in 2023.[73]

(d) With respect to the pre-paid subsegment, the PFs claim that "*VUK has performed more strongly than other MNOs, with [REDACTED]*".[74] The correct interpretation is that [REDACTED] and have been [REDACTED]. While VUK may have performed [REDACTED] than other MNOs, it has performed much more weakly than MVNOs, as the Parties explain below.

[68] PFs, paragraph 8.102(a).

[69] PFs, paragraph 8.104.

[70] PFs, Table 8.9 and Table 8.10.

[71] PFs, paragraph 8.90.

[72] PFs, Table 8.20.

[73] PFs, Table 8.21.

[74] PFs, paragraph 8.99(d).

The PFs mischaracterise the competitive position of the Parties' competitors

3.17 In respect of BTEE, the PFs claim that "*[b]ased on its market shares by gross adds, its high churn rates, and its net adds, BTEE appears to perform more weakly than its market shares by subscribers suggests*".[75] This view relies upon shares of supply by gross adds. However as discussed at paragraph 3.11 above, gross adds must be considered in conjunction with churn rates in order to properly assess operators' competitiveness.

3.18 BTEE's purported high churn rates do not stand up to scrutiny. The PFs claim that BTEE has the second-highest churn of all MNOs but then acknowledge that the recent upturn in churn is due to the closure of BTEE's Plusnet sub-brand. When adjusting the churn figures to exclude Plusnet, the PFs conclude that BTEE's churn rates were lower and comparable to those of other operators in Q3 and Q4 2024.

3.19 In respect of VMO2, the PFs claim that "*VMO2 + Tesco Mobile had the lowest rates of churn of MNOs, though this rate has been slowly increasing, driven primarily by VMO2's churn*".[76] As explained in [REDACTED],[77] VMO2 has acknowledged that the increase in its churn over 2023 was primarily a result of higher churn from Virgin Mobile customers migrating to O2 during 2023.[78] Despite this temporarily higher churn, the integration of Virgin Mobile customers represents an improvement in VMO2's competitive position, as VMO2 has stated that integration of Virgin Mobile customers was part of the execution of its "mobile dual brand strategy" and the primary reason for a 17.1% decline in its mobile, data and voice interconnect and access costs.[79] Further, VMO2 has cited a billing system issue as a cause of customer losses in Q1 2024,[80] which is likely to be temporary. Nonetheless, VMO2 is facing increasing network quality issues which are likely to affect its competitiveness going forward. However, the Beacon 4.1 Agreement will resolve these network quality issues and strengthen VMO2 as both a retail and wholesale competitor. The spectrum divestment (which will result in a [REDACTED]% increase in VMO2's spectrum holding) and additional site access rights to the MergeCo network associated with Beacon 4.1 will enable VMO2 to significantly improve its network quality and retail (and wholesale) offers.

3.20 The PFs continue to *understate* the competitive position of MVNOs:

(a) The PFs only show gross adds and churn for two MVNOs, Sky Mobile and Tesco Mobile, noting that "*We consider that gross adds and churn rates are relevant metrics in the PAYM subsegment […] and we have included the largest independent MVNO in this subsegment (Sky Mobile). In the PAYM subsegment, the Parties were unable to provide a breakdown for iD Mobile,*

[75] PFs, paragraph 8.105.

[76] PFs, paragraph 8.92(b).

[77] [REDACTED].

[78] VMO2 2023 Annual Report, page 16.

[79] VMO2 2023 Annual Report, pages 14 and 39.

[80] Enders Analysis, "On the precipice: UK mobile market in Q1 2024", 3 June 2024, page 9.

whilst all other MVNOs have a very small presence".[81] This continues to omit [REDACTED] of other MVNOs: [REDACTED] operators in the consumer segment today, as illustrated in **Figure 3.5**.

Figure 3.5: Consumer retail net adds ('000 subscribers, 90-day active base, Q1 2020-Q4 2023)

[REDACTED]

Source: [REDACTED].
Notes: [REDACTED].

(b) Across 2020 through to 2023, MVNOs' net adds have totalled [REDACTED], whereas MNOs in turn have [REDACTED]. Sky Mobile only accounted for [REDACTED]% of MVNO net adds, indicating that this growth is not driven by a single MVNO player. This evidence clearly shows that competition today is heavily influenced by MVNOs, contrary to the PFs.

The PFs' conclusions with respect to customer bases is inconsistent with the evidence and entirely at odds with the competitive position of the Parties

3.21 The provisional conclusions on the Parties' competitive position in the retail mobile services market are based on an incorrect interpretation of customer data: as demonstrated above, the PFs continue to overstate the Parties' competitive position based on a narrow view of the data while entirely understating the competitive positions for BTEE, VMO2 and MVNOs on a number of metrics.

4. The PFs mischaracterise the Parties' future prospects and factors impacting competitive influence

4.1 This section addresses the PFs' characterisation of the future of the Parties and the factors impacting operators' competitive influence. Contrary to the provisional thinking expressed in the PFs:

(a) smaller MNOs do not have a stronger ability or incentive to compete aggressively;

(i) the PFs' hypothesis is not supported by the evidence;

(ii) the hypothesis is at odds with the prices observed in the retail mobile services market;

(iii) the internal documents and third-party evidence cited by the CMA do not demonstrate that smaller operators have stronger incentives to compete aggressively; and

(iv) MergeCo, as a larger operator than the Parties, will not have weaker incentives to compete aggressively;

(b) scale is critical in UK mobile telecommunications;

[81] PFs, paragraph 8.101.

(c) 3UK does not have the ability or incentive to compete aggressively and sustainably; and

(i) the PFs' analysis of 3UK's internal documents overstates its growth prospects;

(ii) third-party evidence further supports the fact that 3UK is unable to compete sustainably;

(iii) the PFs overstate the growth potential of FWA; and

(d) VUK does not have the ability or incentive to compete aggressively: the perceived [REDACTED] [REDACTED].

Smaller MNOs do not have a stronger ability or incentive to compete aggressively

4.2 The PFs' assert that operators face a trade-off between the short-term benefit of gaining additional customers (e.g. by lowering their prices) and the cost of reducing the profitability of their existing customer base (i.e. assuming they have to extend the same terms to their existing customers). The provisional conclusion in the PFs is that this cost "*is likely to be greater for mobile operators with larger existing bases than those with smaller customer bases*", and MergeCo would therefore be less incentivised to compete aggressively than 3UK and VUK in the counterfactual.[82]

4.3 The PFs focus on this alleged incentive and disregard much more important considerations affecting MNOs' abilities and incentives to compete, as the Parties explained in [REDACTED],[83] noting that they consider such factors "*elsewhere in our assessment*":[84]

(a) The Parties' lack of scale and [REDACTED] is already weakening their incentive to invest and compete against much larger operators, as shown by the [REDACTED]. Smaller MNOs are unable to afford to invest at a sufficient, "transformative" level to change the status quo in terms of their network quality while earning sustainable returns – their investments simply mean that they are able to tread water, rather than improve their performance and the competitive dynamics of the market.

(b) As the Parties have explained, including at [REDACTED], monetising deployed capacity is a competitive imperative in mobile. The available capacity (or lack thereof) determines whether or not an operator has the incentive to compete aggressively to attract additional customers.[85] The PFs recognise, at paragraph 14.22, that the unit cost of expanding capacity can, in principle, impact prices and quality of service ("*given that mobile operators need to increase capacity to meet growing demand, this reduction in unit cost of capacity may represent a reduction in long-term incremental cost which could potentially give the Merged Entity (all else being equal) an incentive to*

[82] PFs, paragraph 8.180(a).

[83] [REDACTED].

[84] PFs, paragraph 8.185.

[85] See also [REDACTED].

provide a better quality of service and/or lower prices"), but the PFs do not take into account this fundamental feature of the retail mobile services market. See further **PF Annex 3**.

The PFs' hypothesis is not supported by the evidence

4.4 The PFs do not engage with the Parties' previous submissions,[86] and do not explain why they disregard the Parties' submissions in favour of an alternative hypothesis. The Parties reiterate that the provisional conclusion set out in the PFs is not supported by the evidence:

(a) The PFs do not place sufficient weight on the fact that *all* operators price discriminate, offering large and varied tariff portfolios that cater for different customer segments (for example, 3UK, as the smallest MNO, offers almost 500 front book plans and almost 600 base plans for the Three brand). In addition, operators use a variety of incentives and discounts and MNOs use sub-brands (e.g. Giffgaff in the case of VMO2) to price significantly lower than their "main" brands (e.g. VOXI).[87] Targeted discounts are offered by operators to subscribers approaching the end of their contract terms (e.g. [REDACTED]% of Three brand customers acquired in 2023, [REDACTED]% of Three brand customers across the active customer base,[88] and [REDACTED]%-[REDACTED]% of VUK customers, pay a discounted price) which do not always result in re-contracting customers achieving the same price offered to new customers. These targeted discounts allow operators to differentiate prices across subscribers.

(b) As set out in the Parties' response to [REDACTED]RFI [REDACTED], the Parties consider a wide range of factors when deciding whether to change their tariff offerings. 3UK considers [REDACTED]. Similarly, VUK considers [REDACTED]. MergeCo will no doubt consider a combination of these factors. The Parties submitted in response to the [REDACTED] that, to the extent that MergeCo will face a trade-off when setting tariff prices between attracting new customers and reducing the profitability of its existing base, this trade-off must be weighed against a range of other factors – any reduction in competitive incentives as a result of the Transaction would likely be minimal as a result. As noted at paragraph 4.3 above, the PFs do not engage with the impact of these factors on the purported trade-off faced by operators, merely noting that they consider the factors raised by the Parties "*elsewhere in our assessment*".

4.5 As previously explained in [REDACTED], the hypothesis does not take into account the experience of the Parties, which contradicts the PFs' view that smaller MNOs have a stronger incentive to compete aggressively on price. 3UK [REDACTED], but this was an attempt [REDACTED] – survey data indicates that around a quarter of 3UK's

[86] See [REDACTED].

[87] Initial Phase 2 Submission, paragraph 1.8(iv).

[88] See [REDACTED] RFI [REDACTED] (data as at October 2023). For SMARTY, [REDACTED]% of customers acquired in 2023 receive a discount, and [REDACTED]% of customers across the active customer base.

joiners research reputation-based sources before switching, and key customer research sources (such as Which? and Trustpilot) highlight 3UK's poor network performance.[89] The fact that 3UK has consistently failed to achieve meaningful growth suggests that [REDACTED], taking into account quality and prices. Further, VUK was the [REDACTED].

4.6 MNO throughout most of 2020-2022 and was the [REDACTED] for several quarters in 2023, despite having [REDACTED] customer base among MNOs.[90]

4.7 Likewise, the provisional conclusion in the PFs remains inconsistent with the fact that the market leaders, BTEE and VMO2, are large players with scale and significant financial resources (with ROCE greater than WACC) to invest to acquire and retain customers with attractive offers (see Section 7 below). While the Parties agree that BTEE and VMO2 do not compete as vigorously as they could in terms of their network investments, this is not due to their size but because they lack a challenger with the scale necessary to fund sustainable investments to improve their network performance and the corresponding ability to compete aggressively in the retail mobile services market.

(a) 3UK's experience in the retail mobile services market also refutes the claim that smaller MNOs are able to compete more aggressively. 3UK's share of supply in the consumer segment has [REDACTED] at approximately [REDACTED]% (by revenues and subscribers) since 2017 and has been firmly in the range of [REDACTED] of the overall retail market for the past 10 years. This outcome will not change absent the Transaction: as explained at paragraph 5.19 below, [REDACTED].

(b) VUK's share of supply has also been [REDACTED]. As set out below at paragraphs 4.39 to 4.64, VUK is subscale and [REDACTED] due to an inability [REDACTED]. It is notable that since VUK switched off its 3UK network, a significant part of its rural network (23% of rural households across the UK and 28% in Wales) is reliant on 2G for indoor coverage.[91]

The PFs' hypothesis is at odds with the prices observed in the retail mobile services market

4.8 In addition, the PFs do not take into account Compass Lexecon's pricing analysis in [REDACTED] (reproduced below as **Figure 4.1**), which showed that MNOs' prices started to converge in the second half of 2022 and that this convergence persisted until at least June 2024. The convergence in prices was not limited to the Parties.

(a) In 2024, 3UK's pricing has been [REDACTED]. The conditional prices of their main brands were [REDACTED].

[89] [REDACTED] and [REDACTED]; Enders Analysis, "What's to become of H3G? Commercial turnaround versus consolidation", 25 January 2022, page 4.

[90] See Figure 3.6 of the Parties' Phase 2 Initial Submission; Phase 1 Decision Response presentation, slide 19.

[91] See Connected Nations update: Spring 2024 - Ofcom (data as at January 2024).

(b) The range in MNOs' pricing has [REDACTED]. In early 2021, the difference between the most and least expensive MNOs was [REDACTED], whereas by 2024, this difference has [REDACTED].

Figure 4.1: [REDACTED]

[REDACTED]

Source: Compass Lexecon analysis based on Pure Pricing data.
Notes: [REDACTED].

(c) The fact that BTEE has a large customer base, but its pricing has [REDACTED] during the past four years (and is [REDACTED]) and the evidence of converging prices each shows that scale does not determine whether an MNO prices aggressively (see also paragraph 5.5 below). The PFs do not explain why they disregard this evidence.

The internal documents and third-party evidence cited by the CMA do not demonstrate that smaller operators have stronger incentives to compete aggressively

4.9 The internal documents cited in the PFs do not support the hypothesis that larger operators face a more costly trade-off between the short-term benefit of gaining additional customers and the cost of reducing the profitability of their existing customer base.

(a) Firstly, the VUK internal documents quoted at paragraph 8.182 of the PFs directly contradict the PFs' hypothesis that smaller MNOs have a stronger incentive to compete. For example, [REDACTED].[92]

(b) Likewise, the confidential extracts of a BTEE internal document cited at paragraph 8.182(c) do not support the PFs' hypothesis. As with the VUK internal documents cited at paragraphs 8.182(a) and (b) of the PFs, [REDACTED]. The document states that BTEE "*[REDACTED]*", directly contradicting the assertion that smaller operators have a greater incentive to compete aggressively on price – [REDACTED].

4.10 In addition, the third-party evidence cited in the PFs does not support the conclusion that smaller operators compete more aggressively when considered in the context of market realities:

(a) For example, while Sky Mobile notes that 3UK "*continues to play an important role in the retail mobile market – offering low prices and good value deals*",[93] MNOs' (including 3UK's) prices have in fact increased since mid-2022 (as explained at paragraph 4.8 above) – while 3UK [REDACTED], it has failed to achieve meaningful growth and more recently has had [REDACTED] (as explained at paragraph 9.25 below).

[92] [REDACTED]. See also [REDACTED], which states: [REDACTED].

[93] PFs, paragraph 8.183(c).

(b) Similarly, while Sky Mobile and BTEE respectively describe 3UK as "*innovative, disruptive and very competitive*" and a "*disruptor*",[94] these descriptors are inconsistent with the evidence submitted by the Parties, which shows that, rather than driving innovation in the retail mobile services market, 3UK is merely attempting to keep up with its competitors (as explained in further detail at paragraph 4.30 below). Contrary to BTEE's description of 3UK as a "*disruptor*" during a call with the CMA, [REDACTED]. [REDACTED] notes that [REDACTED]. BTEE's documents further show that it [REDACTED]. For example, [REDACTED] notes that 3UK's network investment is "*[REDACTED]*", and [REDACTED] states that while 3UK is "*[REDACTED]*", it is "*[REDACTED]*".

(c) Gamma's statement that an entity "*of greater or similar scale to BTEE and VMO2 will potentially have less incentive to disrupt the market*" is likewise unsupported by evidence, including the fact that BTEE has introduced a number of innovative customer propositions in recent years (as explained in further detail at paragraph 7.5(c) below).

(d) The third-party evidence cited at paragraphs 8.183(a) and (d) of the PFs does not support the notion that smaller operators have stronger incentives to compete. The [REDACTED] document cited at paragraph 8.183(a) ([REDACTED]) is dated 9 September 2021 and does not reflect the current competitive dynamics in the retail mobile services market. As explained at paragraph 4.8 above, MNOs' prices have converged since mid-2022 and 3UK's pricing cannot credibly be described as "*[REDACTED]*", [REDACTED]. Similarly, the BTEE document cited at paragraph 8.183(d) ([REDACTED]), which describes VUK's "*[REDACTED]*", is contradicted not only by the pricing analysis at paragraph 4.8 above, but also by more recent BTEE documents that [REDACTED].

MergeCo, as a larger operator than the Parties, will not have weaker incentives to compete aggressively

4.11 The PFs continue to suggest that prices could rise after the Transaction because (i) combining the Parties will result in a larger operator, which in the CMA's view will not compete as aggressively as the Parties do now; and (ii) removing the competitive constraint that the Parties exert on each other may increase MergeCo's incentive to raise prices.[95]

(a) The PFs rely on the CMA's merger simulation predicting that MergeCo's prices would rise by 7.0% for 3UK and 3.8% for VUK on average.[96] As explained in further detail in **PF Annex 4**, there are fundamental flaws in this empirical analysis. In particular, while the CMA itself accepts that the Transaction would in principle bring about rivalry-enhancing efficiencies (see paragraphs 14.173 to 14.176 of the PFs), it does not consider any quality or cost efficiencies in its analysis. This approach does not tell the full story. As

[94] PFs, paragraph 8.183(e).

[95] PFs, paragraph 14.207.

[96] PFs, paragraph 14.207.

explained in [REDACTED], (i) the significant increase in the total capacity available to MergeCo will reduce the incremental cost of adding subscribers to its network, providing a strong incentive to compete more aggressively to win new subscribers; and (ii) MergeCo's headline price increases cannot be divorced from the better quality that MergeCo offers to its customers, who would otherwise experience poorer network quality absent the Transaction.[97] An analysis that excludes efficiencies is therefore unable to provide an accurate assessment of the Parties' post-Transaction incentives to compete and to determine the overall competitive effect of the Transaction. The Parties have sought to supplement the PFs' limited analysis by incorporating REEs into the CMA's model, by taking into account MergeCo's lower incremental cost of capacity as well as Day 1 network quality improvements. These corrections predict that the Transaction would result in an *increase* in consumer welfare of over £950 million, greatly improving the PFs' findings of a *reduction* in consumer welfare of £329 million. This confirms that the Transaction will be significantly pro-competitive. Importantly, the download speed improvement achieved by the JNP in the first year following completion is on its own sufficient for the Transaction to improve consumer welfare and be pro-competitive. The CMA's model further shows that customers on low incomes also benefit from the Transaction.

(b) The Parties have put forward two robust merger simulation analyses,[98] each of which further shows that once efficiencies are taken into account, the Transaction is *pro-competitive*.[99] Not only will the Transaction enable improved quality competition, but the Parties' merger simulation analyses demonstrate that it will benefit customers, including the most price-sensitive customers (as explained in further detail in Section 9 below). The Parties show that the PFs' criticisms of these merger simulation analyses are unfounded in **PF Annex 4**.

(c) The preliminary conclusion in the PFs is further undermined by a comprehensive review of empirical studies by Padilla et al. (2024), which indicates that four-to-three mobile mergers since 2010 have had little impact on prices, typically having no effect at all, or increasing prices for some customers for a short period only. [100] Prices per gigabyte, which is a unit price that takes into account the amount actually consumed (and is also a good proxy for quality-adjusted prices as better coverage and quality lead to more data being consumed), typically fell as fast or faster post-merger as before the merger. This is consistent with the fact that the average cost per gigabyte has

[97] [REDACTED]. See also [REDACTED], and the Parties' response to [REDACTED] RFI [REDACTED], which explain how the incremental cost of capacity influences the Parties' pricing decisions.

[98] [REDACTED] and [REDACTED].

[99] [REDACTED].

[100] Padilla, J. et al. (2024) "Do four-to-three mobile mergers harm consumers? A review of post-merger effects and concentration studies", *European Competition Law Review*, (5), pages 180-219.

fallen from £234 in 2012 to £1.32 in 2023 and continues to fall.[101] This suggests that the two effects alleged by the PFs ((i) MergeCo's larger customer base providing a disincentive to price aggressively; and (ii) elimination of rivalry between the Parties creating upward pricing pressure) did not occur following the earlier mergers. This is further supported by comments by Padilla et al. (2024) on a recent European Commission study covering the impact of concentration in the telecommunications sector on prices and investment, which notes that there may be a greater likelihood of pro-competitive effects as a result of a merger involving market laggards (i.e. smaller scale challengers) rather than a market leader.[102]

4.12 This provisional conclusion does not hold in the face of the market evidence: MergeCo will have the ability and incentive to compete aggressively, to the benefit of all customers.

Scale is critical in UK mobile telecommunications

4.13 The PFs repeat feedback received from third parties, which reinforces the importance of scale in the UK mobile telecommunications industry: "*A number of mobile operators and stakeholders told us that, as a result, having sufficient 'scale' (ie sufficient subscribers providing sufficient revenue to (i) cover a high fixed cost base, and (ii) maintain and improve network infrastructure) is important to an MNO's ability to operate effectively*".[103] While it is correct that Ofcom "*has never described VUK or 3UK specifically as 'sub-scale'*",[104] the fact that both VUK and 3UK earn returns below their cost of capital (as acknowledged at paragraph 8.111 of the PFs) means that they are unable to invest sustainably in their networks, facing a disproportionately large cost base relative to their revenues.

4.14 As noted in the PFs, "*Ofcom has recognised that scale economies are currently a feature of mobile markets*"[105] – this will remain the case in the future. Scale economies will continue to be important and, as Ofcom acknowledges, "*an MNO [such as the Parties] consistently earning below its cost of capital over a sustained period, despite continuing to compete (and invest), may have reduced forward-looking investment incentives*",[106] including to investment in network improvements, which may

[101] See [REDACTED].

[102] Padilla, J. et al. (2024) "Comments on the Mobile Telecoms Sections of the European Commission's Report on the State of Competition in the EU: Critical Assessment of EC-commissioned Price-Concentration Analysis" (attached as **PF Annex 5**).

[103] PFs, paragraph 8.110.

[104] PFs, paragraph 8.111.

[105] PFs, paragraph 8.111.

[106] PFs, paragraph 8.111, referring to Ofcom's future approach to mobile markets and spectrum Conclusions paper, 6 December 2022, paragraph 4.33.

ultimately result in impacts to quality of service and ability to retain or gain market share.[107]

4.15 The PFs continue to quote an empirical analysis by Ofcom that finds no evidence of a positive link between market concentration and investment or network quality outcomes.[108] As explained in Padilla et al. (2024),[109] Ofcom's analyses in the quoted paper suffer from methodological and data issues.[110] As the Parties explained in [REDACTED],[111] the CMA should consider Ofcom's analyses consistently with its findings elsewhere in the PFs, that differences in the characteristics of mobile markets (such as geographic, demographic and regulatory differences) across countries limits the probative value of any analysis of the effects of mergers outside the UK in assessing the effects of this Transaction.[112] The PFs do not factor these limitations into the provisional conclusions.

4.16 The Frontier Economics Paper "*The Importance of Scale in the 5G Era*", to which the Parties referred in [REDACTED],[113] shows a clear relationship between scale (as measured by the number of subscribers) and returns from semi-fixed investments.[114] The paper illustrates the significant impact that scale can have on the economic viability of 5G rollout, with small-scale MNOs being expected to make a loss on these investments. This means that for MNOs starting from a sub-scale position, it is not possible to generate sufficient returns organically – namely, through growth – to cover the cost of making such investments. It is clear that scale is critical in ensuring that significant investments to maintain and upgrade networks nationwide with best-in-class technologies, such as 5G SA and Advanced 5G, are commercially viable. The PFs do not engage with this evidence in forming the provisional conclusion on the importance of scale.

4.17 The Parties welcome the findings in the PFs that there are relative scale advantages in the provision of mobile network services, and that the mobile telecommunications industry is characterised by a need to make significant infrastructure investments, the

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[107] PFs, paragraph 8.111, referring to Ofcom's future approach to mobile markets and spectrum Conclusions paper, 6 December 2022, paragraph 4.47.

[108] PFs, paragraph 8.111.

[109] Padilla, J. et al. (2024) "Do four-to-three mobile mergers harm consumers? A review of post-merger effects and concentration studies", *European Competition Law Review*, (5), pages 180–219.

[110] The issues with Ofcom's panel data analyses include, but are not limited to: (i) the fact that the GSMA industry capex data are not sufficiently reliable to be used in the sophisticated analyses done by Ofcom; and (ii) the panel data model Ofcom has used to estimate the impact of market concentration on industry capex assumes that a similar process determines industry capex per capita in each of the 30 countries in Ofcom's dataset, however this assumption is clearly rejected. A more complete commentary regarding Ofcom's analysis is set out in Padilla, J. et al. (2024).

[111] [REDACTED].

[112] PFs, paragraph 8.300.

[113] [REDACTED].

[114] [REDACTED].

presence of high fixed costs, and economies of scale.[115] These characteristics indicate that it is critical to have scale in the UK mobile telecommunications industry, which is supported by feedback from a third party recognising that the Transaction will create a "*more sustainable market structure*" to enable the Parties to secure a return on investment and that "*[c]onsolidation is broadly seen as a pivotal measure towards helping operators to attain the necessary scale for expanding their future network infrastructure*".[116] This is further reinforced by evidence from the Parties' largest competitors, BTEE and VMO2. As the PFs note, internal documents provided by BTEE and VMO2 suggest that operating scale is an important factor in providing a competitive mobile offering.[117] The PFs recognise that BTEE, the market leader, has been able to maintain its position as the highest quality network through its investment over the years.[118] The confidential extracts of BTEE and VMO2 internal documents cited at paragraphs C.16 and C.17 of the PFs support the conclusion that scale is critical and 3UK faces challenges due to its lack of scale:

(a) BTEE's 'Business Strategy update' dated [REDACTED] ([REDACTED], pages 14-15) states that BTEE's [REDACTED].

(b) VMO2's internal document dated 15 December 2021 on 'Mobile Market Opportunities' ([REDACTED]) states that [REDACTED]. The document highlights [REDACTED] mobile base, its revenue, and its estimated return on capital employed (**ROCE**), all of which [REDACTED].

4.18 The PFs continue to disregard the Parties' submissions in relation to economies of scale from capacity. The PFs discuss economies of scale arising from the "spreading of fixed costs", but ignore that economies of scale can also arise from reductions in variable costs. As the Parties have previously explained, increasing the size of an MNO's network (in terms of spectrum and sites) reduces unit costs as capacity increases with the product of these inputs. These "technological" economies of scale are variable cost (not fixed cost) economies.[119]

4.19 The Parties face a scale disadvantage vis-à-vis BTEE and VMO2. The Parties are not and will not be able to challenge BTEE and VMO2 on network investment which will in turn impact competition in the retail and wholesale markets. The following section expands on the Parties' ability and incentive to compete in the retail mobile services market.

<u>3UK does not have the ability or incentive to compete aggressively and sustainably</u>

4.20 The PFs do not engage adequately with the evidence submitted by the Parties showing that 3UK does not have the scale to make the network investments necessary to close the gap with the market leaders. As previously explained in [REDACTED],[120] 3UK

[115] PFs, paragraphs G.28 and 8.114.

[116] PFs, paragraph 8.112 and Ericsson response to the Issues Statement, 10 June 2024, pages 1-2.

[117] PFs, paragraph C.18.

[118] PFs, paragraph G.28.

[119] [REDACTED].

[120] [REDACTED].

generated only around [REDACTED]% of the mobile retail revenues earned by each of BTEE and VMO2 and only [REDACTED] of VUK's revenues in 2023. Unlike the two scale players, 3UK's financial position has [REDACTED] over time. In 2022, 3UK generated around [REDACTED] of the two leading MNOs' total EBITDA while still needing to invest similar levels of capex to build and maintain a nationwide network. This has resulted in [REDACTED] and returns below the cost of capital, preventing further network investments required to improve 3UK's network reputation. [REDACTED]. 3UK's cashflow performance is discussed in further detail at paragraphs 4.25 to 4.26 below.

4.21 3UK's share of supply by subscribers in the retail market has been [REDACTED]. If the CMA's hypothesis that 3UK has a strong incentive to compete more aggressively due to its smaller size were correct, then 3UK would be expected to have made market share gains over this time. But 3UK has not done so and its share of subscribers in the [REDACTED].

4.22 3UK's lack of scale has constrained its ability and incentive to invest and compete. Absent the Transaction, 3UK's ability and incentive to invest will be limited to [REDACTED].

Constraints on 3UK's capital expenditure

4.23 As identified above and in previous submissions to the CMA, 3UK faces constraints on its capital expenditure. The CMA has considered internal documents [REDACTED],[121] each of the documents cited by the CMA [REDACTED]. This view is consistent with the summary put forward at paragraph 8.116(a) of the PFs.[122]

4.24 In particular, the PFs continue to claim, based on a decontextualised review of [REDACTED].[123] [REDACTED]:

(a) First, [REDACTED],[124] [REDACTED][125] [REDACTED]. The document also states [REDACTED].[126] [REDACTED].

(b) Second, at the time of the [REDACTED]. However, [REDACTED].[127] In this context, [REDACTED].

[121] [REDACTED].

[122] PFs, paragraph 8.116(a); see also PFs, Appendix C, paragraph C.3.

[123] PFs, paragraph 8.116(b), and PFs, Appendix C, paragraph C.5.

[124] [REDACTED].

[125] PFs, Appendix C, paragraph C.5.(a), referring to [REDACTED].

[126] See [REDACTED].

[127] See [REDACTED] RFI [REDACTED].

(c) Third, the provisional conclusion in the PFs is that [REDACTED].[128] [REDACTED] [REDACTED],[129] [REDACTED].[130] While the PFs acknowledge that "*[REDACTED]*",[131] their conclusion that there is "*[REDACTED]*" simply based on "*(i) the discussion of* [REDACTED] *and (ii) [REDACTED]*"[132] is unfounded. In the context of the relevant discussion, [REDACTED] merely demonstrates that, as explained in [REDACTED], [REDACTED].[133]

(d) Finally, the PFs rely on [REDACTED].[134] These comments have been taken out of context:

(i) as explained at paragraph 4.24(b) above, 3UK's capex plans are independent of Mr Fok's reference to the Transaction, [REDACTED]; and

(ii) in the June 2023 meeting [REDACTED]. When considering 3UK's YTD financial performance as at May 2023, [REDACTED] .

3UK's cashflow performance

4.25 As explained in [REDACTED], [REDACTED] [REDACTED] ([REDACTED] [REDACTED]).[135] As acknowledged by the PFs, [REDACTED],[136] [REDACTED].[137] [REDACTED].[138]

4.26 As such, [REDACTED].

3UK's current expectations of its future performance

4.27 The CMA has reviewed [REDACTED],[139] [REDACTED].

(a) The PFs seem to dispute that 3UK's core business is in decline. They suggest that any fall in subscribers "*is driven primarily by* [REDACTED]*, while the*

[128] PFs, Appendix C, paragraph C.6, referring to [REDACTED].

[129] [REDACTED].

[130] [REDACTED] and Parties' Initial Phase 2 Submission, paragraph 2.28.

[131] PFs, Appendix C, paragraph C.6.

[132] PFs, Appendix C, paragraph C.6, referring to [REDACTED].

[133] [REDACTED].

[134] PFs, Appendix C, paragraph C.5.(a), referring to [REDACTED].

[135] PFs, Appendix C, paragraph C.7.

[136] PFs, Appendix C, paragraph C.7.

[137] PFs, Appendix C, paragraph C.7, referring to [REDACTED] and [REDACTED]. As the PFs acknowledge, the further documents referred to at paragraphs C.7(a) and C.7(b), [REDACTED] and [REDACTED], respectively provide that [REDACTED].

[138] See the Parties' Initial Phase 2 Submission, Figure 2.8.

[139] PFs, paragraph 8.116(c).

[REDACTED] *have remained relatively steady over the same timeframe*".[140] The PFs note that "*losing market share by subscribers in the pre-paid subsegment is not unique to 3UK, as both BTEE and VMO2 + Tesco Mobile have seen more significant declines in their market shares from 2020 and 2023 than 3UK*".[141] However, this does not change the reality that 3UK's total revenues have declined in real terms (as acknowledged by the PFs),[142] and that it has not grown its core business – its core subscriber base has in fact reduced by [REDACTED]% since 2020 (i.e. by [REDACTED] customers – see Figure 2.5 of the Parties' Initial Phase 2 Submission). 3UK's attempts to address [REDACTED] have not been successful.

(b) As explained in [REDACTED],[143] 3UK attempted to grow its core business by significantly increasing its total investment during 2020-2022 to levels similar to BTEE and VMO2 (approximately £[REDACTED] billion in capex, excluding spectrum, over three years on the basis of the Cellnex proceeds) and by reducing its prices to attract new customers. Despite these efforts, 3UK has not been able to grow its [REDACTED]. Its share of supply in the retail mobile services market has remained [REDACTED], notwithstanding limited growth in [REDACTED], and it has [REDACTED]. As a result, 3UK has been [REDACTED], which are converging with other MNOs. It is a squeezed competitor in the retail mobile services market and its performance is inconsistent with a finding that it is a significant competitive force.

4.28 Paragraph 8.121 of the PFs continues to refer to [REDACTED].[144] As explained in [REDACTED], the CMA should not rely [REDACTED].

Figure 4.2

[REDACTED]

Source: [REDACTED].

4.29 [REDACTED]. In addition, CKHGTH's trading update for Q1 2024 stated that year-on-year growth had been driven by "*the increase in certain customer segments*", but "[g]*rowth remains challenging from the shift of customer behaviour towards lower value products*".[145]

[140] PFs, paragraph 8.80.

[141] PFs, paragraph 8.80(b).

[142] PFs, paragraph 8.119.

[143] [REDACTED].

[144] PFs, paragraph 8.121.

[145] CKHGT, Trading update (Q1 2024), available here: https://www.ckhutchisontelecom.com/en/ir/pdf/pre240509.pdf, slide 6.

(a) 3UK's FWA sales have grown in recent years, but ([REDACTED]) its addressable household base [REDACTED] – at [REDACTED] homes through to 2028 based on 3UK's most recent estimates.[146] Even with [REDACTED].[147]

(b) 3UK's [REDACTED] growth in the SOHO segment [REDACTED] ([REDACTED] [REDACTED]% [REDACTED] ([REDACTED] [REDACTED] [REDACTED] [REDACTED])). 3UK has a share of supply of [REDACTED]% by subscribers ([REDACTED] out of [REDACTED] business customers) and [REDACTED]% by revenue (£[REDACTED] out of over £[REDACTED] total revenues) in the business segment overall. Although 3UK has made some [REDACTED] in the SOHO subsegment, [REDACTED]. 3UK is [REDACTED].[148]

(c) While the SMARTY subscriber base has grown in recent years, this growth is limited to the value subsegment and generates a [REDACTED]. In the context of 3UK's [REDACTED], the growth of the [REDACTED] SMARTY business will be insufficient to offset declining subscriber numbers for the Three brand (see paragraph 3.15 above).

4.30 The PFs do not adequately consider the evidence submitted by the Parties, which shows that, rather than driving innovation in the retail mobile services market, 3UK is [REDACTED] and has had to roll back prior initiatives such as free roaming due to its weak financial position. For example, [REDACTED].[149] None of these initiatives can be considered true innovations in the market, as other competitors had previously launched similar initiatives with slightly different mechanics (e.g. [REDACTED]).

4.31 In addition, the PFs continue to suggest that that CK Hutchison and 3UK will be incentivised to "*prioritise and allocate resources both (i) where 3UK [sees] scope for revenue growth and (ii) to protect the current value of [its] shareholdings...*"[150] As previously explained in [REDACTED], this is not correct. [REDACTED]. Its future revenue-earning prospects can be expected to deteriorate as its network becomes more heavily congested and less competitive with rivals' networks.

The PFs' analysis of 3UK's internal documents overstates its growth prospects

4.32 The PFs refer to evidence in 3UK's internal documents suggesting a strong commitment to long-term growth, however the internal documents cited by the CMA are selective and taken out of context.[151] For instance, on the same slide the PFs cite states [REDACTED].[152]

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[146] [REDACTED] of RFI [REDACTED]. This is an updated prediction as set out in the Parties' Initial Phase 2 Submission, paragraph 6.47 and [REDACTED].

[147] [REDACTED].

[148] [REDACTED].

[149] See [REDACTED].

[150] PFs, paragraph 8.190.

[151] PFs, paragraph 8.130.

[152] [REDACTED].

4.33 At paragraph 8.133, the PFs rely on a selective and misleading interpretation of 3UK's internal documents, concluding that 3UK has seen strong recent growth. The PFs do not take into account that the [REDACTED] [153] A key point, as acknowledged in the PFs, [REDACTED]. As the Parties have previously submitted, [REDACTED].[154]

Third-party evidence further supports the fact that 3UK is unable to compete sustainably

4.34 In response to third-party evidence cited by the PFs:

(a) The case for infrastructure investment by the Parties is challenging. The PFs refer to a third party which noted the importance of the CMA considering "infrastructure competition" (i.e. competition by MNOs to improve networks and roll out next generation technology).[155] As previously submitted by the Parties, 3UK has continued [REDACTED].[156] As raised by a number of third parties, "returns" are thought to be particularly limited with respect to MNOs' investment in new technology, and the significant costs associated with rollout contribute to a challenging "business case" for investment (and infrastructure investment) in general.[157]

(b) 3UK does not have the [REDACTED]. The PFs refer to feedback from third parties, referencing academic evidence, that a reduction in competition may result in a reduction in network quality investment.[158] This does not take into account the inability of 3UK to continue to invest and improve its network quality. As submitted previously, 3UK has [REDACTED].[159]

4.35 The confidential extracts of BTEE's internal documents cited at paragraph C.29 of the PFs support the conclusion that 3UK does not have the ability or incentive to invest aggressively and sustainably. BTEE's internal documents show that:[160]

(a) [REDACTED].

(b) [REDACTED].

(c) [REDACTED].

[153] [REDACTED].

[154] Initial Phase 2 Submission, paragraph 2.15.

[155] PFs, paragraph 8.112.

[156] See [REDACTED].

[157] PFs, paragraph 8.112.

[158] PFs, paragraph 8.113.

[159] [REDACTED].

[160] [REDACTED] and [REDACTED].

The PFs overstate the growth potential of FWA

4.36 The PFs identify 3UK internal documents that indicate that FWA has been another strong area of growth in recent years.[161] Again, the PFs selectively identify points from these internal documents, and do not acknowledge the [REDACTED]. 3UK's internal document states [REDACTED].[162] The PFs refer to a [REDACTED].[163] [REDACTED].

4.37 The evidence in the PFs and set out above clearly demonstrates that 3UK does not have the ability or incentive to compete aggressively and sustainably.

VUK does not have the ability or incentive to compete aggressively

4.38 The PFs provisionally conclude that VUK's recent performance has been [REDACTED], that Vodafone's expectations as to VUK's future performance are consequently also [REDACTED], and that as a result Vodafone will [REDACTED] into VUK's [REDACTED] in the [REDACTED].[164]

4.39 This is not an accurate assessment of the reality faced by VUK. As the Parties have previously explained, VUK has [REDACTED], is demonstrably subscale and is [REDACTED], all of which impacts its ability and incentive to compete aggressively in the counterfactual. Most importantly, and as set out at paragraphs 4.58 to 4.61 below, VUK's [REDACTED] to the same standard as other MNOs such as BTEE. Indeed, VUK's [REDACTED].

4.40 As previously explained,[165] VUK's [REDACTED], and [REDACTED] and compete effectively against its larger, converged rivals in retail mobile services. VUK's [REDACTED] have had [REDACTED] and will [REDACTED], worsening its competitive position in retail mobile services going forward.

The PFs' characterisation of VUK's performance is misleading

4.41 The PFs rely on extracts of VUK's management accounts for FY23 and FY24[166] – i.e. from a single annual differential – to draw inferences about VUK's recent performance, as well as Vodafone's future investments in VUK. It is not clear on what basis the CMA considers this appropriate and the PFs do not advance any evidence to support such an approach. In fact, it is clear that [REDACTED] – with a [REDACTED] market position (see further paragraph 3.16 above) and [REDACTED].[167] In any event, the CMA [REDACTED], and the PFs do not adequately explain [REDACTED].

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[161] PFs, paragraph C.70.

[162] [REDACTED].

[163] PFs, Appendix C, paragraph C.70(b).

[164] PFs, paragraph 8.129; the CMA expects that VUK will continue to compete strong in the retail mobile market, "[REDACTED] *in* [REDACTED] *and* [REDACTED] *in the* [REDACTED]*."*

[165] [REDACTED].

[166] PFs, paragraph 8.124 and Table 8.24.

[167] See, for example, the Phase 2 Initial Submission, paragraphs 2.33 to 2.36.

4.42 As set out previously,[168] [REDACTED].

(a) [REDACTED]. Vodafone notes in this context that:

(i) VUK's revenue growth in this period was [REDACTED].

(ii) VUK's revenue growth in the mobile market is lower than the market average. Based on market share analysis of the overall retail revenue data, as submitted in Confidential Annex S109-6 25.001, VUK experienced a [REDACTED]% increase in overall retail service revenues from 2022 to 2023, which was [REDACTED] the market average of [REDACTED]%.

(b) [REDACTED].

(c) As explained in Confidential Annex VF P1DR 1, the CMA's use of [REDACTED].[169] In any event, VUK was [REDACTED].[170]

4.43 [REDACTED] the CMA fails to note that [REDACTED].[171]

4.44 [REDACTED]. As previously submitted, even though [REDACTED] or address VUK's subscale position:

(a) [REDACTED].

(b) VUK has also demonstrated [REDACTED].

(c) VUK's [REDACTED].

4.45 When considering [REDACTED],[172] [REDACTED], a fact which has been wholly ignored by the PFs but [REDACTED]. [REDACTED].[173]

4.46 The CMA must account for [REDACTED] to accurately assess VUK's performance, and the PFs' treatment of [REDACTED], VUK is incorrect.[174] With respect to the internal documents referenced by the CMA in support of this viewpoint:

(a) It is misleading to acknowledge that there is recent evidence of Vodafone [REDACTED], but state that "*[REDACTED]*".[175] The wording implies that Vodafone [REDACTED], which is not a reasonable interpretation from a holistic review of Vodafone's internal documents, particularly when focused

[168] [REDACTED].

[169] [REDACTED].

[170] See [REDACTED] RFI [REDACTED].

[171] [REDACTED] the Parties' Initial Phase 2 Submission, Table 1.

[172] [REDACTED].

[173] [REDACTED].

[174] PFs, Appendix C, paragraph C.14.

[175] PFs, Appendix C, paragraph C.13(b).

on recent performance. [REDACTED]. As previously explained, [REDACTED].[176] [REDACTED].

(b) The CMA also makes reference to documents from both of Vodafone and CK Hutchison which it considers confirm that "*[REDACTED]*".[177] The relevance of this statement to the CMA's provisional conclusion is unclear given that the Parties [REDACTED]. As part of the negotiations relating to the Transaction, [REDACTED].

4.47 Relatedly, Vodafone notes that Table 8.24 has been prepared on the basis of management accounting records. As previously explained to the CMA, these [REDACTED] a point the CMA later acknowledges in its PFs.[178] [REDACTED]. Contrary to the provisional conclusion [REDACTED],[179] [REDACTED]. If VUK did not [REDACTED].

The CMA's characterisation of the ROCE numbers is incorrect

4.48 At paragraph 8.128 of the PFs, the CMA refers to Vodafone's most recent long range plan summarising performance across its group. The CMA considers that [REDACTED]. The CMA considers that this document shows that Vodafone [REDACTED].

4.49 In reaching its provisional conclusion, the CMA's characterisation of VUK's ROCE is misleading:

(a) It is not the case that VUK [REDACTED], as set out in the document on which the CMA relies.[180]

(b) Despite acknowledging that Vodafone [REDACTED], the CMA does not explain why it therefore considers [REDACTED]. As evidenced, VUK has [REDACTED].

(c) [REDACTED] cited by the CMA in Table 8.25 [REDACTED]. As explained above, [REDACTED]. [REDACTED].

4.50 In reaching its provisional conclusions, the CMA also mischaracterises several of VUK's internal documents at Appendix C to the PFs. For example, the CMA considers that "*VUK [REDACTED]*" and that "*[REDACTED]*".[181] [REDACTED]:

Table 4.1 – [REDACTED]

[REDACTED]

[176] See the Parties' Phase 2 Initial Submission, paragraphs 2.2 to 2.8; [REDACTED].

[177] PFs, Appendix C, C.13(d).

[178] PFs, Appendix C, paragraph C.13(c).

[179] PFs, Appendix C, paragraph C.14.

[180] [REDACTED].

[181] PFs, Appendix C, paragraph C.10.

4.51 As acknowledged by the CMA, [REDACTED].[182] On each occasion, VUK forecast [REDACTED].

(a) [REDACTED].

Table 4.2 – [REDACTED]

[REDACTED]

(b) [REDACTED]. This indicates that [REDACTED]. It also reflects a consistent trend of [REDACTED].

(c) [REDACTED].

4.52 The CMA cannot conclude that [REDACTED] and there is no basis upon which to conclude, that [REDACTED]. The PFs do not advance any such evidence in support of this. [REDACTED] is not indicative of VUK [REDACTED], especially in light of its [REDACTED]. It is unclear why the CMA has referred to numerous LRPs [REDACTED] but does not place weight on the fact that [REDACTED].

The PFs' characterisation of VUK's forecast capex expenditure is misleading

4.53 At paragraph 8.126 of the PFs, the CMA makes the provisional finding that:

> *While Table 8.25 shows [REDACTED] in some cases, it demonstrates that* – following [REDACTED] – *its future plans (as set by Vodafone) appear [REDACTED]. Its [REDACTED] plans, in particular, have [REDACTED]. It is therefore difficult for us to conclude* […] *that Vodafone is [REDACTED].*

4.54 This provisional conclusion is incorrect and a mischaracterisation for a number of reasons:

(a) First, [REDACTED].

(b) Second, [REDACTED].

(c) Thirdly and in any event, the capex expenditure is [REDACTED] or to allow it to compete aggressively – as explained in detail in paras 4.56 et seq. below.

4.55 Finally, [REDACTED]. Most obviously, [REDACTED],[183] [REDACTED]. Aside from the fact that [REDACTED], the PFs' emphasis on [REDACTED], is therefore unfounded.

[REDACTED]

4.56 [REDACTED].

4.57 The rapid evolution of technology and the increasing demand for faster, more reliable connectivity requires continuous and substantial network upgrades to maintain high

[182] PFs, Appendix C, paragraph C.10.

[183] See, for example, [REDACTED], and [REDACTED].

performance and meet customer expectations. [REDACTED] but it will [REDACTED].

4.58 VUK's capex primarily [REDACTED]. Realistically, [REDACTED]. As previously explained, VUK's [REDACTED].[184]

4.59 VUK's capacity modelling clearly shows that congestion will become increasingly challenging for VUK to manage in the counterfactual as more than [REDACTED]% of sites will be congested by FY31. In order to address this issue, [REDACTED].[185]

4.60 At present, VUK's [REDACTED]. For instance, in September 2023, [REDACTED].[186] [REDACTED].[187] [REDACTED].

4.61 It is clear that [REDACTED]. In any event, even if hypothetically [REDACTED], as per paragraph 4.59 above, that would [REDACTED].

4.62 This is also evidenced in VUK's internal documents:

(a) [REDACTED] paper dated November 2023 [REDACTED] discussing [REDACTED] and [REDACTED]. Meanwhile the [REDACTED].[188]

(b) A presentation [REDACTED] dated December 2023 [REDACTED] discussing [REDACTED]. Accordingly, [REDACTED].[189]

4.63 Without significant investment, above and beyond [REDACTED], VUK's network infrastructure will lag behind its competitors, undermining its ability to compete effectively. VUK would still be a subscale operator [REDACTED], unable to compete aggressively for new customers – [REDACTED].

4.64 It follows from the above that VUK is unlikely to remain an important competitor in the UK mobile sector. It cannot be provisionally concluded that it will [REDACTED] in [REDACTED] and [REDACTED] in the [REDACTED].

VUK's ambition to improve its position as a converged competitor is a long-term aspiration and will be significantly impeded by its inability to compete aggressively

4.65 The PFs consider that VUK "*strives to compete strongly in the supply of retail mobile services*",[190] with reference to aspirations such as challenging converged players and

[184] [REDACTED]. As noted above at paragraph 2.10, since the switch-off of its 3G network in early 2024, a significant part of VUK's rural network is now reliant on 2G coverage, as only 77% of rural households have good 4G coverage indoors for VUK.

[185] [REDACTED].

[186] See [REDACTED].

[187] See [REDACTED], [REDACTED].

[188] [REDACTED].

[189] [REDACTED].

[190] PFs, paragraph 8.135.

[REDACTED].[191] However, these are simply long-term aspirations which VUK is significantly impeded from achieving due to its inability to compete aggressively.

4.66 As acknowledged by the CMA,[192] VUK's subscale position [REDACTED] are evident from a review of its internal documents and third-party evidence:

(a) As shown in an [REDACTED] from [REDACTED], VUK considered that [REDACTED].[193]

(b) [REDACTED].[194] The PFs' references to any ambition to challenge converged players is a selective reading of VUK's internal documents, as explained in paragraph 4.68 below.

(c) This is corroborated by third-party evidence. In particular, [REDACTED].[195]

4.67 [REDACTED] in VUK's internal documents cited in the PFs mainly relates to [REDACTED].[196] In contrast to BTEE, VMO2 and Sky Mobile, [REDACTED]. [REDACTED].[197]

4.68 [REDACTED]. [REDACTED].[198]

4.69 Whilst VUK may have an ambition to improve its position [REDACTED], this [REDACTED]. It does not follow that having an ambition is indicative [REDACTED].

4.70 Ultimately, MergeCo's superior network would allow for more choice in high-quality home broadband as the combined network will enable MergeCo to offer better-quality FWA, with its greater level of capacity and coverage potentially enabling supply to more customers. This FWA ambition is impossible in a VUK standalone scenario absent the merger.

4.71 The trend towards more competitive converged cross-sell offers (from incumbents BTEE and VMO2) will continue and will provide a significant cross-selling opportunity for the converged players, BTEE, VMO2 and Sky Mobile. For example, Analysys Mason data indicates that between Q2 2021 and Q4 2022, FMC household penetration in the UK went from approximately 18% to approximately 25%, and there

[191] PFs, paragraph 8.135(a) and (c).

[192] PFs, Appendix C, paragraph C.11.

[193] [REDACTED].

[194] Provisional Findings, Appendix C, paragraphs C.11(b)(i) – (v), with reference to Vodafone internal documents: [REDACTED].

[195] [REDACTED].

[196] Calculated using [REDACTED]; includes consumer broadband, telephony and fixed business services.

[197] [REDACTED].

[198] [REDACTED].

is a forecast household penetration of 40% by 2026.[199] BTEE has stated its strategy to reach 30% convergence by 2028, and VMO2's statements are also convergence focused (emphasising the important opportunity of fixed-mobile convergence and VMO2's position as a "*converged champion*" and ambition to be the "*household supplier of choice*" in the UK).[200] This has a material impact on competition in mobile-only. To compete, mobile-only or predominantly mobile players must be able to give customers a reason to switch to them or stay with them, i.e. their network quality must be good enough and they must "match" the converged discounts so that buying both a mobile and fixed standalone service separately does not cost more than buying the rival's bundle altogether. VUK's situation is further compounded by MVNOs, who do not face the same investment pressures as VUK and 3UK.

5. The Parties' current competitive positioning

5.1 This section considers the PFs' analysis of the Parties' current competitive positioning, as well as their performance vis-à-vis its competitors, focusing on:

(a) pricing;

(b) network quality:

(i) the CMA's analysis of third-party data does not in isolation provide a full understanding of the Parties' network quality (including the CMA's analysis on coverage and download speed);

(ii) views drawn from 3UK's internal documents mischaracterise the discussions about network quality; and

(iii) the PFs mischaracterise VUK's internal documents;

(c) brand and customer satisfaction;

(d) the fact that in the counterfactual, the Parties' weak competitive position will worsen, as:

(i) the competitive conditions described in the PFs will worsen in the future;

(ii) CK Hutchison [REDACTED] to fund 3UK's required network rollout; and

[199] See [REDACTED]; Analysys Mason defines "FMC" as an account where the users are subscribed to a service bundle which includes at least both a fixed broadband component and a mobile component. A "bundle" is defined as when (1) a customer receives some explicit benefit from buying multiple services from an operator and/or (2) the purchase of one service depends on the purchase of another. The explicit benefit may be a discount or a reward or exclusive access to a service. The second condition is not mandatory because of the presence of loose bundling, but it captures cases where services are sold in a single package, where the benefit can simply be having a single contract or a shared bill.

[200] Virgin Media O2 – One Year On - Virgin Media O2 (last accessed, 6 July 2024); VMO2's Annual Report and Consolidated Financial Statements, year ending 31 December 2023, pages 6, 10.

(iii) Vodafone would not have the incentive to support VUK if [REDACTED].

Pricing

5.2 Paragraph 8.148 of PFs notes that "*3UK was the cheapest MNO over the period of the analysis*". However, 3UK's price positioning cannot be taken as evidence that it is a particularly strong competitor, and it would be at odds with commercial reality to assess 3UK's prices in isolation. As noted at paragraph 4.5 above, 3UK [REDACTED].

5.3 This observation is supported by the 3UK internal documents cited in the PFs. For instance, [REDACTED] ([REDACTED]) explains that [REDACTED].[201] It is clear that the evidence supports that pricing lower was 3UK's attempt to compensate for its weaker brand reputation.

5.4 The PFs further provide at paragraph 8.148 that "*3UK's price rises have coincided with the Parties' contemplation of the Merger and then the CMA Merger investigation*". Firstly, the Parties' pricing analysis in [REDACTED] covers a period from [REDACTED] and shows that all MNOs' prices [REDACTED], well before the CMA's merger investigation.[202] Secondly, it is entirely incorrect to imply that 3UK took the decision to increase its prices because of the Transaction. As explained at paragraph 9.25(b) below, 3UK had no viable option but to increase its prices due to [REDACTED] (noting the context that [REDACTED]).

5.5 In any event, and as submitted previously in [REDACTED],[203] it is inappropriate to assess 3UK's prices in isolation. The fact that 3UK [REDACTED] demonstrates that, to the extent that [REDACTED], this was not enough [REDACTED]. This reinforces the conclusion that 3UK was not a strong competitor over the period of the analysis and its price positioning does not evidence an aggressive competitive strategy.

Network quality

The CMA's analysis of third-party data does not in isolation provide a full understanding of the Parties' network quality

5.6 The PFs' conclusions with respect to the Parties' network quality rely particularly on:

(a) The CMA's analysis of a subset of Ofcom's Connected Nations coverage data suggesting broadly similar 4G coverage across the four MNOs while 3UK and BTEE have greater 5G coverage than VUK and VMO2;[204] and

(b) OpenSignal data on 4G and 5G download speeds showing BTEE with the fastest 4G download speeds (followed by 3UK, VUK and then VMO2) and 3UK with the fastest 5G download speeds.

[201] See Appendix C, paragraph C.55 and [REDACTED].

[202] [REDACTED].

[203] [REDACTED].

[204] PFs, paragraphs 8.163-8.164.

5.7 Based on these analyses, the PFs conclude that:[205]

(a) 3UK has seen an improvement in its network quality. In areas where it has rolled out 5G, 3UK's network outperforms other operators and it currently offers the fastest 5G speeds in the median Travel to Work Area ("**TTWAs**");

(b) VUK, which has historically been in second place behind BTEE on network quality across several measures, now appears to lag slightly behind 3UK, particularly in 5G, with its network now appearing broadly comparable to 3UK's on certain metrics;

(c) BTEE is regarded as having the strongest overall network quality, whereas VMO2 has the lowest network quality among UK MNOs.

5.8 The PFs recognise that coverage and download speeds are just two possible measures of network quality and that the PFs' analysis only provides a partial insight into the quality offering of each network.[206] As explained in the Parties' previous submissions, network quality is multi-faceted,[207] and a fuller assessment of the different dimensions of quality shows that the PFs overstate the Parties' quality relative to rivals.

5.9 As set out in [REDACTED], 3UK's competitive position is significantly constrained by its more limited and heavily congested 4G network.[208] Both 3UK and VUK are constrained in their ability and incentive to invest sustainably in their networks due to their lack of scale and [REDACTED]. In the counterfactual, the Parties will become increasingly weak competitors, particularly in terms of the network quality that they can offer to meet the needs of their customers.

5.10 As shown in more detail below, the Parties consider that the analysis of the Parties' network quality in the PFs is partial and does not accurately reflect the Parties' overall competitive position in this dimension. [209]

5.11 With respect to coverage, Ofcom's overall Connected Nations' data of January 2024 shows that the Parties are in a weaker position than suggested by the PFs' analysis.[210]

(a) While all four MNOs have good 4G coverage of urban areas, there are significant differences between MNOs in 4G coverage of rural areas. BTEE is the clear leader with 87% 4G geographic coverage of rural areas compared with 79% for 3UK, 80% for VMO2 and 82% for VUK. Ofcom's 4G rural indoor coverage comparison shows that BTEE again leads with 84% of households compared with 73% for 3UK, 77% for VUK and 78% for VMO2. For 3UK, outside these areas it relies on 3G while VUK customers must rely

[205] PFs, paragraph 8.172.

[206] PFs, paragraph 8.171.

[207] [REDACTED]: dimensions include coverage, throughput and reliability, and capacity.

[208] As set out in **PF Annex 3**, the PFs understate the Parties' current congestion issues.

[209] PFs, paragraph 8.171(a).

[210] Ofcom Connected Nations Spring 2024 (data as at January 2024).

on 2G network coverage, which has a theoretical maximum speed of less than [REDACTED] per second, although actual experience [REDACTED].

(b) 5G's deployment is clearly at an early stage in the UK. Ofcom's data shows 3UK's 5G geographic coverage in urban areas is at 60%, placing it behind BTEE (67%) but ahead of VUK (46%) and VMO2 (44%). 5G geographic coverage in rural areas is much more limited, with BTEE leading with 31%, significantly ahead of 3UK (16%), VMO2 (12%) and VUK (9%).[211] Ofcom's figures indicate that 3UK does not have 5G coverage in 40% of urban areas and 84% of rural areas, and its "*5G very high confidence*" figures show that 3UK's 5G outdoor premises coverage is lowest of all MNOs (at 38%, compared with BTEE's 68% coverage, for example).

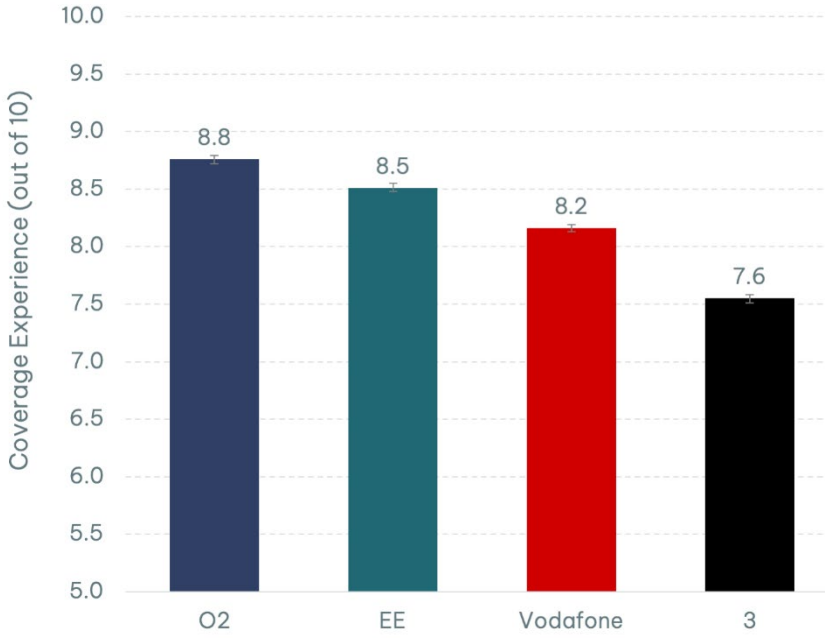
5.12 OpenSignal provides an alternative comparison of coverage based on where users of a given network have seen signal of any generation (2G to 5G) as a share of the total populated regions within the country where users have taken readings. As previously noted in [REDACTED],[212] OpenSignal's coverage experience data shows 3UK and VUK significantly behind the coverage experience of VMO2 and BTEE – the PFs do not take account of this evidence.[213] VMO2's lead in terms of coverage experience likely reflects its large amount of low band spectrum, which travels further and offers better indoor penetration. VMO2 has a very strong coverage network and the best voice coverage among MNOs as per Ofcom's Connected Nations Spring 2024 report. Customers of VMO2 can make and receive uninterrupted calls, use apps when desired and enjoy stable data rates most of the time.

[211] Ofcom Connected Nations Spring 2024 (5G "High Confidence" geographic coverage in rural areas as of January 2024).

[212] [REDACTED].

[213] The coverage experience score is calculated as the area where OpenSignal users on a given operator's network have seen signal of any generation (2G to 5G) as a share of the total populated regions within the country where users have taken readings.

Figure 5.1: OpenSignal coverage experience (across all technologies), data up to 20 February 2024



Source: OpenSignal, "Vodafone and 3 set to create UK's leading mobile coverage network post-merger", 26 March 2024.

5.13 The PFs' analysis focuses on coverage assessed by reference to TTWAs. It should be noted that mobile users value coverage beyond home and work locations. Being able to gain a mobile connection more widely is a key benefit of mobile technology.

(a) As set out in [REDACTED], Ofcom's Connected Nations signal strength data does not fully reflect the actual quality experienced by customers on each network.[214] The nature of mobile services is such that customers need to be able to use their mobile devices where they are, rather than at just one fixed location such as their home or their workplace. As such, having a good network only in some places is not sufficient to attract and retain customers if they experience poor coverage and high congestion when they are in other locations.

(b) Compass Lexecon's demand estimation based on the Parties' discrete choice consumer survey estimated that consumers would be willing to pay £0.35 extra per month (3%) for 1pp fewer places without a minimum signal of 2 Mbps.

(c) A report for the UK Government, albeit from 2014, found that while residents in mobile not-spots would pay the most to be able to have local mobile service, local visitors and tourists also have significant willingness-to-pay ("**WTP**") for mobile signal in non-spot areas, for indoor signals and for better 4G signals.[215] The report finds that residents in not-spot areas have an average WTP of £13.40 and £24.70 per month for 3G or 4G service (in addition to the price of a normal service contract) depending on whether they also get an improvement in their

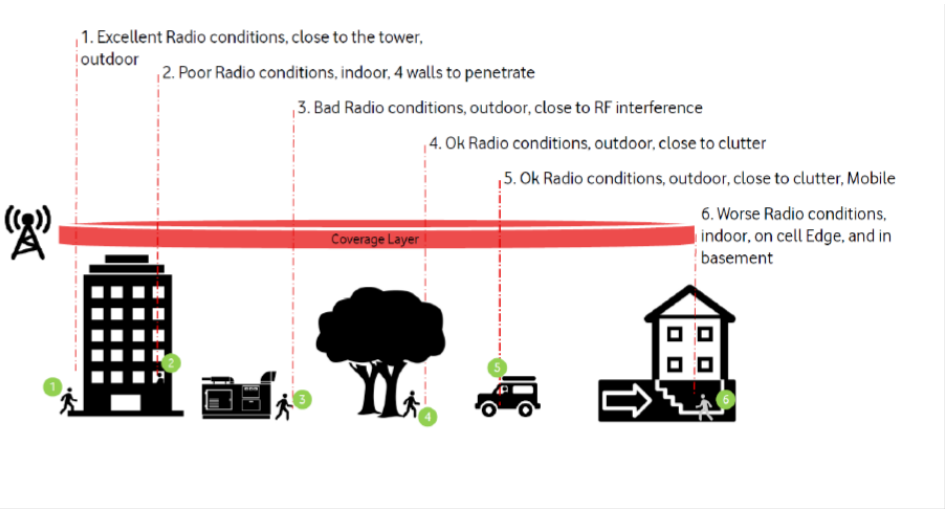
[214] PFs, paragraph 8.165.

[215] Rand, "Estimating the value of mobile telephony in mobile network non-spots", 2014.

signal strength compared with a signal nearby,[216] local visitors of not-spots areas have a similar average WTP of £13.20 and £22.00 per month and tourists in not-spots areas have an average WTP of £2.30 and £4.90 per month.[217]

5.14 The PFs only focus on coverage using a binary approach of whether 4G and 5G signal strength met Ofcom's definition for outdoor coverage. However, it is not the case that people will necessarily get reliable signals even outdoors under this definition. The signal strength of radio waves degrades exponentially as the distance between the transmitter and the receiver increases (this is termed "Free-Space Path Loss"). Radio waves also degrade due to different obstacles or mediums in the environment or as a result of movement between transmitters and receivers. For example, the quality of the radio signal will be affected by shadowing, reflection, diffraction and scattering.[218] **Figure 5.2** below shows the radio signal quality that would be experienced by users in different environments, having regard to their proximity to the base station radio.

Figure 5.2: Illustrative example of signal strength degradation



5.15 The Rand report for Government, referred to above, found customers have a significant WTP for indoor coverage and for a better signal strength.[219] As discussed in **PF Annex 4**, a substantial benefit of the Transaction will be MergeCo's much better signal strength and resulting greater service reliability.

5.16 The PFs note that overall coverage data does not capture the actual quality experienced on each network. While the PFs consider data on download speeds, this analysis is limited.

(a) Although download speed is an important dimension of network quality, it represents only a single aspect and consumers' overall experience is influenced

[216] Residents under the age of 65 were specifically willing to pay £6.00 per month to have a signal in their home (relative to having to go outside).

[217] All figures in 2014 GBP.

[218] Goldsmith, A., "Wireless communications", 2020, Chapter 2.

[219] For example, the Rand report for Government found that residents under the age of 65 were specifically willing to pay £6.00 per month to have a signal in their home (relative to having to go outside) (Rand, "Estimating the value of mobile telephony in mobile network non-spots", 2014).

by a range of other network attributes. Common activities such as video streaming, sending pictures, video conferencing and gaming, require not only fast download speeds but also reliable upload speeds and low latency. In order to assess mobile network quality more fully, all of these factors need to be considered together.

(b) For example, average speeds are not a good indicator of the speeds experienced by users during the peak ("busy") period when most customers want to use the mobile network. 3UK's 4G network shows severe congestion and poor performance in the evening, with average 4G speeds up to 40% slower in those hours, which is the greatest drop in performance among MNOs.[220] This is based on national averages and the deterioration in speeds in more densely populated areas during peak periods would be expected to be greater.

(c) P10 speeds data of the Parties shows that there can be significant periods when customers do not receive speeds suitable for use cases beyond the uses with the lightest data use. In fact, Ookla data from speed tests between April 2023 and March 2024 shows P10 speeds of 3UK at [REDACTED] Mbps (and of VUK at [REDACTED]Mbps), [REDACTED]. At paragraph 8.168, the PFs refer to a VUK internal document listing use cases requiring 10 Mbps (e.g. video chats, sending and receiving videos, single-player online games) and requiring 50 Mbps (e.g. streaming video in 4K quality, playing multiplayer games, uploading multiple files to cloud storage). This is consistent with the views of international regulators – for example, the French regulator ARCEP – that speeds above 10 Mbps are increasingly relevant to mobile customers.[221]

(d) While the PFs focus on a 25th to 75th percentile range, this range is calculated after already excluding TTWAs with poor coverage – these TTWAs would be expected to have relatively slow speeds.

(e) Finally, as the PFs acknowledge themselves, the "*Opensignal data is based on tests and as such in areas where there are limited numbers of tests or tests do not happen across the TTWAs, the results may provide an inaccurate representation of the speed consumers may experience in that area*".[222] On this basis, the Parties' view is that these results need to be taken with caution.

5.17 Considering the multifaceted nature of network quality, consumers' experience is driven by all these dimensions together. Therefore, it is more appropriate to assess the network quality of different MNOs in terms of customers' overall experience of their networks.

5.18 Evidence of customer churn better reflects customer views on network quality as a whole, as it is based on their overall experience of the network rather than specific

[220] OpenSignal, "5G is more consistent than 4G across all hours of the day in the UK", 29 June 2023, https://www.opensignal.com/2023/06/29/5g-is-more-consistent-than-4g-across-all-hours-of-the-day-in-the-uk (Data of March-May 2023).

[221] [REDACTED].

[222] PFs, paragraph 8.171(b).

individual network factors. In particular, **Figure 5.3** below shows that [REDACTED].[223]

Figure 5.3 – [REDACTED]

[REDACTED]

Source: [REDACTED]
Note: [REDACTED]

3UK's network quality

5.19 Despite having a good 5G network in localised areas,[224] the PFs do not place sufficient weight on the overall context, which is that 3UK's competitive position is [REDACTED]. As previously explained in [REDACTED],[225] [REDACTED]:

(a) While approximately [REDACTED] of the 3UK network has been upgraded, the majority of the network ([REDACTED]) still relies on legacy technology, including a significant number of 3G-only sites (around [REDACTED] of 3UK's sites remain 3G only).

(b) As set out in [REDACTED], [REDACTED]% of 3UK's sites (or [REDACTED]% of 3UK's customer base) are currently congested at a 5 Mbps congestion threshold.[226] 3UK's congested sites are largely in areas where 3UK does not have 5G coverage: [REDACTED] of 3UK's congested sites are sites without 5G equipment. All customers, including those with 5G handsets, will face busy hour congestion when they are in these locations.

(c) 3UK has [REDACTED] congestion in areas with 5G coverage, which [REDACTED] consists of congestion on 4G spectrum (as explained in CK Hutchison's response to [REDACTED] RFI [REDACTED]). This negatively impacts customer experience for [REDACTED]% of 3UK customers who do not have 5G devices, as well as 3UK customers who generally rely on low band spectrum for deep indoor coverage.

(d) As set out in [REDACTED], congestion is forecast to [REDACTED] on 3UK's network, [REDACTED] from [REDACTED]% of subscribers being in congested areas to [REDACTED]% over the next three years (based on a 5 Mbps threshold). The percentage of subscribers in congested areas is expected to [REDACTED].

(e) [REDACTED].

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[223] [REDACTED].

[224] As is reflected in Ofcom's Connected Nations data, indicating that BTEE and 3UK have more 5G coverage across the UK, and OpenSignal data showing 3UK having good 5G download speeds in some areas.

[225] [REDACTED].

[226] Even when measured at the cell level, almost [REDACTED] (i.e. [REDACTED]%) of 3UK customers are affected by congestion.

The PFs mischaracterise discussions of network quality in 3UK's internal documents

5.20 The PFs continue to rely in part on discussions of network quality within 3UK's internal documents [REDACTED].[227] However, as previously explained in [REDACTED],[228] [REDACTED].

5.21 At the outset, as explained at paragraph 5.19 above, [REDACTED].

5.22 The PFs' preliminary conclusions regarding 3UK's network quality are not supported by 3UK's internal documents when read in context:

(a) [REDACTED].[229] [REDACTED], as explained in [REDACTED]. As explained in the Parties' Initial Phase 2 Submission, [REDACTED].

(b) [REDACTED].[230] [REDACTED],231 [REDACTED][232] [REDACTED].[233] [REDACTED][234] [REDACTED].

(c) [REDACTED].[235] [REDACTED].[236] [REDACTED].[237] [REDACTED].[238] [REDACTED].

(d) [REDACTED].[239] As explained previously in [REDACTED],[240] [REDACTED].

Figure 5.4: [REDACTED]

[REDACTED]

[227] PFs, paragraphs 8.153 to 8.157.

[228] [REDACTED].

[229] PFs, paragraph 8.157(a), referring to [REDACTED] and [REDACTED].

[230] PFs, paragraph 8.157(b), referring to [REDACTED].

[231] [REDACTED].

[232] [REDACTED].

[233] [REDACTED].

[234] [REDACTED], quoted in PFs, paragraph 8.157(b).

[235] PFs, paragraph 8.157(d), referring to [REDACTED].

[236] PFs, paragraph 8.157(d), referring to [REDACTED].

[237] PFs, paragraph 8.157(d), referring to [REDACTED]

[238] [REDACTED].

[239] PFs, paragraph 8.157(c), referring to [REDACTED].

[240] [REDACTED].

Source: *[REDACTED]*

(e) [REDACTED].[241] [REDACTED].[242] [REDACTED].[243] [REDACTED].

The PFs mischaracterise VUK's internal documents with respect to VUK's network ambitions and expected future performance

5.23 The CMA provisionally concludes that VUK's ambition and strategy is to [REDACTED].[244] As previously explained, internal documents, [REDACTED].

5.24 As previously explained,[245] VUK, as would be expected of any MNO, has ambitions to improve its network and overall position in terms of 5G rollout, and it is therefore logical it would set ambitious forecasts. However, the reality is that [REDACTED]. As the CMA states in the Appendix G to the PFs, [REDACTED].[246]

5.25 [REDACTED]is due to a combination of factors, including: (i) [REDACTED], as explained above; and (ii) [REDACTED].[247] As such, VUK's [REDACTED]. The document cited by the CMA in paragraph C.25 of Appendix C [REDACTED] testifies to this noting that VUK [REDACTED]. The PFs specifically select VUK's [REDACTED],[248] [REDACTED]. In fact, the CMA acknowledges in its PFs that VUK considers itself to be [REDACTED].[249]

5.26 [REDACTED].[250]

5.27 Despite VUK's [REDACTED]. For instance, a VUK internal document [REDACTED].[251] Internal documents illustrate that [REDACTED].

(a) For instance, the [REDACTED].[252]

(b) In the more recent [REDACTED], Vodafone notes that [REDACTED].[253] In essence, this means VUK has [REDACTED] (see paragraph above).

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[241] PFs, paragraph 8.157(e), referring to [REDACTED].

[242] PFs, paragraph 8.157(e).

[243] [REDACTED].

[244] Appendix C to the PFs, paragraph C.25.

[245] [REDACTED].

[246] Appendix G to the Provisional Findings, paragraph G.85.

[247] See [REDACTED].

[248] Appendix C to the Provisional Findings, paragraph C.22.

[249] Appendix C to the Provisional Findings, paragraph C.24. See also [REDACTED].

[250] See [REDACTED].

[251] [REDACTED].

[252] [REDACTED].

[253] [REDACTED].

(c) As VUK's [REDACTED]. The same analysis [REDACTED].[254] In addition to [REDACTED], VUK notes that [REDACTED][255] [REDACTED].[256]

[REDACTED].

5.28 VUK also [REDACTED]. For example[REDACTED].[257]

(a) [REDACTED].[258]

(b) [REDACTED].[259]

(c) This is in comparison to [REDACTED].[260] This indicates that other [REDACTED]. The PFs specifically select VUK's [REDACTED] as evidence of [REDACTED],[261] [REDACTED].[262]

(d) VUK's January 2024 forecasts for 5G sites in the CAR FY25 support this pattern, predicting Vodafone will have [REDACTED] sites end of FY24 (i.e. [REDACTED] and [REDACTED] sites compared to BTEE and 3UK respectively) and [REDACTED] end of FY27 (i.e. [REDACTED] and [REDACTED] fewer sites compared to BTEE and 3UK respectively).[263]

Figure 5.5 – [REDACTED]

[REDACTED]

Source: [REDACTED]
Note: [REDACTED]

5.29 VUK's recent documents also illustrate [REDACTED]:

5.30

(a) [REDACTED].[264]

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[254] [REDACTED].

[255] A protocol that allows voice calls to be made over the 5G network, using the same radio access technology that the 5G data network uses.

[256] [REDACTED].

[257] A [REDACTED] leader in fixed broadband and mobile network testing applications, data and analysis.

[258] [REDACTED].

[259][REDACTED].

[260] [REDACTED].

[261] Appendix C to the Provisional Findings, paragraph C.22.

[262] [REDACTED].

[263] [REDACTED]. As noted above at paragraph 2.10, since the switch off of the VUK 3G network significant parts of VUK's rural coverage is reliant on 2G because the 4G indoor coverage just extends to 77% of rural households.

[264] [REDACTED].

(b) [REDACTED].[265]

(c) [REDACTED].[266]

(d) [REDACTED].[267]

5.31 Therefore, the PFs' assertion that VUK may "*alter and adapt plans over time, taking into account strategic priorities, performance and funding abilities*"[268] [REDACTED].

5.32 As detailed in Section 2 of the Parties' Initial Phase 2 Submission, VUK forecasts that by 2032 5G geographic coverage will reach [REDACTED]%.[269] As such, in the counterfactual, [REDACTED].[270]

5.33 Four factors will ensure the present constraints on VUK's network plans become more severe over time:

(a) Vodafone's inability to increase capital expenditure.

(b) Competing demands for capital across the Vodafone Group.

(c) Competing non-discretionary demands for capex within VUK e.g. HRV compliance, Beacon unwind, and compliance with Telecoms Security Regulations and SRN [REDACTED].

(d) [REDACTED].

5.34 Whilst VUK has been able to meet its internal target of [REDACTED] at roughly [REDACTED]% of sites, in reality congestion is forecast to increase on VUK's network in the counterfactual, with [REDACTED]% of sites expected to be congested at the 5 Mbps threshold in FY33.[271] This level of congestion would [REDACTED].[272]

5.35 Finally, at paragraph C.25 of Appendix C to the PFs, the CMA states that it has not found evidence to suggest [REDACTED]has hampered its ability to meet its customers' needs, nor have the Parties made that claim. This is simply not true. As previously explained, delivering 5G is a key driver for economic growth and a source for consumer welfare. MNOs in Europe and internationally are investing in 5G to the benefit of their economies and customers; it is the UK, with MNOs not properly investing in and deploying 5G, that is falling behind. Further, and contrary to the CMA's preliminary conclusions, Vodafone's internal documents [REDACTED]:

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[265] [REDACTED]. [REDACTED].

[266] [REDACTED]. [REDACTED].

[267] [REDACTED].

[268] Appendix C to the Provisional Findings, paragraph C.24.

[269] [REDACTED], see KPI analysis – Parties' internal estimates; [REDACTED].

[270] Initial Phase 2 Submission, Section 2.

[271] See [REDACTED].

[272] See [REDACTED] for further detail.

(a) A paper to the [REDACTED] dated November 2023 presenting [REDACTED] and in particular discussing [REDACTED]".[273]

(b) A presentation on VUK business from 2023 describes how [REDACTED].[274]

(c) In [REDACTED]dated February 2023 notes indicate that for VUK, [REDACTED],[275]

(d) In a presentation dated 17 November 2022, although VUK [REDACTED].[276]

(e) The CMA mischaracterises VUK's strategic priorities with reference to one internal document ([REDACTED]) at Appendix C to the PFs: [REDACTED].[277] This internal document also shows that [REDACTED] are key factors to determine VUK's network strategy.[278]

Brand and customer satisfaction

5.36 While the PFs correctly observe that 3UK is "*relatively weaker*" in terms of brand strength, compared with the other MNOs, the PFs understate the considerably weaker position of 3UK and overlook that 3UK's internal documents provide mixed evidence in terms of its brand positioning:[279]

(a) A closer examination of the 3UK internal documents cited in the PFs indicates that spontaneous awareness of the Three brand was [REDACTED],[280] but a [REDACTED].[281] A [REDACTED] cited in the PFs further shows that the Three brand's spontaneous awareness figures have [REDACTED].[282] The same 3UK internal document demonstrates that [REDACTED].[283] While it is correct to note that "[REDACTED]", this does not reflect the totality of the evidence in 3UK's internal documents.

(b) The statement in the PFs that the Three brand "*is generally stronger than MVNO brands*" overstates the position in 3UK's internal documents. For example, [REDACTED]demonstrates that [REDACTED].[284]

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[273] [REDACTED].

[274] [REDACTED].

[275] [REDACTED].

[276] [REDACTED].

[277] [REDACTED].

[278] [REDACTED].

[279] PFs, paragraph 8.177.

[280] PFs, paragraph 8.174.

[281] [REDACTED].

[282] [REDACTED].

[283] [REDACTED].

[284] [REDACTED].

5.37 Further, while the PFs note that 3UK's customer satisfaction is "*in line […] with the industry average*", they overlook the strong performance of MVNOs on the same metric: Tesco Mobile had the fewest complaints per 100,000 subscribers, and Sky Mobile's performance equalled that of BTEE and VUK (i.e. 2 complaints per 100,000 subscribers, and "*better*" than the industry average).[285]

5.38 Not only does the evidence on brand strength and customer satisfaction suggest that 3UK is not a particularly strong competitor, but it also indicates that the PFs' conclusion that MVNOs pose only a limited competitive constraint is inconsistent with market realities. The strength of MVNOs is explained in further detail at Section 8 below.

The Parties' weak competitive position will worsen in the counterfactual

5.39 As set out at Section 4 above (and as previously submitted in [REDACTED]),[286] both 3UK and VUK are constrained in their ability and incentive to invest sustainably in their networks due to their lack of scale [REDACTED]. In the counterfactual, the Parties will become increasingly weak competitors, particularly in terms of the network quality that they can offer to meet the considerable needs of their customers. The PFs fail to recognise that this competitive positioning is unsustainable going forward.

The competitive conditions described in the PFs will worsen in the future, with negative repercussions for 3UK's competitive position

5.40 The PFs consider that, although "*[3UK's] network quality and brand reputation were historically below that of the other MNOs, due to recent improvements in 3UK's network it has improved its network quality and [REDACTED]*".[287] In particular, the PFs note that 3UK "*is leading on 5G speeds, is behind BTEE on 4G speeds and comparable to BTEE on 5G coverage*".[288]

5.41 As previously explained at [REDACTED] (and again in [REDACTED]), and paragraph 5.22 above, improvements in 3UK's network quality were achieved [REDACTED]. The PFs discount this evidence. As explained at paragraphs 4.25 and 4.26 above, [REDACTED]. 3UK's [REDACTED] competitive network quality in the long term should be assessed against the backdrop of the PFs acknowledging that "*being able to invest in network quality is important to compete effectively*".[289]

5.42 The PFs further provide that 3UK's internal documents refer to "*[REDACTED]*", in particular "*in its more recently established revenue streams*", while its medium-term budget anticipates "*[REDACTED]*" and "[REDACTED]*, in line with its recent*

[285] https://www.ofcom.org.uk/phones-and-broadband/service-quality/telecoms-and-pay-tv-complaints (accessed: 18 September 2024).

[286] [REDACTED].

[287] PFs, paragraph 8.187(a).

[288] PFs, paragraph 8.187(a).

[289] PFs, paragraph 8.187(c).

performance".[290] However, as 3UK has explained at paragraph 4.28 above, [REDACTED].

5.43 The PFs also cite 3UK's growth in the business retail segment, FWA and SMARTY as evidence of 3UK's "*ability and incentive to find new avenues for revenue growth*".[291] As explained at paragraphs 4.27 and 4.29 above, [REDACTED].

5.44 As explained in REDACTED, 3UK's network capacity will need to [REDACTED].

CK Hutchison [REDACTED]

5.45 The provisional conclusion in the PFs that CK Hutchison is incentivised to invest and prioritise resources where 3UK sees growth opportunity [REDACTED] ([REDACTED]).[292] [REDACTED]. As explained at paragraphs 2.28 to 2.31 of the Parties' Initial Phase 2 Submission, in [REDACTED],[293] and at paragraph 4.24(c) above, [REDACTED]. The PFs do not engage with this evidence.

Vodafone would not have the incentive to support VUK if [REDACTED]

5.46 As previously explained, VUK [REDACTED] in the retail mobile services market. The PFs refer to VUK's competitive constraint in retail mobile, and [REDACTED].

5.47 The PFs compare VUK's performance [REDACTED].[294] However, as explained above at paragraph 3.5(e), [REDACTED].

5.48 The CMA also mischaracterises VUK's internal documents relied upon in the PFs. For example, with respect to internal document [REDACTED], the CMA considers [REDACTED].[295] However, as can be seen, [REDACTED].[296]

5.49 In reality, the UK's status is shown in Vodafone's FY23 results presentation which shows "*Capex reallocated from lower to higher ROCE markets*" and includes the UK in its list of markets where ROCE has fallen below WACC (alongside Italy, Spain and Romania).[297]

5.50 [REDACTED]. [REDACTED].[298]

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[290] PFs, paragraph 8.189. See also Appendix C, paragraph C.9.

[291] PFs, paragraph 8.187(a).

[292] See Appendix C, paragraph C.6.

[293] [REDACTED].

[294] See for example Appendix C to the PFs, paragraph C.12.

[295] See Appendix C to the PFs, paragraph C.12(b).

[296] [REDACTED].

[297] See PowerPoint Presentation (vodafone.com), slide 11. For further detail see the [REDACTED] the Initial Phase 2 Submission.

[298] See [REDACTED] for further detail.

6. 3UK and VUK are not close competitors

6.1 A wide variety of evidence confirms that the Parties are not close competitors, including:

(a) data from the CMA's survey of the Parties' customers;

(b) switching ratios;

(c) diversion ratios based on CL and CMA econometric analysis;

(d) third-party evidence;

(e) internal documents;

(f) the fact that the Parties operate in entirely different sub-segments of the business segment; and

(g) the PFs' closeness analysis should be considered in the context of the pro-competitive impact of the Transaction.

Data from the CMA's survey of the Parties' customers supports the conclusion that they are not close competitors

6.2 As explained in [REDACTED], the CMA survey of the Parties' customers and the switching rates based on MNP and GfK data support the very clear conclusion that 3UK and VUK are not close competitors. The PFs' characterisation is at odds with the data, and the PFs do not address the Parties' previous submissions on this point. The diversion ratios reported in Tables 8.34 and 8.35 of the PFs show that:

(a) Only 9% of VUK customers would switch to a 3UK tariff if the VUK tariff they purchased recently did not exist. This is in stark contrast to the fact that three times as many customers (27%) would switch to BTEE, more than twice as many customers (24%) would switch to VMO2, and twice as many customers (18%) would switch to one of the MVNOs.

(b) Of VUK's price-marginal customers – those that would switch to a different option if the VUK tariff they purchased recently was 10% more expensive – only 14% indicated they would switch to 3UK. Twice as many (28%) would divert to BTEE. VMO2 (22%) and the MVNOs in aggregate (19%) are also more important alternatives for VUK's price-marginal customers than 3UK.

(c) Of VUK's quality-marginal customers – those that would switch to a different option if VUK's network became slightly less reliable – only 9% would switch to 3UK. Both BTEE (31%) and VMO2 (26%) would attract almost three times as many switching customers.

(d) For 3UK customers, BTEE and VMO2 are the most frequently named alternatives. BTEE is named as the second-preferred provider by 24% of all of 3UK customers, by 26% of 3UK's price-marginal customers, and by 27% of 3UK's quality-marginal customers. VMO2 is named by 23% of all of 3UK customers and by 22% of 3UK's price-marginal and quality-marginal customers. By contrast, only 17-19% of 3UK's customers have indicated VUK

as their second-preferred option. MVNOs are – in aggregate – named by more 3UK customers as their preferred alternative than VUK.

Switching ratios confirm that the Parties are not close competitors

6.3 Switching ratios based on both MNP and GfK data confirm that the Parties are not close competitors, even when focusing on the particular subsegments in which the PFs consider the Parties compete particularly closely (namely, the unlimited data, pre-paid and SOHO subsegments). The PFs do not engage adequately with the Parties' previous submissions on this point, including [REDACTED],[299] focusing narrowly on the idea that the Parties need not be the "*primary alternatives*" to one another to dismiss this evidence.[300]

6.4 As noted in the Initial Phase 2 Submission and in [REDACTED],[301] the Parties consider GfK data to be more appropriate for assessing closeness of competition. In addition to the rigorous survey methodologies put in place by GfK (as described at paragraph 3.7 of the Parties' Initial Phase 2 Submission), the GfK data is more representative of the UK population than MNP data. As recognised by the CMA,[302] the main limitation of the MNP data is that it is an opt-in service and therefore does not capture switching for users who do not choose to retain their number (which is particularly common for pre-paid customers, as only c.[READCTED]% of them port their numbers).[303] Furthermore, the Parties do not regard the issues raised in the PFs in relation to GfK's survey methodology to be valid. For example, the use of commercial online panels is a common practice in the industry and typically results in a more representative sample compared to other sampling methods. Further, GfK has [REDACTED] to prevent sampling biases.

6.5 Switching ratios based on both MNP and GfK data show that in the consumer retail segment the Parties are not the [REDACTED] alternative to one another, and leavers of either Party largely prefer BTEE, VMO2 and MVNOs over the other Party. Using GfK FY23 data:[304]

(a) [REDACTED]% of leavers from VUK joined either VMO2 ([REDACTED]%) or BTEE ([REDACTED]%), [REDACTED]% joined MVNOs and only [REDACTED]% switched to 3UK.

(b) Similarly, [REDACTED]% of customers who left 3UK went to either VMO2 ([REDACTED]%) or BTEE ([REDACTED]%), [REDACTED]% to MVNOs and only [REDACTED]% to VUK.

6.6 The above data shows that the Parties are not "[REDACTED]", "[REDACTED]" or even "[REDACTED]" alternatives for each other's customers.

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[299] [REDACTED].

[300] PFs, paragraph 8.198.

[301] [REDACTED], and Initial Phase 2 Submission, paragraph 3.7.

[302] PFs, paragraph 8.196.

[303] Initial Phase 2 Submission, paragraph 3.7.

[304] [REDACTED].

6.7 In those subsegments where the CMA has expressed particular concerns, 3UK and VUK are not the [REDACTED] alternative to one another, and leavers of either Party largely prefer BTEE, VMO2 and MVNOs over the other Party:

(a) In the post-paid unlimited data subsegment (using MNP FY23 data):[305]

(i) [REDACTED]% of VUK leavers switched to BTEE ([REDACTED]%) or VMO2 ([REDACTED]%), [REDACTED]% went to MVNOs and only [REDACTED]% went to 3UK.

(ii) [REDACTED]% of 3UK leavers switched to BTEE ([REDACTED]%) or VMO2 ([REDACTED]%), [REDACTED]% went to MVNOs and only [REDACTED]% went to VUK.

(b) In the SOHO subsegment (using MNP FY23 data):[306]

(i) [REDACTED]% of VUK's leavers joined BTEE or VMO2 and [REDACTED]% joined MVNOs, with only [REDACTED]% joining 3UK.

(ii) [REDACTED] – it has provided diversions for business customers (primarily SOHO/micro businesses), of which only [REDACTED]% of leavers went to VUK.

(c) In the pre-paid subsegment (using FY23 GfK data):[307]

(i) [REDACTED]% of VUK leavers switched to BTEE ([REDACTED]%) or VMO2 ([REDACTED]%), [REDACTED]% went to MVNOs and only [REDACTED]% went to 3UK.

(ii) [REDACTED]% of 3UK leavers switched to BTEE ([REDACTED]%) or VMO2 ([REDACTED]%), [REDACTED]% went to MVNOs and only [REDACTED]% went to VUK.

Diversion ratios from econometric analysis prepared by the Parties and the CMA show that the Parties are not close competitors

6.8 As explained at **PF Annex 4**, the CMA's demand estimation is subject to a number of serious methodological flaws and its reliability is limited at best. Nevertheless, the Parties note for completeness that the results of the CMA's demand estimation confirm that the Parties are not close competitors:[308]

(a) The diversion ratio from VUK to 3UK is just 15%, well below the diversion ratios for VMO2 (29%), BTEE (28%) or the MVNOs combined (22%).

[305] [REDACTED]. GfK does not provide switching ratios for this particular subsegment.

[306] Initial Phase 2 Submission, paragraph 3.10. GfK does not provide switching ratios for this particular subsegment.

[307] [REDACTED]. As MNP data captures less than [REDACTED] of pre-paid leavers, it is more reliable to refer to FY23 GfK data to calculate switching ratios in this subsegment.

[308] PFs, Table 8.36.

(b) Similarly, the diversion ratio from 3UK to VUK is 17%, well below those for VMO2 (27%), BTEE (26%), and the MVNOs combined (23%).

Third-party evidence demonstrates that the Parties are not close competitors

6.9 The evidence gathered by the CMA from MNOs and MVNOs confirms that the Parties are not close competitors in the market for retail mobile services in the UK.

(a) In relation to the consumer retail segment, only a third of competitors (three out of nine) stated that 3UK is a "*very strong*" competitor to VUK, and under half (four out of nine) stated that VUK is a "*very strong*" competitor to 3UK. While the PFs note that the Parties are recognised by competitors as "*having similar products, along with contract types and customer demographics*",[309] evidence provided by the Parties demonstrates that there are material differences in the competitive positionings of the Parties in terms of brand positioning, customer bases and commercial strategies, with only limited competitive interaction between the Parties in terms of market initiatives.[310] For example, 3UK's customers tend to be more data-intense users, opting for larger data allowances compared to VUK's customers.[311] The Parties' products are no more "*similar*" than those of other players in the retail mobile services market – there is a high degree of substitutability between different mobile products, including between PAYM and PAYG tariffs and SIMO and handset offerings.[312]

(b) The evidence collected from MNOs and MVNOs further confirms that even if the Parties have an overlap in the business retail segment it is limited to the SOHO and SME subsegments. Contrary to the assertion at paragraph 8.237 of the PFs, 3UK and VUK do not compete "*less closely*" for larger businesses, which would imply a certain degree of proximity of the Parties' competitive positions. Rather the third-party evidence clearly demonstrates that the Parties *do not* compete closely for larger businesses, given that none of the Parties' competitors indicated that 3UK and VUK compete closely in the medium SME, corporate and public sector subsegments.

Internal documents similarly show that 3UK and VUK do not compete closely

6.10 As previously explained in [REDACTED],[313] and in further detail at Section 8 below, the Parties' internal documents demonstrate that [REDACTED]. [REDACTED]. For example:

(a) [REDACTED].

(b) A holistic review of VUK's internal documents demonstrate that [REDACTED]:

[309] PFs, paragraph 8.236.

[310] [REDACTED]; Initial Phase 2 Submission, paragraph 2.4.

[311] [REDACTED].

[312] [REDACTED].

[313] [REDACTED].

(i) [REDACTED] within VUK's internal documents. For example, within [REDACTED].[314] [REDACTED] across VUK's internal documents as a [REDACTED].[315] As set out in Section 8 below, VUK also [REDACTED].

6.11 The Parties' internal documents therefore support the conclusion that 3UK and VUK do not compete closely. The PFs do not engage with the Parties' submissions on this point in concluding that the Parties compete closely with each other.[316]

The Parties operate in different sub-segments of the business segment

6.12 Contrary to the provisional conclusions in the PFs, feedback from business customers demonstrates that the Parties are not close competitors within the business segment. Evidence gathered by the CMA indicates that 3UK was not considered or approached by a single VUK business customer when considering their options of mobile provider.[317] Given that 3UK does not have a significant presence in the business segment, any competitive interaction between the Parties is very limited.

6.13 Despite this feedback, the PFs continue to *overstate* the degree of overlap between the Parties in the business segment. Paragraph 8.254 of the PFs asserts that the *"the Parties are close competitors in the […] SOHO and small SME subsegments"*; however:

(a) The PFs rely on 3UK's very small presence in the SOHO and small SME subsegments (see PFs, Table 8.15 – a total share of supply of [0-5]% in the business segment) compared to [REDACTED] in other business subsegments. As explained in the Parties' Initial Phase 2 Submission, 3UK is constrained in its ability to compete in the business segment due to, amongst other things, its poor network quality and low brand awareness. Accordingly, its future prospects to grow beyond the SOHO and small SME subsegments are limited and its presence in the business segment absent the Transaction will remain small – i.e. it is *not* a close competitor to VUK.

(b) The CMA clarifies that VUK was mentioned by 18 out of 27 respondents while 3UK was mentioned by only 12. 3UK was not mentioned by any VUK customer.

The PFs' closeness analysis should be considered in the context of the pro-competitive impact of the Transaction

6.14 The evidence in the PFs clearly does not support the CMA's provisional finding that the Parties are close competitors in the retail mobile services market.

6.15 The Parties reiterate that what matters, however, is not a narrow focus on whether the Parties can be characterised as "close competitors" but instead whether the Transaction

[314] [REDACTED].

[315] [REDACTED].

[316] PFs, paragraph 8.233.

[317] See responses to the CMA's questionnaire at paragraphs 363 to 364 of the Phase 1 Decision and responses from additional SOHO and SME business customers of the Parties at paragraph 8.254 of the PFs.

would be likely to result in customers in the retail mobile services market being worse off. The comprehensive evidence submitted by the Parties, including the merger simulations, shows that, once all the key likely effects are accounted for, the Transaction will substantially increase consumer welfare and not lead to higher prices. The pro-competitive impact of the Transaction is discussed in greater detail in **PF Annex 3**.

7. Strength of BTEE and VMO2

7.1 The PFs understate the leading market positions held by BTEE and VMO2. The evidence shows that BTEE and VMO2 are strong competitors, and BTEE and VMO2 do not face an effective challenger with scale.

The PFs understate the leading MNOs' market position

7.2 The view that is sustained in the PFs is that BTEE and VMO2 appear to "*compete less aggressively than the Parties in some respects*", that "*[b]oth are viewed by third parties as being less innovative/slower to change than the Parties*", and that "*they have also both been losing share by both revenue and subscribers*".[318] The PFs downplay BTEE and VMO2's competitiveness in the market and refer to the CMA's own estimates of mobile operator churn rates in the PAYM segment from Q1 2021 to Q4 2024 which state that "*BTEE had the second highest rates of churn of MNOs, and these rates have increased"* to a point that, "*as of the end of 2023, BTEE's churn rate was at a similarly high level to 3UK's".* Meanwhile, when excluding Tesco Mobile, "*VMO2 had the second lowest rates of churn of MNOs".*[319]

7.3 The PFs disregard the facts previously explained in [REDACTED],[320] namely that BTEE and VMO2 are generating disproportionately high (and growing) profits, accounting for the vast majority of annual positive mobile cashflows (87%) between 2020 and 2022 due to their large mobile customer bases, and exercising a strong competitive constraint on the Parties. This conclusion is supported by:

(a) the third-party evidence cited by the CMA, and with which the Parties agree (all third party competitors that responded to the CMA's competitor questionnaires "*consider that BTEE and VMO2 are competitors to the Parties in the consumer retail segment";* all competitors stated that *"BTEE is a strong/very strong competitor to both 3UK and VUK"* while "*VMO2 is a strong/very strong competitor to 3UK"* with "*eight out of nine"* perceiving *VMO2* to be *"a strong/very strong competitor to VUK"*) [321]; and

(b) diversion ratios based on the CMA econometric analysis, which show that BTEE and VMO2 are the two most important rivals to which the Parties lose customers. For VUK customers, 28% and 29% switch to BTEE and VMO2,

[318] PFs, paragraph 8.263.

[319] PFs, paragraph 8.92.

[320] [REDACTED].

[321] PFs, paragraph 8.240.

respectively. For 3UK customers, 26% and 27% switch to BTEE and VMO2, respectively;[322] and

(c) the CMA's view that, in the overall retail market, despite *"BTEE's and VMO2 + Tesco Mobile's market shares continue to fall […] they remain the largest two mobile operators"*.[323]

BTEE and VMO2 are strong competitors

7.4 The PFs continue to understate the competitive strength of BTEE and VMO2, relying on competitor questionnaires to suggest that the two largest MNOs are "*expensive and slow to change/innovate*",[324] and not engaging sufficiently with the Parties' previous submissions, which demonstrate that BTEE and VMO2 are the clear market leaders and the primary rivals to which the Parties lose customers (as noted at paragraph 7.3(b) above).

7.5 As explained in [REDACTED],[325] BTEE has a strong network quality reputation and has introduced a number of innovative customer propositions in recent years.

(a) BTEE is consistently ranked as having the best network amongst the UK MNOs, and this has been a prominent feature of its marketing over the last 10 years. BTEE frequently cites the rankings of RootMetrics, and in particular the fact that RootMetrics has rated EE as the UK's best network 22 times in a row.[326] In Q1 FY23/24, third party benchmarks from RootMetrics and Umlaut showed that BTEE's *"#1 Network performance continues in Mobile for the 10th year in succession*".[327]

(b) 47% of BTEE's customers are long-term loyal customers (i.e. customers who have not changed provider in over six years) and it has a large fixed base to which it can cross-sell mobile services.[328]

(c) The view that BTEE is slow to innovate is inconsistent with its rebranding launched in October 2023. As part of the rebrand, it introduced novel propositions aimed at enhancing user-friendliness to "*transform [its] customers' experience*", and which BTEE anticipates will drive growth.[329] BTEE has rebranded itself as a subscription-based platform business to satisfy all customer needs related to connectivity and technology. The relaunched

[322] PFs, Table 8.36.

[323] PFs, paragraph 8.106.

[324] PFs, paragraph 8.241.

[325] [REDACTED].

[326] https://rootmetrics.com/en-GB/content/uk-mobile-performance-review-1h-2024 (accessed 19 September 2024).

[327] PFs, Appendix C, paragraph C.26(c).

[328] https://www.which.co.uk/news/article/the-most-common-mobile-network-complaints-and-what-to-do-about-them-aA81X7w4KQL9 (accessed 19 September 2024).

[329] https://www.telecoms.com/wireless-networking/ee-dips-toe-in-adjacent-markets-with-snazzy-relaunch (accessed 19 September 2024).

service combines classic telecoms services, alongside video streaming, gaming, device insurance, and a consumer electronics storefront, all with a single sign-on to the "EE hub" and offers the opportunity for customers to manage all their subscribed services via this central EE hub.[330] Further examples of BTEE's ongoing innovation are its recent launches of the UK's "*first broadband package built for next level gaming*" and of its brand new 5G standalone mobile network across 15 major cities in the UK, together with its new Wi-Fi 7 Smart Hub Pro.[331]

(d) Confidential extracts of third-party submissions show the PFs understate BTEE's strong network quality reputation:

(i) BTEE's internal documents confirm that it views itself as "*[REDACTED]*" in a "*[REDACTED]*" market.[332]

(ii) BTEE claims to have the best network in the UK, and [REDACTED]. BTEE describes itself as having "*the best and most reliable mobile network"* against metrics such as "*overall population across 4G", "4G geographic coverage"* and "*5G population coverage"* with a continued strategy "*to prioritise [REDACTED]"*.[333]

(iii) BTEE [REDACTED]. As noted at paragraph C.29 of Appendix C to the PFs, BTEE considers itself "*[REDACTED]*". For example, [REDACTED], BTEE's internal documents note that "*[REDACTED]*",[334] [REDACTED]: while BTEE considered that VUK [REDACTED]. Similarly, while 3UK is noted to have [REDACTED].[335]

7.6 VMO2's strong brand and aggressive pricing propositions are central to its competitive strength, as the Parties previously explained in [REDACTED].[336]

(a) The strength of VMO2's brand is an important driver of its competitive strength and its position as the largest MNO in the consumer segment. It attracts consumers through its "Priority Moments" loyalty programme, which gives subscribers exclusive benefits and rewards, such as early access to event

[330] https://www.telecoms.com/wireless-networking/ee-dips-toe-in-adjacent-markets-with-snazzy-relaunch (accessed 19 September 2024).

[331] https://newsroom.ee.co.uk/ee-launches-uks-first-broadband-package-built-for-next-level-gaming/ (accessed 19 September 2024); https://www.techradar.com/computing/wi-fi-broadband/ee-launches-broadband-made-for-gamers-with-download-speeds-of-16gbps (accessed 19 September 2024); EE LAUNCHES GAME-CHANGING 5G STANDALONE NETWORK AND NEXT-GEN WI-FI 7 ROUTER TO OFFER CUSTOMERS THE UK'S BEST CONNECTIVITY IN AND OUT OF HOME (accessed 2 October 2024).

[332] [REDACTED].

[333] [REDACTED].

[334] [REDACTED].

[335] [REDACTED].

[336] [REDACTED].

tickets, discounts at partner retailers, and other special offers. This is evidenced by its successful recent campaigns on roaming (providing customers with free EU data roaming); Priority Rewards (which enhance customer loyalty through exclusive deals and experiences); and O2 Switch Up, which provides customers with the flexibility to upgrade their devices at any time.[337] Indeed, 43% of VMO2's customers are long-term loyal customers – a significantly higher proportion than for 3UK (30%) (Which?, June 2024).[338]

(b) VMO2 offers significant discounts to its mobile users. Recent examples include:

(i) Offers in the affiliate market (such as uswitch.com), which traditionally attracts mostly price sensitive customers.[339] For example, VMO2 currently offers 50GB for £17[340] on its website, versus 50GB for £10[341] in the affiliate market;[342]

(ii) VMO2's ongoing summer sales, which in addition to offering discounted prices, includes other benefits such as roaming, Disney+, Amazon Prime etc.[343]

7.7 The PFs describe VMO2 as having "*the lowest ranked network quality*".[344] The PFs place undue weight on VMO2 having "*the weakest network quality of the four MNOs*"[345] and downplay the fact that VMO2 performs well on several metrics that matter to customers (e.g. reliability and consistency), and, as the Parties have previously submitted, the fact that there is a gap between network quality *perception* and actual performance (see paragraph 5.12 above on its actual performance).[346] By perception, the Parties refer to the legacy branding of O2's network – for example, its historic partnership with Apple, customer perceptions of quality service, and O2's loyalty and roaming. The PFs do not engage with the fact that, as the Parties submitted

[337] https://www.o2.co.uk/why-o2 (accessed 19 September 2024).

[338] https://www.which.co.uk/news/article/the-most-common-mobile-network-complaints-and-what-to-do-about-them-aA81X7w4KQL9 (accessed 19 September 2024).

[339] https://www.uswitch.com/mobiles/compare/sim_only_deals/ (accessed 27 June 2024) (accessed 19 September 2024).

[340] https://www.o2.co.uk/shop/sim-cards/sim-only-deals?setTTSelectedStack=360 (accessed 19 September 2024).

[341] https://www.uswitch.com/mobiles/compare/sim_only_deals/ (accessed 19 September 2024).

[342] It is worth noting that the two contracts are not identical. The one on the O2 website is 24 months, whereas the one on Uswitch is a 12-month contract.

[343] https://www.o2.co.uk/shop/sim-cards/sim-only-deals?setTTSelectedStack=360#deviceType=phone&contractLength=Featured (accessed 19 September 2024).

[344] PFs, paragraph 8.241.

[345] PFs, paragraph 8.158.

[346] See the Parties' Initial Phase 2 Submission, paragraph 1.8.

in [REDACTED],[347] VMO2 performs well on several metrics that customers care about is further substantiated by:

(a) OpenSignal's coverage experience data (see paragraph 5.12 above) which shows that customers do have a positive perception of VMO2's network quality across the country;

(b) [REDACTED].[348] This strong brand image and reputation for reliability is what attracts and will continue to attract new customers. In any event, as explained in greater detail at **PF Annex 3**, Beacon 4.1 will enable VMO2 to significantly improve its network quality and offering to its customers; and

(c) Third-party documents show VMO2's ability to leverage its competitiveness when addressing issues with network quality perception, and the weight placed by VMO2's customers on various other metrics besides network quality:

(i) As noted at paragraph C.32 of Appendix C, [REDACTED]. Paragraph C.32(b) of Appendix C shows that, when VMO2's [REDACTED] in June 2023, VMO2 had [REDACTED].

(ii) VMO2's internal documents indicate that "*[REDACTED]*", VMO2's strategy is also directed at other metrics to ensure [REDACTED]. Particularly, VMO2's June 2023 strategic plan states that its "*[REDACTED]*" since it considers that "*[REDACTED]*" ([REDACTED]).

7.8 As shown by evidence disclosed into the confidentiality ring, the PFs do not engage with evidence showing the positive impact that the Beacon 4.1 spectrum trade will have on VMO2's network quality which the parties entered into part way through the Phase 2 investigation. The CMA's assessment is instead based on outdated VMO2 internal documents which discuss the spectrum asymmetry prior to entering into the Beacon 4.1 arrangements and which therefore no longer have any probative value:

(a) Absent Beacon 4.1, VMO2 was [REDACTED].

(b) [REDACTED].

<u>BTEE and VMO2 do not face a challenger with sufficient scale</u>

7.9 Contrary to the PFs' characterisation of BTEE and VMO2's competitive positions, they are the clear market leaders with significant scale (in terms of assets and customers), strong brands and strong customer perceptions of their network quality. They do not currently face a third challenger with the scale to invest in network quality and drive competition in the retail mobile services market (as the Parties previously explained at paragraph 7.7 of [REDACTED], and as noted in Section 4 above). BTEE and VMO2 internal documents show the pivotal role that scale plays in the competitive strategies of BTEE and VMO2:

[347] [REDACTED].

[348] [REDACTED].

(a) As mentioned at paragraph C.27 of Annex C, BTEE's internal documents consider [REDACTED]. See also the internal documents discussed at paragraph 4.17(a) above.

(b) In a strategic plan dated 28 May 2023, VMO2 notes [REDACTED].

(c) In contrast, VMO2's internal documents point to the [REDACTED]. In particular, one states that "*[REDACTED]*", highlighting that 3UK's mobile base, revenue and ROCE are all [REDACTED].

8. Importance of MVNOs

8.1 The CMA's provisional finding that MVNOs pose only a limited constraint is at odds with the evidence that they offer some of the cheapest tariffs across the market, including for unlimited and high data allowances. MVNOs have the ability to compete with MNOs across price and non-price parameters of competition. MVNOs are strong and growing competitors, and exercise a strong competitive constraint on the Parties:

(a) MVNOs compete aggressively and differentiate on price;

(b) MVNOs can, and do, compete on network quality;

(c) access to the MergeCo network will make MVNOs more competitive;

(d) MVNOs compete strongly across the entirety of the retail mobile services market; and

(e) the Parties' internal documents demonstrate that they consider MVNOs – including smaller MVNOs – to be strong and important competitors.

MVNOs compete aggressively on price

8.2 As the Parties previously explained in [REDACTED],[349] MVNOs compete aggressively and differentiate from their MNO hosts on price. This reflects the MVNOs' strong bargaining power in wholesale negotiations with MNOs, the fact that they do not have to fund the cost of building and maintaining their own radio networks, predominantly offer online customer service (rather than relying on an extensive retail store footprint), and receive parity of access to the same network capabilities as their host network.[350] The PFs do not engage fully with this evidence.

8.3 The favourable wholesale access agreements MVNOs are able to negotiate with the MNOs enable them to provide competitive retail propositions which is supported by both the Parties' and third-party evidence cited in the PFs. For example:

(a) The Pure Pricing data analysed by the CMA confirmed that iD Mobile was the cheapest provider of unlimited data pre-paid tariffs. Furthermore, the cheapest

[349] [REDACTED].

[350] As explained in further detail at paragraph 1.8(iii)(b) of the Parties' Initial Phase 2 Submission. See PFs, paragraph 9.181(b).

tariffs across PAYM SIMO 12-month tariffs with capped data allowances were offered by MVNOs, including Tesco Mobile, Sky Mobile and iD Mobile.[351]

(b) Sky Mobile's internal documents also suggest that MVNOs (Lyca Mobile and iD Mobile) are the cheapest providers of unlimited tariffs. Similarly, the CMA cites a VUK internal document showing that [REDACTED] has the [REDACTED] in the overall market, followed by [REDACTED] and [REDACTED];[352]

(c) As explained at paragraph 3.23 of the Parties' Initial Phase 2 Submission and further below at paragraph 8.8, many MVNOs (such as Tesco Mobile, Lebara, Lyca Mobile and iD Mobile) supply a full range of retail service offerings across a range of price points.

8.4 The PFs do not engage with Parties' previous submissions regarding the third-party views gathered by the CMA, which confirm that MVNOs can negotiate, and are negotiating increasingly favourable wholesale contracts that allow them to be competitive in the retail market.[353] For instance:

(a) in order to remain competitive over time, MVNOs have negotiated tracking clauses so that their wholesale prices decline in line with the retail prices of their host MNO to ensure that they continue to be competitive in the retail market;[354] and

(b) while some MVNOs considered unlimited contracts were more difficult to offer, third-party views and actual competitive conduct show that MVNOs are increasingly able to offer unlimited contracts.[355]

8.5 In addition, as the Parties submitted in [REDACTED],[356] MVNOs do not typically face the same inflationary cost pressures due to the terms of their wholesale contracts, which contributes to their ability to maintain aggressive pricing. For example:

(a) [REDACTED].

(b) [REDACTED].[357]

The PFs do not engage with this evidence as part of their assessment of MVNOs' current strength as competitors in the retail mobile services market, merely noting that the "*effect of wholesale competition on MVNOs*" is assessed

[351] PFs, paragraphs 8.142, 9.190(a) and (b).

[352] PFs, paragraph 9.190(c) and (d).

[353] [REDACTED].

[354] PFs, paragraph 9.185.

[355] PFs, paragraph 9.186.

[356] PFs, paragraph 8.252.

[357] [REDACTED].

in the context of (i) the wholesale mobile services market; and (ii) post-merger constraints.[358]

8.6 MNOs react to MVNOs' aggressive pricing through (i) large and differentiated tariff portfolios that cater for different customer segments (offering attractive price and non-price features to attract customers); and (ii) the use of sub-brands to price significantly lower than their "main" brands and to address customer needs and market areas that the main brand cannot reach as effectively (as explained in further detail at paragraph 4.4(a) above and at [REDACTED]). Sub-brands' lower price points are often facilitated by a trimmed-down customer experience; for example, VUK's sub-brand, VOXI, is online-only and therefore has lower service costs. The rivalry between MVNOs and sub-brands ensures that there is strong competition at the value end of the market.

8.7 MNOs actively monitor and react to changes in prices and promotions across the whole market, including MVNOs. For example:

(a) A systematic review of VUK's [REDACTED].[359] VUK seeks to respond to market pricing pressure and compete in every segment.

(b) Similarly, as set out at paragraphs 8.25 to 8.30 below, [REDACTED].

MVNOs are growing and increasing their shares

8.8 Further, the PFs recognise that MVNOs are growing very fast, noting that:

(a) "*The combined market share of independent MVNOs is growing, most notably due to Sky Mobile and Lebara, which also have large and positive net adds in the PAYM subsegment and pre-paid subsegment respectively*".[360]

(b) "*Independent MVNOs, in large part due to Lebara and Lyca Mobile, generated [10-20%] of revenues and supplied [20-30%] of subscribers. Lebara in particular has grown significantly from 2020 to 2023, with its market share by revenue more than doubling, and its market share by subscribers more than tripling*".[361]

8.9 Such significant growth can only be attributed to the competitive propositions that MVNOs are able to offer, notably including smaller fast-growing MVNOs like Lebara. MVNOs already exert a significant constraint on MNOs in the retail market. This will only continue to increase and MVNOs will continue to rapidly acquire market share.

MVNOs can, and do, compete on network quality

8.10 As previously explained in [REDACTED],[362] full MVNOs own and operate their own core network infrastructure. This allows full MVNOs to differentiate their quality of service by tiering download speeds provided to different subscribers, thereby allowing

[358] See PFs, paragraph 8.252.

[359] See [REDACTED].

[360] PFs, paragraph 8.107.

[361] PFs, paragraph 8.76.

[362] [REDACTED].

them to differentiate their product offerings in line with their retail strategies. For example, Asda Mobile offers various unlimited 1-month plans at different price points depending on the download speed that it makes available for each plan. MVNOs also have the ability to influence network quality parameters contractually.[363]

8.11 The third-party views gathered by the CMA (and set out in the PFs) confirm that MVNOs typically receive parity of access to the same network capabilities offered to the host MNO's own customers.[364] For example, a large MVNO told the CMA that "*parity of service and network capabilities was a pre-requisite of its agreement with its current host MNO*" and another MVNO indicated that "*in its recent negotiations an overarching principle which was agreed was that its customers should have access to the same network capabilities and quality of service, including any capabilities/services rolled out in the future, that are provided to its host MNO's own customers*".[365] The many MVNOs hosted by BTEE (including Lyca Mobile and Utility Warehouse) are also able to market themselves as being on the UK's best network, and can claim to offer better network quality to their customers than either of the Parties (even if they do not own the underlying network).[366]

8.12 It is not just large MVNOs who are able to negotiate these terms.[367] For example, 3UK [REDACTED] and [REDACTED].[368] MVNOs are able to secure such favourable terms due to the strong bargaining power they are able to leverage in wholesale negotiations. The other MNOs attest to this, with BTEE confirming that "*there is a competitive MVNO market in the UK*" and that "*MVNO bids are highly competitive*".[369]

Access to MergeCo's network will make MVNOs more competitive

8.13 Post-Transaction and Beacon 4.1, access to MergeCo's best-in-class network will make MVNOs hosted by both MergeCo and VMO2's networks far more competitive. Feedback cited by the CMA from several MVNOs confirm that network quality is one of "*the most important parameters of competition*",[370] with 5 out of 13 MVNOs confirming that network quality is the most important factor when negotiating wholesale deals,[371] and 8 out of 9 respondents considering reliability of network to be *"very important*".[372]

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[363] See paragraph 1.12 of the Parties' response to RFI [REDACTED] for further details.

[364] PFs, paragraph 9.187.

[365] PFs, paragraph 9.187(a).

[366] Discover The Best SIM Only Deals | No Contract | Lyca Mobile – see "Why Lyca?" section in which the website lists "*Best UK network, x4 faster speeds since July 2023*".

[367] PFs, paragraph 9.187.

[368] [REDACTED].

[369] PFs, paragraph 9.188.

[370] PFs, paragraph 8.56.

[371] PFs, paragraph 8.55 and 9.22(b).

[372] PFs, paragraph 8.54(a)(ii).

8.14 VMO2 has historically enjoyed a strong reputation for network reliability. However, churn away from VMO2 has recently been increasing as the lag between the reality of VMO2's congested network and the perception of consumers on the network gradually catches up. Evidence gathered by the CMA from third parties finds that the factors competitors consider to be the most important when making a purchasing decision was in line with the key reasons consumers switch providers.[373] It is clear that [REDACTED] for VMO2 to sign Beacon 4.1 in order to improve its capacity and network quality.

8.15 In the absence of the Transaction and Beacon 4.1, Sky Mobile and Tesco Mobile along with other MVNOs hosted on VMO2's network will increasingly find that their customers become more concerned with network performance as data usage increases and the VMO2 network becomes even more congested. As the two largest MVNOs, millions of consumers on Sky Mobile and Tesco Mobile will benefit significantly from the capacity uplift facilitated by the Transaction and Beacon 4.1. This alongside their strong brands and ability to price aggressively will make both Sky Mobile and Tesco Mobile and other MVNOs on VMO2's network, as well as any new MVNOs that VMO2 acquires, even stronger competitors post-Transaction in addition to VMO2 itself along with MergeCo and its own MVNOs.

8.16 The capacity uplift resulting from the Transaction together with the Beacon 4.1 arrangements will provide MVNOs with two better host MNO options competing hard to enable both existing and new MVNOs on the MergeCo and VMO2 networks to offer far more competitive services to consumers in the retail market.

MVNOs compete strongly across the entirety of the retail mobile services market

8.17 While MVNOs contribute to the strong competition for price-sensitive customers, the PFs are incorrect to discount the importance of MVNOs in the entirety of the retail mobile services market and do not engage sufficiently with the Parties' submissions on this point.[374] While the PFs continue to assert that "*[t]he majority of MVNOs (including Lebara, Lyca Mobile, and iD Mobile) primarily target the value segment of the market and therefore provide no or only a limited constraint on the Parties outside the value segment*",[375] MVNOs in aggregate now host [REDACTED]% of subscribers in the consumer segment (as at December 2023) – significantly larger than 3UK's share of subscribers in the same segment ([REDACTED]%) – having grown from a [REDACTED]% aggregate share of supply in 2016 and continue to grow. As a group, they account for the largest share of consumer retail gross adds (24%) in the market in 2023. The total retail subscriber base with MVNOs increased from [REDACTED] subscribers in March 2016 to [REDACTED] subscribers as at December 2023, far exceeding the MNOs in terms of subscriber growth.[376] While the number of subscribers in the retail mobile services market as a whole has grown by approximately [REDACTED] over this period, MVNOs have grown their aggregate subscriber base

[373] PFs, paragraph 8.55.

[374] See [REDACTED].

[375] PFs, paragraph 8.253(c)

[376] These figures exclude the subscriber numbers from Virgin Mobile which is no longer an MVNO. The consumer retail segment alone has grown from [REDACTED] in March 2016 to [REDACTED].

by approximately [REDACTED], meaning that they are winning share from other players in the market.

8.18 As the Parties explained in [REDACTED], MVNOs including Sky Mobile, Lebara, iD Mobile and Tesco Mobile have had the strongest growth in net adds in the consumer retail segment (excluding pre-paid) since the start of 2022. This evidence is inconsistent with the view in the PFs that "*[t]he majority of MVNOs (including Lebara, Lyca Mobile, and iD Mobile) […] provide no or only a limited constraint on the Parties outside the value segment*" (which is an undefined segment of customers) and cannot compete on price or network quality due to the wholesale terms they are offered.[377]

8.19 To suggest that the majority of MVNOs' customers are largely limited to the value segment is an overstatement. On the contrary, as acknowledged in the PFs, "*MVNOs collectively provide a constraint*" on the MNOs in the retail market competing strongly across the entirety of the retail mobile services market (including SIMO, Handset and unlimited and high data propositions), serving the full range of demographics and income segments.[378] This is supported by evidence cited in the PFs that third party competitors "*identified several independent MVNOs as competitors to Parties in the consumer retail segment*".[379]

(a) MVNOs such as Sky Mobile and Tesco Mobile are major brands and offer differentiated propositions. The PFs themselves concede that Sky Mobile and Tesco Mobile "*offer a wide tariff selection*" and that "*Sky Mobile competes against all four MNOs and their sub-brands*", noting that "*there are significant overlaps in their target customer bases*."[380] MVNOs capitalise on the particular advantages of their company groups:

(i) Sky Mobile targets its Pay TV and broadband customer bases of over 10 million homes to cross-sell mobile services, offering additional benefits including unlimited streaming of Sky content apps. Sky has scale as a converged player.

(ii) Tesco Mobile and Asda Mobile are able to cross-sell their mobile offerings to large existing retail customer bases, e.g. via Tesco Clubcard. These MVNOs benefit from the strength of their brands, as well as large marketing budgets and nationwide retail presence, which further strengthen their ability to grow.[381]

(iii) Lebara and Lyca Mobile leverage their strength as international MVNOs, for example Lyca Mobile emphasises its position as the world's largest international MVNO.

[377] PFs, paragraph 8.253.

[378] PFs, paragraph 8.206.

[379] PFs, paragraph 8.247.

[380] PFs, paragraphs 8.253(c) and 8.244(a).

[381] [REDACTED].

(iv) VUK data demonstrates that MVNOs, in particular Sky Mobile and Tesco Mobile, have strong brand NPS.[382]

(b) MVNOs increasingly invest in marketing and propositions to expand their appeal:

(i) Lebara's recent broader success is a testament to this investment (as opposed to its original narrower focus on international calling). Lyca Mobile recently expanded its offering to include contract SIM only plans. Lebara and Lyca Mobile differentiate their brands by offering packages with inclusive international calls and data roaming.

(ii) Tesco Mobile offers additional discounts, rewards and Clubcard points to its 21 million Clubcard customers. It also offers "Family Perks" for customers with more than one mobile connection.[383]

(iii) Utility Warehouse positions itself as a "one stop shop" for household services.

(iv) Sky Mobile, Tesco Mobile and iD Mobile are particularly strong in the Handset segment.[384] For iD Mobile, this is supported by its nationwide store presence via Currys and their Carphone Warehouse store-within-stores.

(v) Third-party evidence presented by the CMA in the PFs states that iD Mobile considers that "*it attracts consumers from across the market and does not have a particular target segment*."[385]

8.20 MVNOs are continuously expanding their offerings across the retail market as they continue to increase their share of supply. For example, while Asda Mobile previously only offered pre-paid tariffs prior to March 2024, it has since expanded its offering to include a PAYM service.[386] Similarly, as mentioned in the PFs, while Tesco Mobile started as a pre-paid only provider, "*it has since started offering a wide range of pre-paid and PAYM plans*" and has an offering in the business segment.[387] While the PFs note that Sky Mobile "*predominately competes in the lower data categories*",[388] and indicate in Table 8.18 that it is not present in the 500GB+ / unlimited data category, it launched unlimited data plans in July 2024.[389]

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[382] [REDACTED].

[383] Family Perks | Supermarket Value | Why Tesco Mobile | Tesco Mobile.

[384] See Phase 1 Decision, paragraph 403.

[385] PFs, paragraph 8.244(d).

[386] PFs, paragraph 8.244(d).

[387] PFs, paragraph 8.245.

[388] PFs, paragraph 8.85.

[389] https://www.ispreview.co.uk/index.php/2024/07/sky-mobile-uk-launching-first-4g-and-5g-unlimited-data-plan.html (accessed: 23 September 2024).

8.21 The Parties provided a significant body of evidence in [REDACTED] showing that MVNOs compete and have had significant success in all consumer retail sub-segments. In particular, [REDACTED] shows that in every consumer retail sub-segment, MVNOs (including Tesco Mobile) have grown their share of supply over the last three years, demonstrating their competitive success. In addition, the review of MVNOs' current offers provided in [REDACTED] clearly demonstrates that they are able to compete across the entire consumer retail segment, with many MVNOs offering high and unlimited data packages to customers. The PFs do not engage with this evidence.

8.22 As explained at paragraph 8.17 above, and in light of the comprehensive body of evidence submitted by the Parties, it is not accurate to suggest that this subscriber share is largely limited to a value subsegment, not least because customers move between products and tariffs during their customer journey. MVNOs' tariff offerings and share of supply growth show that they compete in all subsegments, and therefore provide a strong (and increasing) competitive constraint on the MNOs.

The Parties' internal documents demonstrate that they consider MVNOs – including smaller MVNOs – to be strong and important competitors

8.23 The Parties have submitted a large body of evidence throughout the investigation which shows that they consider both larger and smaller MVNOs to be significant competitors.[390]

CK Hutchison

8.24 CK Hutchison reiterates that its internal documents [REDACTED].

8.25 [REDACTED].[391] [REDACTED].

8.26 [REDACTED].[392] [REDACTED].[393]

8.27 [REDACTED].[394] [REDACTED].[395]

8.28 [REDACTED].[396]

8.29 [REDACTED].[397] [REDACTED].[398]

8.30 As is clear from the above, [REDACTED].

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[390] See [REDACTED].

[391] PFs, paragraph 8.233(b).

[392] For example, at PFs, Appendix C, paragraph C.109, referring to [REDACTED]; [REDACTED]; and [REDACTED].

[393] PFs, Appendix C, paragraph C.109, at footnote 251.

[394] PFs, Appendix C, paragraph C.113, referring to [REDACTED].

[395] See [REDACTED].

[396] [REDACTED].

[397] PFs, paragraph 8.230.

[398] [REDACTED]. See [REDACTED] for further examples.

Vodafone

8.31 The PFs focus on some of internal VUK documents to conclude that the overall competitive performance or strength of other MVNOs (including [REDACTED]) is not monitored or commented on with the same intensity as MNOs, with the exception of Sky Mobile and Tesco Mobile. However, the PFs do not to attach enough weight to VUK's internal documents clearly identifying MVNOs such as [REDACTED]. For example:

(a) VUK prepares [REDACTED].[341]

(b) [REDACTED].[342]

(c) [REDACTED].

8.32 The PFs do not put sufficient weight on [REDACTED]. As previously explained in [REDACTED], the Parties reiterate that [REDACTED], for example:

(a) [REDACTED]. For example, [REDACTED]. For example, [REDACTED].

(b) [REDACTED].

8.33 VUK does not just pay lip-service to MVNOs, it [REDACTED] MVNOs (in addition to the three MNOs), and will [REDACTED] going forward in light of increasing share gains by MVNOs.

8.34 Based on a review of all available evidence, it is undeniable that MVNOs are effective and growing competitors in the retail mobile services market. This evidence should be reflected in the CMA's analysis.

9. Post-merger constraints

9.1 This section addresses:

(a) MergeCo's incentives with respect to pricing;

(b) the expected competitive reaction of BTEE and VMO2;

(c) Competition will ensure that price-sensitive customers benefit from the Transaction;

(d) MNOs' independent decisions to increase prices in recent years; and

(e) the impact of the Transaction on wholesale competition.

MergeCo's incentives with respect to pricing

9.2 In relation to MergeCo's post-merger pricing incentives, the PFs present two quantitative analyses of the impact of the Transaction on prices, namely a merger simulation model and a Gross Upwards Price Pressure Index ("**GUPPI**") model:

[341] See for example [REDACTED].

[342] See [REDACTED].

(a) The CMA's merger simulation model indicates that MergeCo would raise the prices of 3UK's tariffs by 7.0% on average and VUK's tariffs by 3.8%, and that BTEE and VMO2 would also increase their prices by 0.6% and 0.5% respectively on average.

(b) Based on its GUPPI analysis, the CMA finds that the Transaction would lead to pricing pressure of between [5-10]% and [10-20]% for 3UK, and between [5-10]% and [5-10]% for VUK.

9.3 Based on these analyses, the PFs conclude that the "*Merger is likely to have a material impact on retail prices*".[399] This approach does not tell the whole story.

9.4 The PFs' assessment of MergeCo's pricing incentives entirely dismisses the efficiencies and instead focuses only on the impact of the loss of rivalry between the Parties. In particular, the CMA's merger simulation and GUPPI models are based on this very narrow framework:

(a) the CMA's GUPPI model focuses solely on the impact of a loss of rivalry between VUK and 3UK (the "**GUPPI effect**"); whilst

(b) its merger simulation model simply extends this framework by incorporating the response of rivals to the change in MergeCo's prices.

9.5 In addition to not taking into account the REEs, which the CMA accepts in principle exist, there are a number of other material limitations in the CMA's model, which are explained further in **PF Annex 4**.

9.6 In assessing any likely price effects resulting from the Transaction, it is critical to measure the net effect of the REEs, taking into account any assumed effect from the loss of rivalry between VUK and 3UK. Although the PFs themselves consider that "*the Merger is likely to result in some level of network quality improvements which are rivalry enhancing*",[400] these have not been accounted for at all in the CMA's assessment of MergeCo's post-Transaction pricing incentives. Once the REEs are taken into account, the Parties' models clearly show that the REEs are more than sufficient to eliminate any upwards pricing pressure, confirming that the Transaction is *pro-competitive*.

9.7 The CMA cannot simply ignore the REEs given how central they are to this case and, as explained in further detail in **PF Annex 3**:

(a) There will be a significant increase in the total capacity available to MergeCo post-Transaction. This capacity uplift will substantially eliminate the network congestion experienced by both Parties in the counterfactual, thereby significantly reducing the marginal costs that the standalone networks would face when adding new customers to their networks. This reduction in the incremental cost of adding subscribers to the network improves MergeCo's ability to compete on price and provides a strong incentive to compete more aggressively in order to win more subscribers onto its network, both through its retail and wholesale offerings. As explained below (and further explained

[399] PFs, paragraph 8.313.

[400] PFs, paragraph 14.237.

in **PF Annex 3**), the impact of MergeCo's higher capacity alone is sufficient to neutralise any theoretical incentive to increase prices.

(b) MergeCo's joint network plan (the "**JNP**") will have a dramatic impact on MergeCo's ability to compete on quality (e.g. coverage and download speeds), including the ability to compete more effectively with BTEE's (currently) unchallenged position as the market leader on network quality and performance, leading to a substantial increase in competitive rivalry in respect of network quality competition. The network quality improvements delivered by MergeCo's best-in-class network will lead to lower quality-adjusted prices and a very substantial increase in consumer welfare.

(c) The Beacon 4.1 arrangements will also reinforce these effects by significantly increasing VMO2's capacity and network quality.

9.8 The Parties have provided substantial evidence which demonstrates the offsetting impact of REEs on any theoretical incentive to increase prices:

(a) The Parties have prepared two merger simulation models based on conventional economic logic and approaches drawn from the economic literature. The two models are complementary because they extend the standard GUPPI model in different but critical ways to better model the effects of the Transaction:[401]

(i) The quality-focused model makes it possible to incorporate the impact of MergeCo having a higher quality network,[402] and also captures the impact of MergeCo's higher capacity by incorporating as an input the estimated reduction in incremental costs of adding more subscribers to the network that were set out in [REDACTED]. It therefore has the advantage of assessing the impact of the GUPPI effect and both quality and capacity simultaneously.

(ii) The capacity-focused model predicts not only post-Transaction prices, but also post-Transaction capacity investment decisions for MergeCo, as well as BTEE and VMO2. It therefore has the advantage of assessing MergeCo's optimal choice of capacity post-Transaction on a dynamic basis (rather than assuming a specific, unchanged level of post-Transaction capacity),[403] while also accounting for BTEE's and VMO2's responses.[404] The model also treats congestion as a cost borne

[401] See the [REDACTED].

[402] It does this by relying on consumer survey data to measure the value customers obtain from different dimensions of mobile network performance.

[403] This is based on: (i) the benefits of having access to more sites; and (ii) the benefit of being able to add capacity at much lower cost during network integration.

[404] The model predicts an increase in investment in capacity for VMO2, while BTEE's investments remain almost constant. This is because the capacity-focused merger simulation model focuses on one dimension of quality only (namely congestion) – i.e. not the range of quality improvements generated by MergeCo's best-in-class network rollout. Therefore, the model does not capture the other reasons why

by customers (alongside the monetary costs), instead of assuming that higher capacity leads to marginal cost reductions.[405]

(iii) The Parties have addressed the CMA's reservations regarding their two merger simulation models in **PF Annex 4**.

(b) Notwithstanding the limitations in the CMA's models, the Parties have adjusted the CMA's own merger simulation model and GUPPI calculations for incremental cost savings and Day 1 quality improvements, as detailed in **PF Annex 4**.[406]

(i) The results from the PFs' merger simulation model suggest an increase in consumer welfare of over £950 million per year.[407] Importantly, the download speed improvement achieved in the first year following completion of the Transaction is on its own sufficient for the Transaction to improve consumer welfare and be pro-competitive. The CMA's model shows that customers on low incomes also benefit from the Transaction.

(ii) The revised GUPPI analysis incorporating the Willig extension suggests that the quality improvements in the first year alone are nearly sufficient to offset any upward pressure on quality-adjusted prices, with significant incentives to reduce prices once cost efficiencies are considered as well.

9.9 Each of these models shows that the REEs are more than sufficient to offset any GUPPI effect, and in particular that:

(a) The capacity efficiencies alone are sufficient to offset any upwards pricing pressure from the GUPPI effect:

(i) The Parties' capacity-focused merger simulation model confirms this finding and predicts an average reduction in market-wide prices of -0.3%, when accounting for the congestion "cost" imposed on customers;[408] and

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BTEE and VMO2 would want to increase network investments in response to MergeCo. See [REDACTED].

[405] The model considers congestion as a cost borne by customers (alongside the monetary costs), given that congestion worsens the customer experience, and estimates the change in these congestion costs as a result of the Transaction.

[406] The Parties had also extended the CMA's GUPPI model in response to its [REDACTED]. See the Parties' response to the [REDACTED].

[407] PF Annex 4, Table 3.8.

[408] [REDACTED].

(ii) The Parties' quality-focused merger simulation model predicts an average market-wide reduction in prices of -0.4% when accounting only for the capacity efficiencies;[409] and

(iii) Consistent with these findings, if the CMA's own models are extended to account only for the capacity efficiencies:

(A) The CMA's merger simulation model predicts an average market-wide increase in consumer welfare of £92 million;[410] and

(B) The CMA's GUPPI model estimates that the upward pricing pressure that results from the Transaction is [REDACTED] for 3UK ([REDACTED]%) and [REDACTED] for VUK ([REDACTED]%).[411]

(b) When the CMA's merger simulation model is extended to account for Day 1 improvements in coverage and download speeds only,[412] it predicts an increase in consumer welfare of c.£510 million per year across all consumers.[413] It is important to note that this result is likely to be conservative, as the Transaction will generate substantial additional quality benefits beyond the Day 1 improvements in download speeds and coverage, which can be expected to further improve consumer welfare.[414]

(c) When accounting for both the capacity efficiencies and the quality efficiencies arising from the Transaction, consumer welfare increases substantially:

(i) The Parties' quality-focused model predicts an average reduction in quality-adjusted prices of -15% market-wide, and an increase in consumer welfare of +£2 per subscriber per month, or £1.8bn per year across all consumers.[415]

(ii) When the CMA's merger simulation model is extended to account for both quality and capacity efficiencies, it predicts an increase in consumer welfare of over £950 million per year across all

[409] [REDACTED].

[410] PF Annex 4, Table 3.6.

[411] Using congested-adjusted acquisition margins, which the Parties consider to be the correct margin measure and accounting for the cost saving that results from the capacity uplift. See PF Annex 4, paragraphs 2.12-2.16.

[412] These are the only quality efficiencies it is possible to model within the CMA's framework.

[413] PF Annex 4, Table 3.7.

[414] These include substantially wider C-Band coverage, an increase in network reliability (as captured by P10 speeds), a further increase in network coverage, and reductions in network latency. However, given the limitations of the PFs' demand estimation model, it is not directly possible to quantify the effect of these network quality improvements. See PF Annex 4, paragraph 3.46.

[415] [REDACTED].

consumers.[416] For the same reason as set out above at paragraph 9.9(b), these results are likely to be conservative.

(iii) When the CMA's GUPPI model is extended to account for both Day 1 quality and capacity efficiencies, it shows that any upward pricing pressure is more than offset. The "Net" GUPPI is [REDACTED]% for 3UK and [REDACTED]% for VUK when assessed using congested-adjusted acquisition margins and is [REDACTED] across all other margin measures considered by the CMA.[417]

(d) The Parties' merger simulation models predict that competitors will respond to MergeCo by making their products more attractive to consumers, i.e. improving their value for money. Competitors do this within the models by cutting their average prices in response to stronger competition from MergeCo. In reality, BTEE and VMO2 can be expected to react by also investing to improve network quality. The Parties explain the impact of the Transaction on BTEE and VMO2's incentives further below.

9.10 These results provide a conservative basis for assessing the likely price effects from the Transaction, as they do not take into account additional factors which would further increase MergeCo's (and its rivals') incentive to lower prices:

(a) As explained further below, VMO2 (over and above its benefits from the upgraded Beacon 4.1 arrangements) and BTEE will have incentives to invest in improving their own network quality in response to the challenge from MergeCo.[418] This will increase competition further.

(b) As further detailed in **PF Annex 2**, MergeCo's improved network will also increase competition in the wholesale market. This will lead to better access terms for MVNOs, and as MVNOs have historically priced aggressively compared to MNOs, this in turn will also intensify competition in the retail market.[419]

The studies on MNO mergers testify to the likely positive impact of the Transaction

9.11 The PFs consider that there is conflicting economic evidence of the competitive effects of previous four-to-three MNO mergers. While Compass Lexecon's meta-study found that these mergers typically had little impact on prices and accelerated the rate of

[416] PF Annex 4, Table 3.8.

[417] PF Annex 4, Table 2.2.

[418] In the modelling approaches adopted it has not been possible to model the network quality response of BTEE and VMO2. In the quality-focused model, price is the only strategic parameter, i.e. MergeCo's rivals can only respond to MergeCo's improved offer by lowering price, not by improving their own networks. In the capacity-focused model, firms (MergeCo and rivals) can invest in capacity in order to reduce congestion, but the model does not consider competition on network performance in terms of network coverage, speed and latency, which are key to network quality competition.

[419] The quality-focused merger simulation model already captures the fact that the retail offers of MVNOs hosted by MergeCo will automatically benefit from MergeCo's network quality improvements.

decline in price per gigabyte[420] in some cases, the PFs note findings of the Lear et al. study for the European Commission of a positive correlation between market concentration and prices and that one additional MNO is associated with a reduction in consumers' average expenditure on mobile services ("**ARPU**").[421]

9.12 The conclusions of the Lear et al. study concerning MNO mergers are neither robust nor clear-cut. Compass Lexecon's assessment of the study (attached as **PF Annex 5**). In summary, the conclusions of the study are flawed for the following reasons:

(a) The study uses ARPU to measure price. Variations in ARPU do not necessarily imply price differences (e.g. in the price per gigabyte of data) but may reflect changes in consumption levels or in the quality of services taken by consumers, or a combination of these factors. Given this, even if a reduction in the number of MNOs did lead to an increase in ARPU, this would not necessarily imply an anti-competitive effect of a price-increase. It could imply a pro-competitive effect of customers choosing higher quality or obtaining packages with greater amounts of data.

(b) The study uses market-wide capex to measure investment. This is ill-suited to assessing the effect on consumer welfare. Even if there were a positive relationship between market-wide capex and the number of MNOs, this would not support a conclusion that MNO mergers tend to reduce investment in quality to the detriment of customers. There are substantial fixed costs of deploying mobile network infrastructure. An additional MNO may result in higher market-wide capex – but this may simply be inefficient duplication of capex such as in underutilised rural sites or in core network functions.

(c) The study is focused on the 4G era, but there are reasons to believe that investment in deploying an advanced 5G network nationally requires greater scale than was the case with 4G. Even if the conclusions were true for the 4G era, this would not imply that they are relevant when assessing the current Transaction.

9.13 There are severe methodological issues with the study, which cast doubts on the reliability of its finding that an increase in concentration leads to higher ARPU and lower market-wide capex.

<u>The expected competitive reaction of BTEE and VMO2</u>

9.14 The evidence presented in the PFs indicates that BTEE and VMO2 are "*strong/very strong*" competitors to both Parties.[422] This implies that MergeCo's significantly improved quality of service – which the PFs recognise is an important parameter of

[420] As explained at paragraph 4.11(c) above, price per gigabyte is a unit price that takes into account the amount actually consumed (and is also a good proxy for quality-adjusted prices as better coverage and quality lead to more data being consumed).

[421] PFs, paragraph 8.298.

[422] PFs, paragraph 8.240.

competition – will increase the attractiveness of its offering vis-à-vis its rivals.[423] BTEE and VMO2 will be at significant risk of losing customers to MergeCo.

9.15 As a result, and as explained by the Parties in [REDACTED],[424] BTEE's and VMO2's most likely reaction to the Transaction will not be to increase their prices but on the contrary to compete more aggressively against MergeCo. In line with the Parties' submissions, the PFs note that MergeCo's improved quality would "*in turn likely elicit a competitive response (for example, by way of further network investment) from BTEE and VMO2 to also improve their respective network quality*".[425]

9.16 Evidence from BTEE's internal documents suggests that it will be forced to compete more aggressively following the Transaction. [REDACTED].[426] [REDACTED] internal documents suggest that if MergeCo was to challenge [REDACTED]. [REDACTED] would consider [REDACTED].[427] Although the PFs consider that "*the balance of the evidence points to it responding to any such challenge [REDACTED]*",[428] there is no reason to believe *a priori* that – in parallel to increasing its network investment – BTEE would not seek to reduce the price of (some of) its tariffs to maintain its competitive position vis-à-vis MergeCo. This is supported by [REDACTED] internal documents, which note that [REDACTED].[429]

9.17 In addition, the PFs consider that the spectrum transfer agreed through Beacon 4.1 would provide a notable and rapid increase in network capacity and quality for wholesale and retail customers on the VMO2 network, which will enable and incentivise VMO2 to compete harder and would further increase rivalry.[430]

9.18 BTEE's and VMO2's expected response to MergeCo is further corroborated by the results of the Parties' merger simulation models:

(a) The Parties' capacity-focused merger simulation predicts that MergeCo's rivals would cut prices by around 0.8%.[431]

(b) The Parties' quality-focused merger simulation implies that, faced with competition from MergeCo, BTEE and VMO2 would suffer very large market share losses if they reacted by lowering prices only while keeping their level of network quality constant. These results suggest that failing to invest to improve their network quality will not be a commercially viable strategy for BTEE and VMO2.

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[423] PFs, paragraph 14.174.

[424] [REDACTED].

[425] PFs, paragraph 14.202.

[426] PFs, paragraphs 8.238 and 8.239.

[427] PFs, paragraph 14.202.

[428] PFs, paragraph 14.202.

[429] PFs, Appendix C, paragraph C.164(a), referring to [REDACTED] and [REDACTED].

[430] PF, paragraph 14.203.

[431] [REDACTED].

9.19 The Transaction will therefore result in a high-investment equilibrium, stimulating a pro-competitive response from BTEE and VMO2.[432] In addition, this will improve the network quality that can be offered by MVNOs hosted on those networks.

Competition will ensure that price-sensitive customers benefit from the Transaction

9.20 While the Transaction can be expected to drive BTEE and VMO2 to invest more in quality, it is unlikely that they will be able to match the gain in MergeCo's network quality. This can be expected to lead them to reduce their prices to stem the loss in customers to MergeCo. Lower quality-adjusted prices will lead to prices being reduced for offers targeting the value end of the market, including MNOs' trimmed-down sub-brand offers and MVNO prices. In particular, with better quality being available at lower prices, the prices of more basic offers will need to be cut. This is consistent with the evidence of significant switching between different tariff types. For example, a number of the Parties' post-paid customers have switched to and from MVNOs and sub-brands.[433] Lower prices at the value end of the market will be further supported by the Transaction and Beacon 4.1 boosting wholesale competition.[434] Contrary to the PFs' provisional conclusion that "*those consumers on the lowest incomes would see the greatest fall in their welfare*" as a result of the Transaction,[435] the competitive pressure exerted by MergeCo, and the reaction of MergeCo's competitors, will mean that price-sensitive customers benefit from the pro-competitive effects of the Transaction.

9.21 This is confirmed by the Parties' quality-focused merger simulation and the CMA's own merger simulation analysis:

(a) When the CMA's merger simulation model is extended to account for both quality and capacity efficiencies, it predicts that the segment of consumers with an income of less than £1,500 per month would experience an increase in consumer welfare of 5.9%, corresponding to +£5.64 per subscriber per year.[436] For the same reason as set out above at paragraph 9.9(b), these results are likely to be conservative.

(b) Similarly, the Parties' quality-focused merger simulation model predicts that, as a consequence of the REEs, the quartile of most price-sensitive customers will benefit, as headline prices paid by these customers are forecast to drop by 2.3% on average, leading to a consumer welfare gain for them as well.[437]

MNOs' independent decisions to increase prices in recent years

9.22 The one pricing interaction cited by the PFs at paragraph 8.274 does not substantiate a conclusion that the raising of prices by one MNO would cause other MNOs to react by

[432] BTEE and VMO2 each has the ability and incentive to deploy a number of counterstrategies (including increasing cross-selling to their large customer bases).

[433] [REDACTED].

[434] See paragraph 9.26 below.

[435] PFs, paragraph 8.318.

[436] PF Annex 4, Table 3.9.

[437] [REDACTED], paragraph 1.2(i)(e)(I).

raising their prices in the same way. As the PFs acknowledge, the price rises following BTEE's September 2020 price rise were implemented by the other MNOs over a period of time, with VUK doing so in December 2020, VMO2 doing so in March 2021, and 3UK in November 2022.[438] As explained in [REDACTED],[439] over a period of time, there are various external factors that can and do influence a decision by an MNO to raise its prices. Given all MNOs were facing the same cost pressures driven by market-wide inflationary effects, it is no surprise that each adopted a similar approach. Indeed, as explained in the Parties' responses to [REDACTED] of the [REDACTED],[440] both 3UK and VUK had [REDACTED] rationales for implementing the inflation-linked price increase that the PFs cite.[441] The PFs do not adequately engage with the Parties' [REDACTED] rationales for introducing price rises, concluding based on a fleeting reference to internal documents that pricing decisions are made "*taking into account other competitors' prices*".[442]

9.23 As previously explained in the Parties' submissions, [REDACTED], which the CMA does not take into account in the PFs:

(a) First, it is [REDCTED].[443] For example, [REDACTED].[444]

(b) Second, [REDACTED].[445] [REDACTED].

(c) Third, [REDACTED]. [REDACTED].

(d) Finally, as highlighted in a [REDACTED],[446] [REDACTED].

9.24 VUK reiterates that the [REDACTED]. As a result, VUK estimates that it [REDACTED].

[438] PFs, paragraph 8.274.

[439] [REDACTED].

[440] See [REDACTED].

[441] At the Main Party Hearings, the CMA inferred from the introduction of CPI+ clauses that MNOs are not constrained by MVNOs, as the latter did not introduce such clauses. That inference is invalid. MVNOs were affected by recent inflationary cost pressures to a far lesser extent than MNOs. As a matter of basic economic theory, if a subset of the competitors in a differentiated-goods market (such as mobile telecoms) are affected by a substantial cost increase, it is to be expected that the prices of the affected players will increase relative to those of their unaffected competitors, and that the affected players will lose market share as a consequence. This is true regardless of the fact that all players in the market compete with each other, and irrespective of the precise degrees of competitive "closeness" between the various players.

[442] PFs, paragraph 8.277.

[443] See VUK's response to [REDACTED] of [REDACTED] in [REDACTED].

[444] [REDACTED].

[445] See e.g. letter from Lindsey Fussell to Emma Reynolds from 29 March 2018.

[446] [REDACTED].

9.25 As explained in [REDACTED], [REDACTED].[447]

(a) [REDACTED]. The PFs deal with [REDACTED] in two cursory sentences, and [REDACTED].[448] [REDACTED].[449]

(b) Further, while the PFs correctly acknowledge that this [REDACTED] "*may have affected the Parties' decision to introduce a price increase*", the PFs give insufficient regard to it as a factor in the Parties' pricing decisions.

(c) Rather, the PFs refer to the Parties' internal documents to suggest that "*MNOs monitor each other's pricing, acknowledge that competitors' prices will impact them, and set their prices taking into account other competitors' prices*".[450] This suggestion is unsupported by the documents referred to by the PFs.

(i) [REDACTED].[451] [REDACTED].[452]

(ii) The PFs further refer to a [REDACTED] from August 2022 and a subsequent internal presentation from [REDACTED].[453] [REDACTED].[454]

(d) [REDACTED] [REDACTED], [REDACTED],[455] [REDACTED].

(e) [REDACTED].[456]

<u>The impact of the Transaction on wholesale competition</u>

9.26 The PFs assert that "*the Merger may lead to MVNOs receiving worse terms from MNOs and therefore being less of a constraint at the retail level post-Merger*".[457] As explained previously in [REDACTED], competition in the wholesale market will be *weaker* absent the Transaction, as 3UK is already an ineffective competitive constraint and the capacity constraints faced by the Parties increasingly limit the extent to which they are able to compete for MVNOs. By contrast, the Transaction, reinforced by the increase in capacity and network quality Beacon 4.1 will deliver for VMO2, will *increase* competition in the wholesale market, creating two stronger and more competitive

[447] [REDACTED].

[448] PFs, paragraph 8.276.

[449] [REDACTED].

[450] PFs, paragraph 8.277.

[451] PFs, Appendix C, paragraph C.60(a).

[452] [REDACTED].

[453] PFs, Appendix C, paragraph C.60(b), referring to [REDACTED] and [REDACTED].

[454] PFs, Appendix C, paragraph C.60(b); [REDACTED].

[455] [REDACTED].

[456] [REDACTED].

[457] PFs, paragraph 8.293.

wholesale competitors, providing greater choice for MVNOs, greater competition to BTEE and enabling MVNOs to become stronger competitors in the wholesale market.

10. Conclusion

10.1 The retail mobile services market described in the PFs remains inconsistent with the market reality. Both 3UK and VUK are constrained in their ability and incentive to invest sustainably due to lack of scale [REDACTED], which is increasingly weakening their effectiveness as competitors in the retail market. They are squeezed in the middle, between, on one hand, BTEE and VMO2, the market leaders, which generate the lion's share of the industry's cashflows, and, on the other, MVNOs, the fastest growing operators, which have capitalised on their strong bargaining power and favourable contractual terms with host MNOs to be a strong and growing competitive force across the retail mobile services market, accounting for nearly all growth in the market in recent years and leading competition.

10.2 Contrary to the provisional conclusions expressed in the PFs, the significant body of evidence submitted by the Parties throughout the investigation based on both their internal document and economic analysis demonstrates that the Transaction will be *pro-competitive*. Rather than increasing MergeCo's incentives to raise prices, the Transaction will deliver a substantial increase in consumer welfare, and MergeCo's greater capacity alone will be sufficient to neutralise any theoretical incentive to increase prices (as explained in further detail in **PF Annex 4**). The Transaction will unlock substantial investment and create a third MNO with the scale to invest sustainably in its network, providing a much-needed challenge to the market leaders and significant benefits to customers, stimulating a pro-competitive response from BTEE and VMO2, as both players will be incentivised to invest in their networks to close the network quality gap to MergeCo, and boosting dynamic competition in the retail mobile services market – all to the benefit of consumers. This shift to a high investment equilibrium will put downward pressure on prices and VMO2's increased capacity from Beacon 4.1 will only amplify this effect. The spectrum transfer agreed will provide a notable and rapid increase in network quality for wholesale and retail customers on the VMO2 network, which will further increase rivalry, providing greater choice for MVNOs and enabling MVNOs to become stronger competitors in the retail mobile services market. In light of the above, and contrary to the assertation in the PFs, there is no basis to conclude that the Transaction will lead to an SLC in the supply of retail mobile services in the UK.

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ME/7064/23 – Vodafone UK / Three UK
Provisional Findings: Parties' response to Chapter 9 on TOH2 (PF Annex 2)

KEY
Confidential to VUK
Highly confidential to VUK (including internal docs)
Confidential to 3UK
Highly confidential to 3UK (including internal docs)
Confidential to both Parties
Confi Ring information / Confi Ring Information

1. Executive summary

1.1 The CMA's Provisional Findings ("**PFs**") describe a wholesale market in which: (i) 3UK is a credible and competitive supplier exerting a constraint on all MNOs; (ii) the Parties are close competitors; (iii) MNOs' incentives to compete may be impacted by their retail base, cannibalisation considerations, and relationships with existing customers; and (v) MVNOs do not have strong buyer power.

1.2 In reaching these provisional conclusions, the PFs have mischaracterised a substantial amount of the evidence gathered by the CMA, through misinterpretation, inadequate consideration, or failure to attach due weight to certain key facts. In doing so, the PFs mischaracterise the dynamics of competition in the wholesale market.

1.3 In reality, the wholesale market is currently dominated by two players: BTEE, which has won almost all recent tenders; and VMO2, which hosts the largest MVNOs but whose ability to compete will be increasingly hampered by its lack of capacity. The strong body of evidence in front of the CMA demonstrates that it is effectively a three-player market since 3UK is not an effective wholesale supplier and the MVNOs have significant bargaining power. Further, the elements of Beacon 4.1 which are conditional upon completion of the Transaction will reinvigorate VMO2 as an even stronger wholesale competitor by way of additional spectrum and access to MergeCo sites. Three players will remain post-Transaction, but MergeCo and VMO2 will be better placed to compete.

1.4 This response will show that the provisional conclusions are incorrect and at odds with the significant body of evidence submitted by the Parties and no credible basis has been established on which the Transaction could give rise to an SLC in the wholesale market in the UK.

1.5 As explained in **Section 2**, the Transaction will be transformative and pro-competitive for the wholesale market:

(i) MergeCo will have an improved ability and incentive to compete: it will have far greater capacity than the Parties on a standalone basis with materially reduced congestion; and its corresponding lower incremental cost of capacity, along with its corresponding network improvements, will further provide MergeCo with the ability and incentive to compete aggressively.

(ii) The Transaction will also boost VMO2's effectiveness as a competitor by virtue of the Beacon 4.1 Agreement which will provide it with additional spectrum and access to an additional c. [REDACTED] sites. This will result in a substantial increase in capacity and better network quality, giving VMO2 the ability and incentive to offer more competitive wholesale pricing.

(iii) MergeCo's increased competitiveness will further trigger a competitive response from both BTEE and VMO2. The Transaction creates an effective third wholesale player with improved network capacity, quality and the ability to offer competitive pricing. The other MNOs will be highly incentivised to retain existing wholesale customers and secure additional customers, encouraging more aggressive competition across the market.

1.6 As explained in **Section 3**, 3UK is not an effective wholesale supplier:

(i) 3UK [REDACTED] and [REDACTED].

(ii) [REDACTED].

(iii) [REDACTED]. MVNOs' actions speak more convincingly of their real views and motivations than any remarks or statements they may have provided to the CMA during the course of its merger investigation and the PFs do not appear to give due weight to this.

(iv) Third-party feedback simply does not support a finding that [REDACTED]. This is clearly apparent from the evidence available to the CMA, including internal documents.

1.7 As explained in **Section 4**, the Parties are not close competitors in the wholesale market:

(i) The PFs' market share analysis reaches incorrect conclusions and is inconsistent with the data submitted by the Parties. The Parties' data clearly demonstrates that they [REDACTED]. The PFs also take an approach that is inconsistent with both CMA and EC precedent.

(ii) The PFs' analysis of tender opportunities reaches incorrect conclusions as:

(a) It places unjustified weight on the competitive experience of five "large" MVNOs for a number of reasons:

(I) The CMA's approach disregards the wide range of MVNOs that have entered the retail market in the last ten years (a reflection of the fact that entry barriers for MVNOs are lower than ever). It does not account for the real growth potential of MVNOs as it excludes an analysis of which MNOs are winning emerging MVNOs and are, therefore, competing most aggressively.

(II) By focusing on evidence from large MVNOs, the PFs disproportionately discount the views of MVNOs hosted by

BTEE, which jointly make up a substantial majority of the wholesale market.

(III) Furthermore, these MVNOs are very different companies from each other in terms of their subscriber numbers, perception in the market, and buyer power. Excluding the [REDACTED] opportunity (due to [REDACTED]) the Parties only overlap in one large competitive opportunity: Sky Mobile. In this respect, the PFs conclude that Sky Mobile is unique amongst MVNOs and its experience is not representative of that of other MVNOs, which in itself is at odds with the PFs including it in this group of five MVNOs.

(b) The PFs continue to mischaracterise tender opportunities as competitive or ones for which both Parties participated in support of finding both closeness between 3UK and VUK and that 3UK is a credible competitor. Instead, the opportunity data (assessed in further detail in **Section 5**) indicates that the Parties have only overlapped in a very small number of opportunities and [REDACTED].

1.8 As explained in **Section 5**, the CMA's assessment of competitive dynamics does not sufficiently substantiate its provisional conclusions. The PFs are selective and inconsistent in their approach to interpreting and analysing MVNO "opportunities" data, and then rely on this data in reaching the incorrect provisional conclusions that: (i) 3UK has played an important role in a number of opportunities and is therefore a credible wholesale supplier (discussed further in **Section 3**) and (ii) that the Parties competed closely for large MVNO opportunities (discussed further in **Section 4**). The CMA also mischaracterises the competitive position of BTEE and VMO2.

1.9 As explained in **Section 6**, MNOs' incentives to compete may be impacted by their retail base, cannibalisation considerations, and relationships with existing customers:

(i) The evidence presented in the PFs is not consistent with the concern that cannibalisation may incentivise MNOs to offer less competitive pricing or terms due to the risk of losing retail market share:

(a) In practice, MNOs have to accept a cannibalisation impact to win wholesale business because they risk the loss of revenue at both the wholesale and retail levels should a rival MNO secure the wholesale business. Securing wholesale revenue, notwithstanding any cannibalisation, is more profitable than losing both the retail and wholesale revenues. As such, MNOs are incentivised to compete for MVNOs in spite of any cannibalisation risk.

(b) The concern is also entirely at odds with the views and internal documents of the two largest MNOs, BTEE and VMO2, as well as the

fact that jointly they have a [REDACTED]% wholesale market share by subscribers, and host c.90% of MVNOs, in the UK.[1]

(ii) It is not correct that the Parties are incentivised to compete due to their smaller retail base and that larger MNOs compete less aggressively. When pricing deals for MVNOs, the focus of MNOs is network economics. Despite the inevitable loss of retail customers to MVNOs (which are highly competitive players in the retail market), MNOs are highly incentivised to secure wholesale business, which provides predictable revenues and cashflows as well as allowing the MNO to spread network costs across a wider subscriber base. This is supported by the fact that BTEE has won the highest number of MVNO opportunities of all the MNOs in recent years.

(iii) In any event, post-Transaction, larger MNOs will be more incentivised to compete aggressively for MVNO opportunities. MergeCo will be able to compete with BTEE and VMO2 resulting in intense and effective competition between these three operators as the implementation of the JNP delivers more capacity and better quality, both of which will improve MergeCo's ability to effectively challenge the market leaders (who jointly supply c.90% of the MVNOs).[2] In particular:

(a) The Beacon 4.1 Agreement will enhance VMO2's ability to compete by improving its network quality and boosting its capacity.

(b) MergeCo's enhanced capability to compete for MVNOs will generate a competitive threat which will trigger a response from both BTEE and VMO2, in particular the reduction of prices and renewal of network investments, in order for BTEE to retain its reputation as being the best network and for BTEE and VMO2 to retain their competitive positions in wholesale.

(iv) Despite the Parties' numerous submissions that the CMA's consideration of cannibalisation amounts to a prediction that MergeCo will engage in (partial or full) input foreclosure, the PFs fail to adequately analyse this position.

(v) The CMA does not produce any compelling evidence to show that MNOs' incentives to compete for MVNOs can be affected by existing relationships with other MVNOs. It relies solely upon a single, fact-specific, example which is not reflective of competitive incentives more widely.

1.10 As set out in **Section 7**, MVNOs have strong and increasing buyer power which will continue post-Transaction due to their growing scale and because of technology advancements such as the availability of eSIMs, as well as due to the strong competitive incentives of MNOs:

(i) Intense retail competition is indicative of the commercially advantageous terms secured at the wholesale level. MVNOs frequently undercut MNOs, including their

[1] Merger Notice, paragraph 15.452.

[2] Merger Notice, paragraph 15.452.

MNO host, in the retail market and, as the PFs recognise, are typically able to secure parity of access to key technological developments.

(ii) MVNOs compete in all segments and offer unlimited and high data tariffs which are akin to unlimited allowances. The PFs rely on a minority of MVNO views to conclude otherwise. In addition, the CMA's position is at odds with the weight it affords to evidence for other aspects of its competitive assessment. Despite incorrectly doing so, the CMA places importance upon the experiences of five large MVNOs with respect to the tender data. However, it does not place sufficient weight upon the evidence that these five MVNOs all offer unlimited data tariffs, with most also offering data tariffs of at least 100GB.

(iii) The CMA's investigation confirms that any barriers to switching are not significant, nor are they often a determinative factor for MVNOs when selecting an MNO host. The threat of switching is therefore sufficient to incentivise aggressive wholesale competition. The ability to switch will not be reduced post-Transaction. Indeed, technological advancements will continue to increase the ease with which MVNOs are able to switch MNO host including, for example, the availability of eSIMs which will lower barriers for light MVNOs to switch MNO host.

1.11 In summary, the Parties are clearly not close competitors in the wholesale market and have not both participated for the majority of opportunities identified by the CMA. The CMA's analysis, moreover, inflates the Parties' positions as it inconsistently includes a number of "opportunities" for the Parties that cannot be fairly described as such (and similar high-level discussions have been discarded from the data relating to other MNOs). The PFs over-emphasise the alleged views of a small number of MVNOs whose submissions to the CMA are contrary to other documentary evidence and/or their own actions in the market. In reality, [REDACTED] in the wholesale market and [REDACTED]. This fact is widely known by its competitors and [REDACTED]. There is no credible evidence in the PFs to the contrary.

1.12 In these circumstances, the overall conclusion that the Transaction will lead to a substantial lessening of competition in the wholesale market is unwarranted and unsupported by the evidence before the CMA. The CMA should reassess its analysis of the wholesale market and conclude that, on the balance of probabilities, there will be no SLC.

2. The Transaction will be pro-competitive for the wholesale market

MergeCo will have an improved ability and incentive to compete

2.1 The PFs correctly acknowledge that "*some reduction in the incremental cost of capacity is likely from the deployment of more spectrum*" as a result of the Transaction.[3] However, notwithstanding the evidence the Parties have previously submitted, the PFs conclude that while "*there is some evidence that any additional cost of capacity resulting from an MVNO contract is taken into account in bidding*", "*[this evidence] did not indicate the effect this had on the price ultimately agreed with MVNO customers*".[4] The Parties note that: (i) MergeCo will have far greater capacity than the Parties on a standalone basis with materially reduced

[3] PFs, paragraph 14.242.

[4] PFs, paragraph 14.243.

congestion; and (ii) MergeCo's corresponding lower incremental cost of capacity, along with its corresponding network improvements, will further provide MergeCo with the ability and incentive to compete aggressively.

2.2 MergeCo's network capacity will be significantly increased post-Transaction. Only [REDACTED]% of its sites will be congested following MergeCo's planned network investments. This additional capacity reduces the need for further network capacity investment when onboarding additional MVNOs. For example, if MergeCo were to host an additional MVNO of [REDACTED] subscribers (over and above the expected growth in subscribers in the JBP), the number of congested sites would increase by only [REDACTED]%. As a result, MergeCo would incur significantly lower incremental network costs in hosting such an MVNO.

2.3 In contrast, the Parties currently face capacity constraints which substantially limit their ability and incentive to compete to host MVNOs, and these constraints will increase in the counterfactual.[5] In particular, acquiring additional wholesale customers / traffic on a capacity constrained network is costly, as it triggers the need for additional network investments to avoid congestion (absent which existing customers will experience a deterioration in quality). For example:

(i) [REDACTED].[6,7]

(ii) [REDACTED].[8]

2.4 MergeCo's greater capacity will impact pricing and have a significant pro-competitive effect. Enders Analysis agrees that the capacity uplift resulting from the Transaction "*is likely to put further downward pressure on the wholesale rates that the MVNOs pay*"[9] noting that "*spare capacity in the industry is the number one determinant of MVNOs' bargaining power*".[10] The PFs fail to acknowledge the fundamental importance of network capacity in driving competition and market outcomes, and do not properly engage with the submissions made by the Parties.

2.5 The PFs wrongly assume that the CMA must find evidence of capacity considerations being *explicitly* considered in the pricing decisions of 3UK or VUK as standalone businesses in order to accept that MergeCo's significant capacity increase (and therefore incremental cost reductions) can have a pro-competitive effect. As explained in more detail in paragraphs *5.48* et seq. of PF Annex 3, the focus should instead be on the fundamental capacity and cost factors driving commercial outcomes, not the factors driving short-term, tactical pricing decisions. There should already be a strong economic presumption that higher capacity is associated with

[5] See PF Annex 3 paragraphs 5.3 to 5.25.

[6] [REDACTED].

[7] [REDACTED].

[8] The modelling assumes that the volume of traffic per subscriber for customers of MVNOs hosted on VUK's network would be equivalent to that of VUK's own retail customers.

[9] Enders Analysis, '*Tread lightly - Response to the CMA's proposed remedies to the Vodafone-Three Merger*', 27 September 2024, page 3.

[10] Enders Analysis, '*Tread lightly - Response to the CMA's proposed remedies to the Vodafone-Three Merger*', 27 September 2024, page 4.

lower pricing outcomes in a capacity driven market (see paragraphs 5.35 *et seq*. of PF Annex 3) such as the UK mobile market.

2.6 Moreover, the PFs do not give sufficient weight to examples provided by the Parties showing that the additional cost of capacity restricts their ability to offer attractive wholesale offers to MVNOs. For example, as noted at paragraph 2.2(i) above, [REDACTED].

2.7 Given the magnitude of these costs, they are currently a key driver in wholesale pricing decisions and thus the Parties' ability to offer attractively priced wholesale offers to MVNOs absent the Transaction. The PFs acknowledge that the Parties' documents, as well as documents from competitor MNOs, show that the costs of providing an MVNO's wholesale service are taken into account when competing for wholesale opportunities and, in particular, that there is evidence that MNOs take into account the incremental cost of capacity in bidding, for example:[11]

(i) As noted in the PFs, VUK considered [REDACTED] when evaluating the two-year extension of the contract with Lebara;[12]

(ii) As noted at paragraph 2.2(i) above, [REDACTED];

(iii) [REDACTED];[13]

(iv) One internal document from BTEE notes that winning Nitrogen [Sky] would [REDACTED];[14]

(v) BTEE told the CMA that [REDACTED] it carried out a review of [REDACTED].[15] As noted in the PFs, [REDACTED].[16] The PFs also noted that [REDACTED];[17] and

(vi) In VMO2's own assessment of its strengths and weaknesses, it noted that it enjoys no advantage over any other MNO [REDACTED].[18]

2.8 As set out in paragraph 2.9 of [REDACTED], MergeCo will not be capacity constrained (unlike the standalone Parties), and the additional cost of capacity will almost entirely fall away. This will enable MergeCo to price more competitively for MVNOs (and thus increase competition with BTEE and VMO2).

2.9 In addition, with regard to network quality improvements, the PFs wrongly consider that "*while some network quality improvements will result these are more limited than is claimed by the*

[11] PFs, paragraphs 9.208(d) and 14.145. See paragraphs 5.30 to 5.73 and Table 5.2 of PF Annex 3.

[12] PFs, paragraph 9.197(d)(ii) – referring to Vodafone Internal Document, [REDACTED].

[13] [REDACTED].

[14] PFs, paragraph 9.201(c).

[15] PFs, paragraph 9.221(a) and (b).

[16] PFs, paragraph 9.221(c).

[17] PFs, paragraph 9.221(c).

[18] PFs, paragraph 9.226(f). However, as explained at paragraphs 2.13 *et seq.* below, the Transaction will boost VMO2's ability to compete in wholesale, in particular by improving VMO2's capacity and network quality. MergeCo's enhanced ability to compete will also trigger a competitive response from VMO2.

Parties".[19] However, as explained in PF Annex 3, this is based on a misunderstanding of the standalone networks and a mischaracterisation of the quality improvements delivered by the Transaction. The PFs understate the extent of the congestion problem that the standalone networks face[20] and fail to properly take into account the substantial benefits of MergeCo in terms of delivering good speeds even in circumstances when the Parties' standalone networks would deliver speeds inadequate for common use cases (i.e. P10 speeds) as well as MergeCo's benefits of better network reliability and indoor coverage.[21]

2.10 The PFs do not acknowledge that the network quality improvements delivered by the Transaction (even if considered to be smaller than the Parties' claims) will *necessarily* have a pro-competitive effect as they will enable MergeCo to compete for MVNOs more effectively. These improvements are highly relevant in the wholesale market, in particular given the feedback the CMA has received regarding the importance of network quality to MVNOs.

2.11 As set out in the PFs, network quality is highly important to MVNOs. Five MVNOs – including two of the five largest MVNOs – stated that network quality was the most important factor in selecting an MNO.[22] MVNOs highlighted network quality as being of particular importance because it forms part of the retail customer proposition and thus encompasses a range of dimensions (including factors such as brand perception and coverage).[23] Moreover, Company A's response to the CMA's Phase 2 Issues Statement noted that the network capacity increase from the Transaction should create an opportunity for lower wholesale data pricing for mobile, especially on 5G. Company A considers that MergeCo will need to sell this extra capacity to existing and new MVNOs as this would result in better network utilisation. This would, in Company A's view, allow it to compete more effectively with converged operators (e.g., VMO2, BTEE and Sky Mobile) who offer very low-priced mobile services as part of their converged product set. It appears that the CMA has not acknowledged Company A's response in the PFs, nor has it set out any reasoning for doing so.[24]

2.12 The Transaction will enable MergeCo to compete for MVNOs more effectively on quality, especially given [REDACTED] and VUK's recent experience of MVNOs increasingly placing greater importance on network quality in order to compete effectively in the retail market.

The Transaction will also boost VMO2's effectiveness as a wholesale competitor via Beacon 4.1

2.13 As explained in [REDACTED], through Beacon 4.1, VMO2 will gain access to [REDACTED]% more spectrum and c. [REDACTED] additional sites in the MORAN Areas – this amounts to a [REDACTED]% increase in the total Beacon grid footprint in the MORAN Areas.

[19] PFs, paragraph 14.238.

[20] See PF Annex 3 paragraphs 5.3-5.25.

[21] See PF Annex 3 paragraphs 5.76-5.98.

[22] PFs, paragraph 9.22(b).

[23] PFs, paragraphs 9.22-9.24. Other factors referenced include price (which was most the most important factor for six MVNOs), strategic fit and technical ability to service.

[24] Company A's response to CMA's Issues Statement (dated 2 May 2024), pages 1-2.

2.14 The Parties welcome the PFs' recognition that, therefore, Beacon 4.1 "*will improve VMO2's network quality, enabling it to become a stronger competitive constraint post-Merger*".[25] These improvements in network quality will immediately benefit the large number of UK MVNO customers that currently use the VMO2 network as well as having long term benefits to MVNOs and their customers.

2.15 As a preliminary point, the Parties note that the Beacon 4.1 agreements were only recently signed – they were publicly announced on 3 July 2024, and many of the detailed arrangements remain confidential. As such, at the time the CMA was consulting for MVNO input, the MVNOs would not have had sufficient time or ability to fully evaluate the anticipated benefits to competition in the wholesale market, and in particular the enhanced competitiveness of terms VMO2 will be able to offer them as a result of Beacon 4.1 (as outlined further at paragraphs 2.18 *et seq*. below).

Beacon 4.1 improves VMO2's network quality

2.16 Beacon 4.1 strengthens and enhances MergeCo and VMO2's network quality by creating a higher capacity network across a denser grid – this will provide both MergeCo and VMO2 with an enhanced platform on which to compete for MVNO business. These anticipated benefits to MVNOs are substantiated by the evidence submitted by MVNOs. For example:

(i) one large MVNO noted that the Beacon 4.1 Agreement was a "*positive development*" that "*should result in rebalancing of spectrum and improving VMO2's network in terms of capacity and network quality*",[26] and

(ii) another large MVNO noted that "*for customers of VMO2"* – which, by implication, includes future customers of VMO2 – "*there are likely to be some benefits from there being more capacity available*".[27] This increase in capacity would, in turn, enhance VMO2's ability to compete in future tender opportunities.

2.17 These MVNO customer views are consistent with those of VMO2 itself, which considers that "*the Beacon 4.1 Agreements, including the spectrum transfer, will improve its competitiveness in the wholesale market*", in light of its "[REDACTED]", which it notes "[REDACTED]".[28]

Beacon 4.1 gives VMO2 the ability and incentive to offer more competitive wholesale pricing

2.18 As explained in more detail in paragraph 2.27 *et seq*. below, MVNOs will – in general – benefit by gaining a more credible wholesale provider (in addition to VMO2 and BTEE, which currently dominate the wholesale market). This more credible provider – MergeCo – will not be capacity constrained, and therefore will have significantly lower incremental network costs than the standalone Parties. As such, MergeCo will be able to offer significantly more competitive pricing terms than those that could be offered by the Parties in the counterfactual. This will increase

[25] PFs, paragraph 9.268(g); see also REE Working Paper, paragraph 7.3.

[26] PFs, paragraph 9.264(a).

[27] PFs, paragraph 9.264(d)(i).

[28] PFs, paragraph 9.265.

significantly the competitive pressure on VMO2 (and indeed BTEE) to compete more aggressively on pricing.

2.19 In addition, VMO2's incremental network costs are likely to decrease due to the extra capacity and spectrum afforded to it under the Beacon 4.1 agreements (as set out at paragraph 2.16 above). This will lead to VMO2 itself becoming a more credible MNO host with the ability to offer more attractive and competitive terms to its current and future MVNO customers.

2.20 The PFs are incorrect to conclude that VMO2 "*may have a reduced incentive to act on this ability [to become a stronger competitive constraint] as a result of the removal of the constraint which the Parties currently exert*".[29] The CMA makes this assertion based on its provisional view that the Parties currently impose a competitive constraint in the wholesale market. However, as set out in **Sections 3 and 4** below, this existing constraint ([REDACTED]), is weak and replacing it with that of MergeCo is likely to result in a more competitive response from VMO2 rather than impeding VMO2's incentive to compete. To the contrary, the significant increase in VMO2's network capacity, as a result of Beacon 4.1 will significantly enhance its incentives to compete to fill this additional capacity.

MVNOs both on and off MergeCo's network will benefit from a more attractive offering

2.21 In the counterfactual 3UK is demonstrably [REDACTED], whilst VUK [REDACTED]. The Parties are capacity-constrained, and as such, acquiring additional customers would remain very costly – restricting their ability to offer competitively priced wholesale offers to MVNOs.

2.22 Post-Transaction, MVNOs already in-contract on MergeCo's network will gain several benefits that will immediately improve the experience that they provide to their end-customers:

(i) MVNOs will benefit from **better terms** as the capacity uplift on MergeCo's network puts downward pressure on MergeCo's wholesale prices and incentivises MergeCo to compete more effectively (as explained in paragraphs 2.2 *et seq*. above).

(ii) MVNOs will also benefit from **network quality improvements** as a result of MergeCo's "best-in-class" network. These quality benefits will be accessed at the same time as MergeCo's customers and include:

(a) **Better reliability:** 25% of areas with no reception will be eliminated on Day 1.[30] Additionally, site densification will double signal strength for [REDACTED] of 3UK customers and [REDACTED] of VUK customers in the 20 largest cities. It will also provide 95% indoor coverage for those cities by Year 8;

(b) **Increased 5G coverage**: Broad 5G C-band coverage, reaching 71% of the UK population on Day 1 and 86% by Year 6;[31]

[29] PFs, paragraph 268(g).

[30] [REDACTED].

[31] [REDACTED].

(c) **Higher throughput:** Average speeds of up to [REDACTED] Mbps on Day 1 and [REDACTED] Mbps by Year 3, [REDACTED].[32] At the same time, only [REDACTED]% of customers on MergeCo's network will experience speeds below [REDACTED]Mbps by Year 8.[33] Customers of MVNOs hosted on MergeCo's network will be able to experience average speeds of [REDACTED] Mbps in high traffic areas, and [REDACTED] Mbps in mid to low traffic areas by 2032;[34] and

(d) **Better latency:** Significant reductions in latency (as required by the most demanding user applications), ultimately to less than [REDACTED]ms for [REDACTED]% of the UK population by 2032.[35]

(iii) MVNOs will benefit from **improved connectivity supported by 5G SA** for their own subscribers as 5G SA technologies are made accessible, and this will enable advanced 5G use cases. The JNP is expected to accelerate the time to market for many of these use cases compared to the counterfactual where [REDACTED] and [REDACTED].

2.23 MVNOs not on MergeCo's network will also benefit by gaining an additional credible wholesale provider (in addition to VMO2 and BTEE, who currently dominate the wholesale market), able to offer significantly competitive terms and network quality improvements outlined above.

2.24 As with MergeCo, VMO2's incremental network costs will decrease due to the extra capacity and spectrum afforded to it under Beacon 4.1, leading to VMO2 itself becoming a more credible MNO host that can offer more attractive and competitive terms to its current and future MVNO customers.

2.25 As demonstrated in Section 8 of PF Annex 1, MVNOs already exert a significant competitive constraint on the retail market, in particular evidenced by the fact they offer some of the cheapest tariffs across the market, including for unlimited and high data allowances. MVNOs also compete on network quality, particularly given that most MVNOs receive parity of access to their host MNOs network capabilities. Third-party views presented by the CMA in the PFs confirm that network quality is of significant importance, as set out at paragraph 2.10 above.

2.26 It is clear that the significant benefits that will be provided to MVNOs post-Transaction in terms of network quality and commercially advantageous terms will enable them to compete even more effectively in the retail market, ultimately to the benefit of end-consumers.

[32] [REDACTED].

[33] [REDACTED].

[34] [REDACTED]

[35] [REDACTED].

MergeCo's increased competitiveness will trigger a competitive response from BTEE and VMO2, which currently dominate the wholesale market, and further increase the competitiveness of the terms they offer to MVNOs.

2.27 The PFs' assessment of the wholesale market does not consider the significant impact of the Transaction on dynamic competition, in particular the competitive responses of BTEE and VMO2 to MergeCo's improved network.

2.28 Specifically, there are [REDACTED]in the wholesale market today[REDACTED]. 3UK is[REDACTED] (see **Section 3** below). Post-Transaction, there will [REDACTED] be three effective competitors – BTEE, VMO2 and MergeCo – but MergeCo will be substantially more competitive than the standalone VUK today ([REDACTED]) as a result of improvements in its network quality and an uplift in capacity.

2.29 MergeCo will be highly incentivised to utilise the uplift in its capacity, encouraging it to offer significantly advantageous commercial terms. It follows that MergeCo can present more attractive offers to MVNOs which will in turn trigger an intense competitive response from BTEE and VMO2 (which will already be incentivised to compete more effectively as a result of Beacon 4.1 and the substantial increase in capacity that it will deliver). Specifically:

(i) The first-order response of BTEE and VMO2 will be to reduce their prices in order to increase their competitiveness and stem market share losses that are likely otherwise to arise as a result of the commercially advantageous terms offered by MergeCo.[36]

(ii) It is highly likely that BTEE and VMO2 will also respond by renewing investment in their respective networks. The UK mobile market is currently in a 'low network quality' equilibrium: VUK and 3UK are unable to accelerate investments in 5G and, in turn, BTEE and VMO2 lack the incentive to increase investments. This dynamic will change post-Transaction, as the presence of MergeCo's 'best-in-class' network will incentivise (i) VMO2 to close the network quality gap with MergeCo and BTEE, utilising the additional spectrum and sites to which it will gain access through Beacon 4.1, and (ii) BTEE to retain its reputation as being the best network, so that it can maintain its position in the wholesale market. [37]

***The Transaction will be pro-competitive for the wholesale market compared to the counterfactual, in which 3UK will* [REDACTED] *and VUK and VMO2* [REDACTED].**

2.30 Competition in the wholesale market will therefore be substantially stronger post-Transaction than in the counterfactual with the Parties' standalone networks. Absent the Transaction, and as developed further in this Annex:

(i) 3UK will [REDACTED];

(ii) VUK will [REDACTED]. For example, 23% of rural households do not receive VUK 4G indoor coverage meaning that VUK customers have to rely on 2G network

[36] See also [REDACTED].

[37] See also [REDACTED].

coverage, with a theoretical maximum speed of less than 400 kbps (and far lower speeds being achieved in reality). [REDACTED]; and

(iii) VMO2's ability to compete for new MVNO customers (and potentially also its ability to retain its existing MVNO customers) will be limited by a lack of capacity. As presented by the CMA in the PFs, [REDACTED]. For example:

(a) [REDACTED]"; [38] and

(b) [REDACTED], whose network it described as "*far superior*";[39]

2.31 It is inevitable that, absent the Transaction, [REDACTED].

3. 3UK is [REDACTED] in wholesale

3.1 The PFs consider that 3UK is "*a significant competitive force*"[40] in the wholesale market by expressly relying on a very selective reading of the MVNOs' views[41] and feedback which suggests [REDACTED].[42] The PFs mischaracterise and disregard the evidence that 3UK is [REDACTED] in the supply of wholesale mobile services. As previously explained to the CMA, [REDACTED] and [REDACTED],[43] and [REDACTED]. Contrary to the conclusion in the PFs, [REDACTED] cannot be characterised as competitive processes that 3UK "won", as explained further at paragraphs 4.21 *et seq*. below.[44] The PFs disregard the evidential record and submissions made throughout the investigation that clearly show that [REDACTED] in the wholesale market.

3.2 The PFs rely on 3UK's [REDACTED] to consider it a credible competitor. However, the analysis relied upon is incorrect for the following reasons: (i) the "wins" recorded are not in fact wins; (ii) the analysis presented in the PFs does not consider the significant number of competitive tenders 3UK was not aware of; (iii) there is a disconnect between certain third-party views presented in the PFs and the reality that MVNOs consistently choose not to award tenders to 3UK; and (iv) the primary reason for 3UK's lack of credibility is that [REDACTED].

[REDACTED]

3.3 The PFs refer to its analysis of MVNO opportunity data in finding that "*3UK is seen as a credible competitor*" in the wholesale market.[45] However, the data presented in Table 9.3 indicates that BTEE was aware of [REDACTED] opportunities, [REDACTED] that 3UK was aware of. While the PFs state that "[REDACTED]", the fact 3UK was not even considered or contacted for these opportunities serves as further evidence that 3UK is not considered a significant competitor in

[38] PFs, paragraph 9.59(b).

[39] PFs, paragraph 9.136.

[40] PFs, paragraph 9.249(a).

[41] PFs, paragraph 9.241.

[42] PFs, paragraph 9.245.

[43] PFs, paragraph 9.62.

[44] PFs, Table 9.3.

[45] PFs, paragraph 9.62.

the wholesale market. The PFs rely on this justification to use the number of opportunities the Parties were aware of rather than the overall number of opportunities the MNOs were aware of as the denominator in its analysis along with the fact [REDACTED].[46] However, the Parties reiterate that this approach artificially inflates the Parties' invitation, participation and win rates and therefore the PFs overstate 3UK's credibility as a wholesale competitor.

[REDACTED]

3.4 The views of MVNOs reported in the PFs cannot be reconciled with 3UK's inability to win MVNO business. The PFs note that 3UK has allegedly "*played an important role in a number of opportunities*"[47] based on third-party feedback claiming that 3UK has provided very competitive offers in a number of tenders.[48] However, the fact remains that [REDACTED]. [REDACTED]. The reality is that MVNOs perceive 3UK as ultimately lacking credibility as a host MNO. For example, [REDACTED]. Enders Analysis similarly finds that 3UK is not viewed as a competitive force in wholesale negotiations and lacks credibility "*even as a realistic bargaining chip to extract better deals from the other operators*".[49] This is strong evidence of the fact that [REDACTED].

Network quality

3.5 The PFs refer to some of the MVNOs' views in finding that 3UK is "*recognised by multiple MVNOs as having improved its network quality over time*".[50] For example, in its submission and response to the CMA's questionnaire, [REDACTED] commented that while "*it had historic concerns about 3UK's network quality, it considers that its network quality has significantly improved*" and now perceives 3UK to be "*a very credible network host*".[51] This statement is contradicted by both market reality and the outcome of the [REDACTED] tender. As explained further at paragraphs 3.13 *et seq.* below, the reason why 3UK missed out on this opportunity was due to its [REDACTED]. The reality is that [REDACTED] which is evidenced by the fact [REDACTED], including the [REDACTED].

3.6 Similarly, the PFs refer to a comment made by [REDACTED] that "[REDACTED]"[52] while Gamma describes 3UK's network as "*very good*".[53] This is at odds with commercial reality. The fact remains that 3UK failed to win the [REDACTED] tender and as explained at paragraph 3.23 below 3UK believes that Gamma [REDACTED].[54]

3.7 The reality is more accurately encompassed by [REDACTED]'s comment that it considers 3UK's network quality to be just 2 out of 5 stars and that 3UK would only become competitive

[46] PFs, paragraph 9.61(a).

[47] PFs, paragraph 9.179.

[48] PFs, paragraph 9.246.

[49] Enders Analysis, '*Tread lightly - Response to the CMA's proposed remedies to the Vodafone-Three Merger*', 27 September 2024, page 3.

[50] PFs, paragraph 9.245.

[51] PFs, paragraph 9.245(a).

[52] PFs, paragraph 9.245(e).

[53] PFs, paragraph 9.245(g).

[54] PFs, paragraph 9.245(e).

once (and if) it has "*achieved its planned technical capability*".[55] Indeed, it is precisely because [REDACTED] in the wholesale market that [REDACTED], including the [REDACTED] opportunity. This is further supported by a comment made by [REDACTED] that "[REDACTED]".[56] This perception is rooted in the reality that 3UK suffers from a congested network that it does not have the funds to improve. Indeed, 3UK documents indicate that [REDACTED]. [REDACTED]. Without the transformation the Transaction would bring, 3UK will therefore continue to [REDACTED] in the wholesale market [REDACTED].

3.8 The PFs further state that "*in some cases 3UK was the only MNO (other than the host provider) the MVNO engaged with*" in support of its provisional conclusion that "*3UK is a significant competitive force in the supply of wholesale mobile services*".[57] However, the CMA refers to just two such instances and one of these instances merely concerns only a high-level discussion between 3UK and the MVNO (of the type that the CMA [REDACTED]), which does not amount to participation in that competitive tender process. [REDACTED] told the CMA that its interactions with 3UK consisted of merely "*high-level discussions*" and "*the discussions did not go beyond assessing whether 3UK had an appetite to work with the third party*".[58] The other MVNO cited is [REDACTED] which, as stated at paragraph 3.19 *et seq*. below, [REDACTED].

3.9 Further, the PFs place more weight on the feedback of larger MVNOs in relation to its assessment of 3UK's network reputation on the basis that "*larger MVNOs are well positioned to make an informed assessment of 3UK's network quality and network reputation given their significant technical expertise relative to individual retail customers*".[59] This approach artificially limits the evidentiary base and is flawed:

(i) Given the critical importance of network quality to all MVNOs,[60] smaller MVNOs are equally dependent on, and therefore well positioned to form valid views on an MNO's network quality. As such, during wholesale discussions they fully engage about the network performance of their potential MNO hosts. For example, and as explained at paragraph 3.24 below, [REDACTED].[61] Similarly, the third-party evidence cited by the PFs indicate that a number of MVNOs, small and large, including [REDACTED]r.[62]

(ii) Individual retail customers provide valuable views on network quality as well. For instance, as mentioned above, comparison websites have cited 3UK's network quality as a reason against choosing iD Mobile at the retail level,[63] and Superdrug subscribers regularly identify network quality as an issue.[64] Indeed, as set out in

[55] PFs, paragraph 9.245(c).

[56] PFs, paragraph 9.245(h).

[57] PFs, paragraph 9.247.

[58] PFs, paragraph 9.247(a).

[59] PFs, paragraph 2.239.

[60] PFs, paragraph 8.54(ii).

[61] Merger Notice, paragraph 15.458(iv).

[62] PFs, paragraphs 9.107(c), 9.245(c) and 9.245(h).

[63] Merger Notice, paragraph 15.459.

[64] Trustpilot, 'Superdrug Mobile', n.d., available at: https://uk.trustpilot.com/review/www.superdrugmobile.com?stars=1 (accessed 6 July 2024).

Section 5 of PF Annex 1, [REDACTED]. All of this feedback at the retail level will be assimilated by MVNOs when choosing a host MNO.[65]

Pricing

3.10 In relying on MVNO feedback, the PFs find that 3UK is "*recognised by a number of MVNOs as offering competitive pricing/terms compared to the other MNOs*". For example, the call notes between the CMA and [REDACTED] suggest that the MVNO indicated that 3UK offered "*a more favourable pricing structure*".[66] [REDACTED] response to the CMA's questionnaire suggest that "*3UK was the most competitive MNO on price*".[67] The fact that 3UK has offered lower prices (as suggested in the PFs[68]) but still has [REDACTED] provides strong evidence that 3UK is regarded as uncompetitive as a [REDACTED] even if it has historically tried to [REDACTED]. The PFs ignore the market reality and the consistent body of evidence provided by the Parties that [REDACTED].

3.11 As previously explained to the CMA, the MVNOs' actions speak more convincingly of their real views and motivations than any remarks they may have provided to the CMA during the course of its merger investigation. It is not plausible that MVNOs [REDACTED]. While the PFs do not engage with the Parties' submissions (other than merely noting the Parties' submissions in paragraph 9.243 of the PFs) they cite a handful of third-party documents, and entirely rely on a selective reading of certain MVNOs' submissions made to the CMA. In assessing the evidence on this issue, the CMA must have greater regard to MVNOs' incentive to use the CMA to advance their commercial positions.[69] The CMA should accord greater weight to the objective evidence of whom the MVNOs invite to tender for their business and with whom the MVNOs

[65] PFs, paragraph 8.54(ii).

[66] PFs, paragraph 9.246(d).

[67] PFs, paragraph 9.246(b).

[68] PFs, paragraph 9.182(c).

[69] For example, see the [REDACTED].

choose to contract. The objective evidence demonstrates clearly that [REDACTED] in the wholesale market.

Third-party feedback does not support a finding that [REDACTED]

3.12 Contrary to feedback provided by MVNOs to the CMA (and set out above), 3UK has [REDACTED].

Sky Mobile

3.13 [REDACTED]. [REDACTED].[70] [REDACTED].

3.14 The PFs do not place sufficient weight on the fact that [REDACTED]. [REDACTED].[71] [REDACTED].[72] There is evidence that Sky Mobile was [REDACTED].[73] 3UK's internal documents even indicate that 3UK [REDACTED] "*[REDACTED]*".[74]

3.15 [REDACTED].[75] [REDACTED].[76]

3.16 [REDACTED]. [REDACTED],[77] which is notably at odds with the PF's conclusion that BTEE "[REDACTED]".[78]

3.17 It follows from the above that although several internal documents show that 3UK [REDACTED],[79] the overall body of evidence confirms that 3UK had [REDACTED]. Contrary to the allegations in the PFs, 3UK did not succeed in overcoming [REDACTED].[80] The reference in the PFs to 3UK's intention "*[REDACTED]*" despite the news about a potential agreement between Sky Mobile and VMO2 is not evidence to the contrary.[81] 3UK's statement merely confirms the view that all MNOs, including 3UK, seek to compete for MVNO customers. However, as confirmed by the tender opportunity data analysis in **Section 4** below, 3UK does not have a [REDACTED], [REDACTED].

Lyca Mobile

3.18 The PFs consider that [REDACTED], "[REDACTED]".[82] Lyca Mobile undertook a network quality assessment of each MNO which concluded that "[REDACTED]" and "[REDACTED]"

[70] CK Hutchison internal document, [REDACTED]

[71] CK Hutchison internal documents, [REDACTED]; [REDACTED]; [REDACTED].

[72] CK Hutchison internal document, [REDACTED]

[73] CK Hutchison internal document, [REDACTED].

[74] CK Hutchison internal document, [REDACTED].

[75] CK Hutchison internal document, [REDACTED].

[76] PFs, paragraph 9.90.

[77] PFs, paragraph 9.103(c).

[78] PFs, paragraph 9.107(c).

[79] CK Hutchison internal documents, [REDACTED].

[80] PFs, paragraph 9.82(b) and CK Hutchison internal document, [REDACTED]

[81] PFs, paragraph 9.81 and CK Hutchison internal document, [REDACTED].

[82] PFs, paragraph 9.141.

have higher network quality than "[REDACTED] *being far superior*". Lyca Mobile further confirmed that "*network quality perceptions affect brand perceptions, which is an element that Lyca Mobile is striving to improve*".[83]

[REDACTED]

3.19 [REDACTED][REDACTED][REDACTED][REDACTED][REDACTED][REDACTED][REDACTED]. The view expressed in the PFs that "[REDACTED] *has* [REDACTED] *in the last few years,* [REDACTED]" does not align with the commercial reality that 3UK is [REDACTED] in the wholesale market.[84] This contradicts other third-party evidence cited in the PFs such as Lyca Mobile which considered [REDACTED] network inferior to the [REDACTED] networks. Indeed, [REDACTED] would itself ultimately go on to renew its contract with [REDACTED] rather than switch to [REDACTED] which, as mentioned above, 3UK believes was due to [REDACTED].

3.20 As noted in paragraphs 3.34 *et seq.* below, the Parties' request to see the underlying documents relied upon has been refused. The Parties are therefore unable to meaningfully comment on the claims made in the PFs by reference to the views provided by the MVNOs. Nevertheless, 3UK reiterates that there have been no significant improvements in its network quality to remedy [REDACTED]).

Gamma

3.21 3UK believes that [REDACTED].

3.22 In the context of [REDACTED].[85]

3.23 [REDACTED]. [REDACTED].[86]

Other third-party commentary

3.24 In the O2 / Virgin Mobile merger investigation, the CMA noted that "*[c]ertain MNOs and MVNOs perceive Three as having poor network quality*".[87]

3.25 3UK's network quality has also been publicly cited as a reason against choosing iD Mobile at the retail level.[88]

[83] PFs, paragraph 9.137.

[84] PFs, paragraph 9.168

[85] [REDACTED]".

[86] [REDACTED].

[87] CMA, Final Findings Report Liberty Global Plc / Telefónica S.A., paragraph 10.66(b).

[88] A comparison website notes that a 'con' with respect to iD Mobile is that "Coverage: The MVNO runs on the Three network, and some areas suffer from a more mediocre network connection" (S. Khan (Talk Home), '*A Complete Guide to the Best Mobile Virtual Network Operator (MVNO) in UK*', 4 August 2021, available at: https://blog.talkhome.co.uk/technology/mvnos-in-uk/).

3UK [REDACTED]

3.26 The PFs rely on [REDACTED] to form the view that 3UK has [REDACTED]. The PFs note that [REDACTED].[89]

3.27 However, as explained further in paragraphs 4.16 *et seq*. below, the analysis in the PFs does not adequately recognise that 3UK [REDACTED].[90] [REDACTED],[91] [REDACTED].[92]

3.28 [REDACTED].[93] [REDACTED].

VUK's internal documents consistently demonstrate that [REDACTED]

3.29 Evidence from VUK's internal documents demonstrates that VUK [REDACTED] in the wholesale market. As explained in [REDACTED],[94] VUK internal documents illustrate that it perceives 3UK to [REDACTED],[95] and views 3UK to have had the "*[REDACTED]*" and an "*[REDACTED]*".[96] [REDACTED]. Whilst the PFs make a fleeting reference to these documents provided by VUK, they do not address the fact that this is direct evidence of VUK's [REDACTED]. The PFs do not explain why this evidence is being disregarded.

3.30 As noted in [REDACTED], evidence from VUK's internal documents also show that [REDACTED]. As stated in the PFs, VUK internal documents considered [REDACTED].[97] The same internal document states [REDACTED]. This documentary evidence should be afforded due weight in the CMA's assessment of VUK's perceptions of [REDACTED].

The PFs rely on a selective and inconsistent approach of the MVNO "opportunities" data

3.31 As set out in detail in **Section 5**, the PFs are selective and inconsistent in their approach to interpreting and analysing MVNO "opportunities" data, and rely on this data in reaching the incorrect provisional conclusion that 3UK plays an important role in the wholesale market.

The CMA's approach to disclosure of evidence relied on in Chapter 9 on TOH2 is procedurally unfair

3.32 The PFs expressly rely on the assertions of third parties to reach their provisional views in relation to 3UK's competitive position and its role in the wholesale market. In contrast to its scrutiny (and, in many cases, dismissal without explanation) of the Parties' evidence, the CMA takes these third-party assertions at face value without properly testing them against the evidential record including the actual behaviour and commercial choices of MVNOs. As

[89] PFs, paragraph 9.212(e).

[90] PFs, paragraph 9.212(e)(vi).

[91] CKH internal document, [REDACTED].

[92] CKH internal document, [REDACTED].

[93] [REDACTED], paragraph 7.8.

[94] [REDACTED], paragraph 5.23(ii).

[95] This is consistent with [REDACTED].

[96] Vodafone internal document, [REDACTED].

[97] Vodafone internal document, [REDACTED].

explained at paragraph 3.4 above, the third-party feedback on which the CMA relies is [REDACTED] – [REDACTED].

3.33 Limited quotes and/or summaries of certain third-party internal documents have been provided to external legal advisers under a confidentiality ring. These do not provide sufficient context for the Parties to make informed submissions in response to the PFs.

3.34 On 20 September 2024, the Parties sent a request to the CMA for access to a number of the relevant third-party documents relied on by the CMA in reaching it provisional views in relation to the wholesale market and the functioning of MBNL, and in particular 3UK's competitive position. This request was refused on 25 September 2024. The Parties have endeavoured to respond to the arguments presented in the PFs based on the extracts provided, but it is impossible for the external advisers to comment meaningfully or make informed submissions on the information without having access to the full evidence relied upon in the PFs.

3.35 As the CMA recognises in paragraph 13.7 of its Mergers: Guidance on the CMA's jurisdiction and procedure (as amended on 4 January 2022), "*the disclosure of confidential information will be deemed necessary where it forms part of the 'gist of the case' the merger parties have to answer. In other words, the merger parties need to be provided with sufficient information in order to make informed submissions in response to the CMA's provisional findings*".[98] As is evident from the PFs, the third-party documents requested form a key part of the CMA's reasoning and provisional conclusions, particularly concerning 3UK's competitive position in the wholesale market. The PFs expressly state that they rely on the views of MVNOs in finding that 3UK is "*a significant competitive force*" in the supply of wholesale mobile services.[99]

3.36 The statements or summaries set out in the PFs are contrary to other documentary evidence before the CMA. In those circumstances, understanding the full basis on which third parties were asked to provide information to the CMA is essential for the Parties to understand the context it was given and the potential existence of other relevant statements in those documents which have not been extracted in the PFs.

3.37 The CMA's refusal to grant the Parties' requests for access to this evidence is procedurally unfair. The Parties reserve their rights to make further submissions to the CMA.

4. The Parties are not close competitors in wholesale

4.1 The CMA mischaracterises several key pieces of evidence to provisionally conclude that the Parties are particularly close competitors. In fact, (i) the Parties both have low market shares, which is more likely to be consistent with customers switching from the Parties to other operators than to each other; (ii) it is not appropriate to place additional weight upon the competitive experiences of five large MVNOs without justification, which also leads the CMA's analysis to ignore the experience of the plethora of new market entrants; (iii) the CMA relies on unevidenced assertions from third parties which are at odds with the market reality including

[98] Mergers: Guidance on the CMA's jurisdiction and procedure (as amended on 4 January 2022), paragraph 13.7. See also *Meta Platforms, Inc v Competition and Markets Authority* [2022] CAT 26, which requires the CMA is required to disclose everything that is necessary to justify its decision at Phase 1, as well as all the information which is necessary to facilitate consultation with the affected parties. By extension, it is reasonable for this practice to apply also at the current stage of the CMA's Phase 2 process to ensure that the CMA's disclosure obligations are consistent with this duty.

[99] PFs paragraph 9.249.

the actual commercial choices of MVNOs; and (iv) once the tender analysis is corrected, the Parties in fact have only overlapped in a very limited number of opportunities.

Market share data

Tesco Mobile

4.2 The Parties agree with the inclusion of Tesco Mobile in the PFs market share analysis. As the Parties have previously submitted, Tesco Mobile is a contestable MVNO. Although it is currently operating under a joint venture agreement with VMO2, this in no way precludes it from switching host in the future.[100] Indeed, as noted in the PFs:

(i) Tesco Mobile has the option to revisit the joint venture agreement in [REDACTED], and even exit the joint venture if [REDACTED].

(ii) Tesco Mobile also had the opportunity to "[REDACTED]" prior to renewal of the joint venture agreement with VMO2, [REDACTED].[101]

The CMA's shares of supply analysis

4.3 The PFs take the view that wholesale markets provide a reasonable approximation of competitive constraints because the likelihood of changes in market shares occurring is reduced by limited switching and limited successful MVNO entry.[102] In reality, market shares provide limited insight to the extent of competition and the competitive constraints on MNOs.

4.4 The Parties' current wholesale shares are almost entirely the product of one MVNO each; iD Mobile and Lebara. iD Mobile launched in partnership with 3UK in 2015, and Lebara launched in the UK in partnership with VUK in 2007. These are not recent opportunities which can be relied upon as evidence of the effectiveness of 3UK or VUK as current or future competitors.

4.5 The PFs suggest an approach that is inconsistent with CMA and EC precedent that an analysis of *recent* tender opportunities provides the best indication of operators' competitiveness.[103]

4.6 Notwithstanding the Parties' view that market shares provide limited insight to the extent of wholesale competition, the CMA's market shares appear to be inconsistent with the data submitted by the Parties.

(i) Table 9.1 of the PFs presents subscriber shares between 2021 – 2023 that are higher for VUK and at the same time lower for 3UK than the market shares

[100] [REDACTED], paragraphs 4.1 *et seq*.

[101] PFs, paragraph 9.37.

[102] PFs, para 9.48.

[103] In COMP / M.7612 *Hutchison 3G UK / Telefónica UK*, the EC *noted "historical shares in the wholesale market are not necessarily a good indicator of competitive strength of individual competitors for several reasons and must be interpreted carefully."* The EC, amongst other observations, noted that it may take time before trends in an MNO's ability to win new business will be reflected in historical market shares, as MVNOs tend to switch MNO host infrequently – see COMP / M.7612 Hutchison 3G UK / Telefónica UK, paragraph 1868. Further, this view was also reflected by the CMA in its analysis of the BTEE transaction as it noted that *"when large contracts are allocated through bidding, such as is the case for some wholesale mobile contracts, static market shares may not be a good indicator of the strength of constraint provided by each competitor".* See CMA, Final Findings Report BT / EE, footnote 425.

submitted by the Parties.[104] This implies that the figures on the Parties' subscriber bases must have been altered when calculating the shares presented in Table 9.1 and it is not clear from the PFs on what basis these changes have been made.

(ii) Table 9.2 states that 3UK hosted [REDACTED] MVNOs in every year between 2020 to 2023, whereas the Parties submitted in paragraph 15.403 of the Merger Notice that 3UK hosted [REDACTED] MVNOs in 2023. Table 9.2 also states that BTEE hosted [REDACTED] MVNOs in 2023, whereas BTEE has publicly stated that it hosts 50.[105]

4.7 The PFs draw incorrect conclusions with respect to the market shares presented (notwithstanding the potential factual errors outlined in paragraph above).

(i) The PFs conclude that 3UK's relatively stable market share between 2020 and 2023 suggests that it exerts a competitive constraint in the market.[106] It is not clear on what basis the PFs make this finding. Instead, Table 9.1 shows that in 2023 3UK had the smallest market share by subscriber base (at [REDACTED]%) and the second smallest by revenue (at [REDACTED]%). Table 9.2 also shows that 3UK had [REDACTED], number of MVNOs in every year between 2020 and 2023, indicating that it exerts at most a weak competitive constraint.

(ii) Conversely, the market shares show that VMO2 and BTEE are strong competitors, with VMO2 consistently holding a market share over [REDACTED]% by subscriber base and revenue and BTEE's recent win of the Lyca Mobile opportunity reflected in its [REDACTED].

(iii) The PFs also conclude – without detailed reasoning – that the Parties' market shares are consistent with the Parties being close competitors.[107] However the Parties' low market shares are, if anything, more likely to be consistent with customers switching from the Parties to the other operators rather than to each other (which is in fact the case).

Tender opportunity data

4.8 The PFs note that "*evidence of VUK and 3UK participating in the same opportunities…may indicate that VUK and 3UK compete closely*".[108] Although the PFs acknowledge that the Parties did not compete in [REDACTED]% of the tenders they were aware of it nonetheless concludes that the Parties both competing in [REDACTED] of the five MVNO opportunities is evidence of

[104] See [REDACTED]

[105] See https://newsroom.bt.com/lyca-mobile-partners-with-bt-wholesale-levelling-up-connectivity-speed-and-coverage-for-customers/ (accessed 19 September 2024).

[106] PFs, paragraph 9.50(b).

[107] PFs, paragraph 9.50(a).

[108] PFs, paragraph 9.51.

particular closeness. The PFs' selective and inconsistent analysis of this "opportunities" data is also discussed in further detail in **Section 5** below.

4.9 To reach its provisional conclusion, the PFs' assessment incorrectly:

(i) places more weight on the competitive experiences of five large MVNOs. By restricting the tender analysis to the five largest MVNOs, the PFs do not acknowledge the impact of the plethora of MVNOs that have entered the retail market in the last ten years (a reflection of the fact that entry barriers for MVNOs are lower than ever), nor does it factor in the real growth potential of MVNOs[109] as it excludes any analysis of which MNOs are winning the business of emerging MVNOs and are, therefore, competing most aggressively; and

(ii) relies on unevidenced assertions from third parties which are at odds with the market reality including the actual commercial choices of MVNOs. For example, [REDACTED]'s statement that "*3UK competes strongly or very strongly with VUK*" is at odds with its decision [REDACTED];[110] In the same vein, [REDACTED]'s statement that "*VUK competes strongly or very strongly with 3UK*" is unsupported by the market reality considering that [REDACTED].[111] and

(iii) continues to mischaracterise certain tenders as competitive opportunities in which it considers the Parties both participated.[112] Once corrected, the opportunity data in fact shows that the Parties have only overlapped in a very small number of opportunities and, in fact, [REDACTED].

4.10 If [REDACTED] is correctly excluded from the CMA's analysis of the five largest MVNO opportunities (given that, as explained at paragraph 4.21 below, [REDACTED]), the only overlap between the Parties is in relation to one large MVNO opportunity only: Sky Mobile. As the PFs conclude, Sky Mobile is in a unique position and not representative of the experiences of other MVNOs, and in any case was not an opportunity which saw close competition between the Parties (as explained in **Section 5** below). It cannot follow from this that the Parties are close competitors.

4.11 Even using the PFs' data, the Parties' win rates are very low, and do not indicate that they exert competitive constraints in the context of wholesale opportunities. Specifically, VUK won [REDACTED]of total opportunities, and 3UK won [REDACTED] of total opportunities.

It is not reasonable for the PFs to place more weight on the competitive experiences of the five large MVNOs.

4.12 As an initial point, it is not clear to the Parties on what basis the PFs treat Sky Mobile, [REDACTED], Lyca Mobile, [REDACTED] and [REDACTED] together as a group of "five large

[109] For example, the CMA fails to recognise Lebara's extraordinary growth in the pre-paid subsegment, where it has increased its share of supply by subscribers from [REDACTED]% in 2020 to [REDACTED]% in 2023, and [REDACTED].

[110] PFs, paragraph 9.252(a) and 9.113.

[111] PFs, paragraphs 9.252(b) and 9.157.

[112] The Parties welcome the fact that [REDACTED] is not included as a relevant competitive opportunity. For the reasons set out at paragraphs 5.10 – 5.12 in [REDACTED], this was not a competitive process in which multiple MNOs bid for an opportunity.

MVNOs" with "*relative competitive importance […] as customers of wholesale mobile services*":[113]

(i) These MVNOs are very different companies, in terms of their subscriber numbers, perception in the market and buyer power. Of these five MVNOs, taking the CMA's metric of share of MVNO subscribers as a guide, the largest, Sky Mobile, has a share of [REDACTED]%; next is [REDACTED] ([REDACTED]%); followed by Lyca Mobile: ([REDACTED]%); [REDACTED] ([REDACTED]%); and the smallest, [REDACTED] ([REDACTED]%).[114]

(ii) As acknowledged by the PFs, in practice, each of these MVNOs had qualitatively different experiences when they went to the market to renegotiate their wholesale contracts.[115]

(iii) Furthermore, the PFs conclude that Sky Mobile is in a unique position amongst MVNOs and that Sky Mobile's experience of strong competition between all four MNOs is not representative of the experience that other MVNOs would have. The PFs consider that this is due to its strong brand, ability to cross-sell to a large, fixed customer base and strong growth and that Sky Mobile's status also provides it with significantly more resources and leverage in negotiations with MNOs.[116]

4.13 The Parties consider that the same factors that place Sky Mobile in a "unique" position amongst MVNOs are equally applicable to Tesco Mobile, which has a strong brand, an ability to cross-sell to a large number of customers, strong growth and status that provides it with substantial resources and leverage in negotiations. Tesco Mobile also has the highest share of all MVNOs discussed in detail in the PFs ([REDACTED]%).[117] These factors place Tesco Mobile on a similar footing to Sky Mobile, and it is the Parties' view [REDACTED]. The Parties consider that [REDACTED]. The PFs do not explain why (or even assert that) [REDACTED], Lyca Mobile, [REDACTED], or [REDACTED] possess any or some of the same attributes that would justify treating them in the same way as Sky Mobile or Tesco Mobile.

4.14 As noted above at paragraph 4.8(i) above, the PFs do not acknowledge the impact of the plethora of MVNOs that have entered the retail market in the last ten years (a reflection of the fact that entry barriers for MVNOs are lower than ever), nor does it factor in the real growth potential of MVNOs[118] as it excludes any analysis of which MNOs are winning the business of emerging MVNOs and are, therefore, competing most aggressively. New MVNO entrants are particularly important to the wholesale market. As acknowledged in the PFs,[119] VUK's internal documents indicate that [REDACTED][120] and [REDACTED][121]

[113] PFs, paragraph 9.56.

[114] PFs, paragraphs 9.75, 9.108, 9.127, 9.142, and 9.156.

[115] PFs, paragraphs 9.63-9.178 and 9.182-9.187.

[116] PFs, paragraph 9.192(c).

[117] PFs, paragraph 9.65.

[118] For example, the CMA fails to recognise Lebara's extraordinary growth in the pre-paid subsegment, where it has increased its share of supply by subscribers from [REDACTED]% in 2020 to [REDACTED]% in 2023, and [REDACTED].

[119] See PFs, paragraph 9.212(a)(iv) and paragraph 9.212(b)(iii).

[120] See, e.g. Vodafone internal documents [REDACTED]; [REDACTED]; [REDACTED].

[121] Vodafone internal document [REDACTED].

[REDACTED][122][REDACTED].[123] In addition, and as discussed in more detail below, [REDACTED]% of the [REDACTED] MVNO opportunities won by [REDACTED]. [124] The CMA should not place less weight on the competitive experiences of smaller MVNOs, including new entrants.

4.15 In addition, the CMA's provisional conclusion that 3UK and VUK's strategies of targeting new MVNO entrants indicate their ambitions to grow in wholesale (and, consequently, the competitive constraint that 3UK exercises),[125] is also at odds with its refusal to acknowledge the importance of such MVNOs in relation to its opportunity analysis.

It is not correct to conclude that similar competitive strategies are indicative of closeness of competition

4.16 The PFs seek to rely on VUK and 3UK internal documents to suggest that [REDACTED] as a means of indicating they have similar strategies and could be considered close competitors.[126] However, an ambition to grow in the wholesale segment is not an indication that the Parties will use the same strategy as each other and therefore compete closely with each other in the wholesale market.

4.17 Moreover, the Parties note that having an ambition to grow does not mean they can or will grow at all. As noted in **Section 2** above, absent the Transaction:

(i) 3UK has been and will remain a [REDACTED];

(ii) VUK will [REDACTED] compared to BTEE and VMO2.

4.18 With respect to paragraph 4.17(i) above, the PFs find, based on their analysis of internal documents, that 3UK's strategy suggests it *"compete[s] for existing MVNOs as well as new entrants and have ambitions to grow"*.[127] As explained to the CMA previously, [REDACTED] and the capex constraints preventing 3UK from investing in its network.

(i) For example, in reaching this conclusion, the PFs refer to an internal document dated 2021 which states that [REDACTED][128] The same internal document indicates that [REDACTED][129] [REDACTED]. In addition, in these documents [REDACTED][130] [REDACTED][131]

[122] [REDACTED].

[123] For more detail, see paragraph 7.7 below.

[124] PFs, paragraph 9.57(e)(i).

[125] PFs, paragraph 9.230.

[126] PFs, paragraph 9.230(a).

[127] PFs, paragraph 9.230.

[128] PFs, paragraph 9.212(e)(i). CK Hutchison internal document, [REDACTED].

[129] PFs, paragraph 9.212(e)(iv).

[130] PFs, paragraph 9.212(e)(iv).

[131] PFs, paragraph 9.141(a).

(ii) The PFs also refer to an internal document from 2022 noting that [REDACTED][132] [REDACTED][133] [REDACTED][134] [REDACTED].

(iii) The PFs refer to several other extracts in paragraph 9.212(e) of the PFs [REDACTED][135] [REDACTED].

(iv) The PFs also refer to a 3UK internal document [REDACTED][136] [REDACTED].[137] This is supported by the fact that BTEE has won the highest number of MVNO opportunities of all the MNOs in recent years. Meanwhile VMO2 continues to host the two largest MVNOs on its network, Tesco Mobile and Sky Mobile, which together serve 8.7 million customers. This would suggest that both BTEE and VMO2 are very much focussed on growing their wholesale presence and have been far more successful than 3UK at doing so.

4.19 3UK's growth ambitions must also be considered in the context of 3UK's actual capabilities. The reality is that 3UK's network is highly congested and will remain so in the counterfactual. [REDACTED]. [REDACTED].[138] Without the Transaction, 3UK will [REDACTED].

[REDACTED] was not a competitive opportunity for which the Parties both bid

[REDACTED] cannot be characterised as a "competitive opportunity"

4.20 Contrary to the view stated in the PFs,[139] [REDACTED]. As the Parties have previously explained in several submissions, [REDACTED]. [REDACTED].[140] [REDACTED][141] [REDACTED].

4.21 [REDACTED][REDACTED].[142] [REDACTED].

4.22 In addition, the PFs refer to two [REDACTED] to support the finding that VUK was interested in competing for [REDACTED]. One document recommended that VUK [REDACTED].[143] The other [REDACTED].[144] [REDACTED]. Importantly, these documents are dated March 2021 and June 2021 respectively, i.e. just after 3UK and [REDACTED] announced their renewal of the MVNO agreement in early 2021. For these reasons, they cannot possibly be regarded as a statement of intent regarding VUK's interest in bidding for the [REDACTED] opportunity, nor do they reflect the reality of VUK's wholesale strategy with respect to [REDACTED], and therefore

[132] PFs, paragraph 9.212(g).

[133] Merger Notice, footnote 548.

[134] [REDACTED]. See the Parties' response to [REDACTED].

[135] [REDACTED], paragraph 3.5.

[136] PFs, paragraph 9.219(b)(i).

[137] [REDACTED].

[138] [REDACTED], paragraph 1.4(iii).

[139] PFs, paragraph 9.59(a)(ii).

[140] Merger Notice, paragraph 15.468.

[141] TOH2 Working Paper, paragraph 1.37(c).

[142] PFs, paragraph 9.149.

[143] PFs, paragraph 9.151(b), with reference to Vodafone internal document, [REDACTED].

[144] PFs, paragraph 9.151(b), with reference to Vodafone internal document, [REDACTED].

should not be afforded any weight in the CMA's assessment of VUK's strategy in the context of wholesale bidding opportunities.

4.23 Further, the CMA excluded [REDACTED]on the basis that [REDACTED] and there was therefore no competitive process.[145] Following the same logic, VUK's engagement with [REDACTED], [REDACTED], should not amount to participation in a competitive process. The PFs cannot consider [REDACTED] a competitive opportunity without also accounting for [REDACTED] "opportunities" as the denominator to determine the Parties' win rate. The approach taken by the PFs is therefore internally inconsistent and contradictory.

[REDACTED]'s renegotiations do not support the conclusion on VUK and 3UK being close competitors

4.24 In any event, as the Parties have previously stated in [REDACTED], [REDACTED] [REDACTED] [REDACTED].[146] [REDACTED] [REDACTED] [REDACTED].[147] [REDACTED] [REDACTED] [REDACTED].

4.25 The Parties further note that the PFs downplay the importance of [REDACTED] as a competitive force in what they consider to be a bidding process involving [REDACTED]. However, as demonstrated by third-party documents, should the PFs consider [REDACTED]'s renegotiation with 3UK as a bidding process, they cannot but acknowledge that both [REDACTED] and VUK engaged with that process to the same limited extent, and therefore VUK is not a closer competitor to 3UK than [REDACTED].

(i) The PFs provide that [REDACTED]".[148] [REDACTED].[149] However, this was only the "[REDACTED]",[150] and although it could have "[REDACTED]" as argued in the PFs,[151] the Parties understand that [REDACTED].[152] This is in contrast to VUK [REDACTED]. [REDACTED].[153]

(ii) [REDACTED]. In one of these documents, [REDACTED] clearly states that [REDACTED].[154] In another one, [REDACTED].[155]

4.26 On the basis of the above, the Parties conclude that [REDACTED] cannot be considered as a less important competitive force with respect to the [REDACTED] process than VUK, which

[145] PFs, paragraph 9.61(a).

[146] [REDACTED], paragraph 5.13

[147] PFs, paragraphs 9.142-9.155.

[148] PFs, paragraph 9.149.

[149] PFs, paragraph 9.153(d).

[150] PFs, paragraph 9.153(d).

[151] PFs, paragraph 9.153.

[152] The Parties' views are based on PFs, paragraph 9.153(e) as the underling third-party documents have never been shared with them.

[153] PFs, paragraph 9.153(e).

[154] PFs, paragraph 9.149 (emphasis added).

[155] PFs, paragraph 9.152(b)

supports the conclusion that VUK and 3UK were not close competitors in their negotiations with [REDACTED].

[REDACTED] was not a "win" for 3UK

4.27 The Parties welcome the CMA's decision to "*[REDACTED]*",[156] but do not agree that it is any indication of 3UK's credibility as a wholesale supplier. [REDACTED].

4.28 [REDACTED].

4.29 [REDACTED].[157] [REDACTED] Furthermore, as stated above, it is inconsistent for the PFs to place any weight on the [REDACTED] "win" given that 3UK was not involved in the process while refusing to place weight on the [REDACTED].

4.30 When the PFs' wholesale tender analysis is corrected to account for the mistaken view that [REDACTED] and that [REDACTED] was a competitive opportunity, it shows that neither 3UK nor VUK could be considered as being particularly successful in winning MVNOs [REDACTED].

5. The CMA's assessment of competitive dynamics in recent MVNO opportunities is flawed and does not substantiate its provisional conclusions

5.1 The PFs consider the competitive dynamics in relation to what the CMA considers to be the five largest MVNO opportunities during in the period Q1 2020 – Q1 2024 (Sky Mobile, [REDACTED], Lyca Mobile, [REDACTED], and [REDACTED]), and assess the steps taken by Tesco prior to renewing the Tesco Mobile JV. The PFs consider that this analysis is complementary to the opportunity data analysis and informative of the following conditions of competition:

(i) the extent to which the Parties competed against each other;

(ii) the role (if any) played by 3UK; and

(iii) the strength of competition from the other two MNOs.[158]

5.2 On the basis of its assessment, the PFs provisionally conclude that:

(i) the Parties have competed closely for large MVNO opportunities, including Sky Mobile [REDACTED];

(ii) 3UK has played an important role in a number of opportunities, even where it has not won;

(iii) BTEE's [REDACTED]; and

[156] PFs, paragraph 9.59(b).

[157] [REDACTED].

[158] PFs, paragraphs 9.63 to 9.64.

(iv) VMO2 [REDACTED].[159]

5.3 As set out in the remainder of this Section, the CMA's provisional conclusions are in fact not an accurate reflection of competition on the wholesale market.

Tesco Mobile

5.4 The PFs conclude that if Tesco was to engage in a competitive process, it is likely that all MNOs would take part [REDACTED]. This is not indicative of a closeness of competition between the Parties, and the CMA appears to mischaracterise Tesco's submissions.

5.5 Tesco told the CMA that before renewing its JV with VMO2 in December 2023 it conducted only "*an internal high-level review of the MNO market to assess appetite from other MNOs, but did not run a formal tender process or evaluate wholesale offers*" (emphasis added).[160] Tesco noted, in particular, that it "*had some high-level discussions* [REDACTED] *but this did not go beyond assessing whether* [REDACTED] *had an appetite to work with Tesco Mobile*".[161] These [REDACTED] only addressed the appetite of the MNOs to compete for Tesco's MVNO business, not their capability to meet Tesco's requirements. [REDACTED].[162] [REDACTED] was also not invited to participate in the Lyca Mobile opportunity [REDACTED].[163] The CMA's conclusion is misguided, and any suggestion that the Parties would be able to exert a significant constraint in a future formal tender for Tesco is wholly speculative.

Sky Mobile

The Parties did not compete closely for the Sky Mobile opportunity

5.6 The PFs conclude that the Parties competed closely for the Sky Mobile opportunity and that [REDACTED] is not evidence that the Parties are not close competitors because they [REDACTED].[164] However, this does not necessarily mean that Sky considered the Parties close competitors. The reality is that they both lost. It is clear from the development of the RFP process that Sky Mobile intended to procure a contract with an MNO that could provide [REDACTED] whilst achieving [REDACTED].

5.7 Sky's feedback to the Parties outlines that it was clearly focused on different metrics when assessing their offers: in particular, it was [REDACTED];[165] and in contrast, [REDACTED] [166] As evidenced by 3UK's internal documents, [REDACTED].[167] The fact that [REDACTED]

[159] PFs, paragraph 9.179.

[160] PFs, paragraph 9.66.

[161] PFs, paragraph 9.68.

[162] PFs, paragraph 9.113.

[163] PFs, paragraph 9.141(a).

[164] PFs, paragraph 9.107(a).

[165] PFs, paragraph 9.85.

[166] See [REDACTED], paragraph 5.23(iii).

[167] CKH internal document, [REDACTED].

became the primary reason behind it losing the Sky Mobile tender is further supported by various internal documents analysed at paragraphs 3.7 *et seq*. above.

5.8 The PFs further conclude that 3UK suspected it was competing against [REDACTED] for the Sky Mobile tender.[168] While [REDACTED].[169] In fact, [REDACTED], i.e. all other MNOs, including VUK, BTEE and VMO2.[170] In addition, in its correspondence with Sky Mobile, [REDACTED].[171] It is therefore inaccurate to frame VUK and 3UK as the primary competitors.

5.9 As noted at paragraph 3.30 above, evidence from VUK's internal documents also show that [REDACTED]. As recognised in the PFs, VUK's internal documents considered [REDACTED].[172] [REDACTED]. This documentary evidence should be afforded due weight in the CMA's assessment of closeness of competition between the Parties in the context of the Sky tender.

5.10 In the round, the evidence demonstrates that Sky Mobile's views cannot reasonably be interpreted as suggesting that the Parties were close competitors for the tender. The evidence also indicates that VMO2 was clearly the strongest competitor for this opportunity, given it ultimately won Sky Mobile's wholesale business. In addition, the provisional conclusion that BTEE [REDACTED] is inconsistent with the statement that "*BTEE competed 'hard' for [Sky's] business*", and "[REDACTED]".[173]

5.11 Sky Mobile's views on 3UK's [REDACTED] also illustrate the limited extent to which the Parties can competitively constrain each other in the context of wholesale bids more generally: for example, if an MVNO had a preference for a host MNO offering strong [REDACTED], the MVNO would likely find VUK's offering more attractive than 3UK's, whilst 3UK would be limited in the extent to which it could compete against VUK's offer.

3UK did not [REDACTED] *in Sky Mobile's tender process*

5.12 The PFs arrive at the tenuous conclusion that 3UK [REDACTED],[174] referring to Sky Mobile's internal documents as evidence to support this position. The PFs misrepresent the evidence to support their conclusion and fail to demonstrate any 'links' to establish 3UK's presence in Sky Mobile's tender processes as [REDACTED]. For example:

(i) The PFs refer to a document which allegedly shows Sky Mobile using [REDACTED] offer to ask [REDACTED] for [REDACTED].[175] The PFs fail, however, to note whether [REDACTED] actually [REDACTED] as a response to [REDACTED] offer. An attempt to use [REDACTED] to leverage better offers is not in itself demonstrative of [REDACTED] importance in tender processes.

[168] PFs, paragraphs 9.78 and 9.84 with reference to CKH internal documents, [REDACTED] and [REDACTED].

[169] CKH internal document, [REDACTED].

[170] CKH internal document, [REDACTED].

[171] CKH internal documents, [REDACTED] and [REDACTED].

[172] Vodafone Internal Document, [REDACTED].

[173] PFs, paragraph 9.105(a).

[174] PFs, paragraph 9.107(b).

[175] PFs, paragraph 9.88(a).

(ii) Similarly, the PFs cite VMO2 [REDACTED], as an example of Sky Mobile using [REDACTED] to leverage a better offer.[176] However, the PFs do not make clear in using the example, whether Sky Mobile actually communicated [REDACTED]. The PFs refer to the [REDACTED], which indicates that [REDACTED] presence in the tender process may have been completely unrelated to [REDACTED].

(iii) The PFs refer to a document showing that 3UK was [REDACTED] competitor [REDACTED] VMO2, [REDACTED] VUK [REDACTED].[177] The PFs appear to suggest that [REDACTED] was as a result of 3UK's presence in the tender process. This does not logically follow, as the same outcome (of [REDACTED]) could have occurred without 3UK's involvement.

[REDACTED]

5.13 As explained in [REDACTED],[178] [REDACTED][REDACTED][REDACTED]. Further, [REDACTED][REDACTED][REDACTED] in which [REDACTED] [REDACTED]. The Parties do not understand how this reaches the evidential bar of a competitive interaction in which VUK was constrained by 3UK's participation in this tender process.

5.14 While the CMA provisionally concludes that all four MNOs engaged with the [REDACTED] opportunity in [REDACTED] to some extent, the Parties note that the CMA did not conclude that 3UK [REDACTED] in line with the evidence which clearly demonstrates that [REDACTED].[179]

5.15 As demonstrated by [REDACTED].[180] A [REDACTED] internal document also notes that 3UK was interested but [REDACTED], [REDACTED].[181] 3UK's [REDACTED] were [REDACTED] from the outset, and as such, 3UK could not have been considered as a [REDACTED]for the opportunity.

5.16 Further, while 3UK has confirmed that there are "*[REDACTED]*", it is highly relevant that certain factors "*can make the integration process slower and / or more costly / difficult to implement*" including "*the size of the MVNO, the more subscribers that a new MVNO would bring onto the 3UK network, the more 3UK would need to invest to expand capacity to accommodate the incremental traffic, in particular given that 3UK's network already suffers from congestion*".[182] Given 3UK's congestion issues today, it is highly unlikely that it would be able to closely compete with VUK for [REDACTED] business at the next opportunity, [REDACTED].

[176] PFs, paragraph 9.88(c).

[177] PFs, paragraph 9.89.

[178] [REDACTED], paragraphs 5.7 to 5.9.

[179] PFs, paragraph 9.113.

[180] PFs, paragraph 9.113.

[181] PFs, paragraph 9.114; [REDACTED], paragraph 5.9.

[182] Parties Response to the [REDACTED].

5.17 In contrast to [REDACTED], the evidence demonstrates that BTEE was willing to submit a commercial offer,[183] and VMO2 [REDACTED].[184] As such, BTEE and VMO2 are clearly more capable of imposing a competitive constraint upon VUK than 3UK.

Lyca Mobile

The PFs draw incorrect conclusions about 3UK's competitive constraint and MNO incentives

5.18 Despite acknowledging that [REDACTED] was not invited to participate in the Lyca Mobile opportunity [REDACTED], the CMA does not place any weight on this evidence in the context of its assessment of the extent to which [REDACTED] on the wholesale market elsewhere in the PFs. [185] The evidence shared by [REDACTED] confirms that [REDACTED] amongst large MVNOs (and therefore it does not exert a competitive constraint in large MVNO opportunities).[186] Despite claiming to place more weight on the views of larger MVNOs, the PFs do not appear to place significant weight on [REDACTED].

5.19 In addition, the PFs note that Lyca Mobile "*[REDACTED]*" citing a 3UK internal document from July 2021.[187] 3UK submitted that "*[REDACTED]*". [188] This is clear evidence that [REDACTED], and that, in general, [REDACTED].

5.20 The PFs further conclude that [REDACTED] was also not formally invited to participate in the Lyca Mobile opportunity, and refer to [REDACTED] to suggest that existing relationships between MVNOs and MNOs might affect MNOs' incentives to compete. This provisional conclusion is wholly unsubstantiated by the evidence presented in the PFs. This is an entirely speculative view which contradicts the evidence the CMA seeks to rely upon.

5.21 In fact, the [REDACTED] quoted by the CMA in relation to its assessment of the Lyca Mobile opportunity strongly suggest that VUK *[REDACTED]*. Specifically:

(i) VUK internal documents show that [REDACTED].[189]

(ii) One VUK internal document from November 2022 notes that [REDACTED].[190]

(iii) One VUK internal document from August 2023 states that VUK intended to "*[REDACTED]*".[191]

5.22 As explained at paragraph 6.19 below, the publicly-known hostile relationship between Lebara and Lyca Mobile is highly fact-specific and [REDACTED]. The approach taken [REDACTED].

[183] PFs, paragraph 9.123(d).

[184] PFs, paragraph 9.125.

[185] PFs, paragraph 9.141(a).

[186] PFs, paragraph 9.141(a).

[187] PFs, paragraph 9.132.

[188] PFs, paragraph 9.132, citing CK Hutchison internal document, [REDACTED] and CK Hutchison response to putback [REDACTED].

[189] PFs, paragraph 9.134(a), with reference to Vodafone internal documents, [REDACTED]; [REDACTED]; [REDACTED].

[190] PFs, paragraph 9.135(a), with reference to Vodafone internal document, [REDACTED].

[191] PFs, paragraph 9.135(b), with reference to Vodafone internal document, [REDACTED].

The CMA has not presented any evidence that VUK has considered its [REDACTED] with respect to any other MVNO.

The Lyca Mobile opportunity confirms the existence of alternative constraints in the wholesale market

5.23 The PFs consider that BTEE exerted a significant competitive constraint in the Lyca Mobile opportunity [REDACTED] given [REDACTED].[192] The evidence does not support the PFs accepting this conclusion on behalf of BTEE [REDACTED]. Even though BTEE [REDACTED],[193] it is clear that price is not the only factor considered by MVNOs when choosing their host MNO. As noted in paragraph 9.22 of the PFs, five out of 13 MVNOs approached by the CMA, including [REDACTED], reported that network quality is the most important factor when selecting a host. Indeed, when [REDACTED] was selecting a network host, it ultimately [REDACTED].[194]

5.24 BTEE's [REDACTED] in the future. In addition, as explained in **Section 2**, MergeCo's enhanced capability to compete for MVNOs will generate a competitive threat which will trigger a response from both BTEE and VMO2. This response is likely to amount to the reduction of prices and renewal of network investments in order for BTEE to retain its reputation as being the best network, and for BTEE and VMO2 to retain their competitive positions in wholesale. Therefore, whilst the internal documents the CMA relies upon suggest that BTEE [REDACTED] (emphasis added).[195]

5.25 While VMO2's offer [REDACTED] in the Lyca Mobile opportunity,[196] this will not be the case post-Transaction. As set out above in **Section 2**:

(i) VMO2's incremental network costs are likely to decrease due to the extra capacity and spectrum afforded to it under Beacon 4.1, leading to VMO2 itself looking to grow its MVNO business by offering attractive and competitive terms to its current and future MVNO customers.

(ii) MVNO customer views are also consistent with those of VMO2 itself, which considers that "*the Beacon 4.1 Agreements, including the spectrum transfer, will improve its competitiveness in the wholesale market*", in light of its "[REDACTED]", which it notes "[REDACTED]".[197]

[192] PFs, paragraph 9.141(c).

[193] PFs, paragraph 9.221.

[194] PFs, paragraph 9.131 and 9.141.

[195] PFs, paragraph 9.139.

[196] PFs, paragraph 9.128.

[197] PFs, paragraph 9.265.

[REDACTED]

5.26 The Parties reiterate their comments in **Section 4** as regards [REDACTED]. [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]. The PFs' purported conclusion that [REDACTED] cannot be sustained.

5.27 It is evident from the internal documents cited in the PFs that [REDACTED]. [REDACTED].

5.28 It is entirely implausible to suggest that the [REDACTED] was a competitive process [REDACTED] and compare and assess the impact of 3UK in a process which was merely a [REDACTED].

[REDACTED]

5.29 The PFs provisionally conclude that [REDACTED] presented a significant competitive force in the [REDACTED] opportunity.[198] However, [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED].[199] This is in line with the feedback that [REDACTED] has shared with the CMA, according to which it believed that "*switching to* [REDACTED] *would involve risks*".[200] Based on the PFs, [REDACTED] was discussed at a Board meeting where [REDACTED] concluded that "*there was a possibility of* [REDACTED]*",* and expressed at one point concerns that "[REDACTED] *coverage did not match* [REDACTED]".[201]

5.30 Further, the PFs' conclusion that [REDACTED] "*[has] enabled* [REDACTED]*e to extract better terms pricing/terms from its* [REDACTED]" overstates the role that [REDACTED] played in the [REDACTED] opportunity.[202] The PFs do not engage in any meaningful way with [REDACTED] [REDACTED] [REDACTED] rather than the competitive pressure from [REDACTED].[203] Taken together with [REDACTED] [REDACTED], this confirms that [REDACTED] could hardly be seen as having a "*significant competitive* force" in this opportunity (emphasis added).[204]

5.31 In addition, the Parties submit that the PFs note that [REDACTED] did not invite VUK to participate in its competitive process,[205] but place no weight on, nor do they even acknowledge, the fact that this is evidence of the Parties not being close competitors in the wholesale market more generally.

[198] PFs, paragraph 9.178.

[199] [REDACTED], and CK Hutchison internal document, [REDACTED].

[200] PFs, paragraphs 9.163.

[201] PFs, paragraphs 9.163 and 9.164.

[202] PFs, paragraph 9.178.

[203] PFs, paragraph 9.176 and [REDACTED].

[204] PFs, paragraph 9.178.

[205] PFs, paragraph 9.157.

The CMA's overall conclusions regarding competitive dynamics are not reflective of actual competition on the wholesale market

5.32 As set out at paragraph 5.2 above, the PFs conclude that:

(i) the Parties have competed closely for large MVNO opportunities, including Sky Mobile [REDACTED];

(ii) 3UK has played an important role in a number of opportunities, even where it has not won;

(iii) BTEE's [REDACTED]; and

(iv) VMO2 [REDACTED].[206]

5.33 However, the analysis in this Section clearly demonstrates that the CMA's provisional conclusions are not an accurate reflection of competition on the wholesale market. Of particular note:

(i) The CMA concludes that BTEE [REDACTED]. On the basis of the evidence that the CMA has presented, this logic can also be applied to 3UK (for example, with respect to the fact that [REDACTED]). However, the CMA concludes that "*3UK has played an important role in a number of opportunities, even where it has not won"*.[207] No reasoning is provided to justify such a distinction between these two MNOs.

(ii) With respect to the fact that VMO2 [REDACTED], this seemingly ignores VMO2's retention of Sky Mobile, one of the MVNOs the CMA places additional weight upon.

(iii) Finally, the PFs do not present a sufficient body of evidence to suggest that relationships with customers are significant enough to influence MNOs incentives to bid competitively for new MVNOs.

6. MNOs' incentives to compete are not impacted by their retail base, cannibalisation considerations, and relationships with existing customers

6.1 The Parties agree with the PFs' conclusion that there is limited transparency in the wholesale market, in particular over which MNOs are bidding and the terms offered, which increases the incentive of the MNOs which do participate to submit competitive offers.[208] Furthermore, the Parties welcome the CMA's provisional conclusion that "*cannibalisation is often not the determinative factor in whether the Parties decide to bid*".[209]

6.2 However, the PFs come to a number of incorrect provisional conclusions in relation to competitive incentives. The Parties consider that: (i) cannibalisation does not impact MNOs'

[206] PFs, paragraph 9.179.

[207] PFs, paragraph 9.179(b).

[208] PFs, paragraph 9.21.

[209] PFs, paragraph 9.208(b).

competitive incentives, as substantiated by the MNO internal documents referred to by the CMA in its own analysis; (ii) post-Transaction, larger MNOs will be incentivised to compete aggressively for MVNO opportunities, in particular given the significant increases in network capacity that will be available to both MergeCo and VMO2 post-Transaction and Beacon 4.1; (iii) the CMA's cannibalisation theory amounts to a theory of vertical foreclosure and must be treated as such; and (iv) the CMA does not produce compelling evidence to demonstrate the incentives of MNOs can be affected by pre-existing customer relationships.

Cannibalisation does not impact MNOs' competitive incentives

6.3 The evidence presented in the PFs is inconsistent with the CMA's finding that cannibalisation is one of the factors that can affect MNOs' willingness to bid for a particular MVNO opportunity, or that "*MNOs may be incentivised to offer less competitive pricing or terms where the MVNO competes more closely with the MNO's own retail business*" due to the risk of losing market share.[210]

6.4 As the Parties have previously submitted,[211] MNOs will have an incentive to aggressively compete for an MVNO's business [REDACTED]. In practice, an MNO has to accept a cannibalisation impact to win wholesale business because it risks the loss of revenue at both the wholesale and retail levels should a rival MNO makes a successful access offer. Experiencing cannibalisation and securing wholesale revenue is more profitable than losing both retail revenue and wholesale revenue – a situation in which all MNOs refrain from bidding due to a concern about cannibalisation of retail sales is unlikely to occur and the PFs present no evidence as to such an outcome. As such, it is commercially attractive to bid for MVNOs competitively in spite of any cannibalisation risk.

6.5 The CMA misconstrues the internal documents that it relies on to support its conclusions. 3UK's internal documents demonstrate that [REDACTED].

(i) In relation to the [REDACTED] tender opportunity, 3UK notes the following:

(a) The PFs mischaracterise a 3UK internal document that [REDACTED].[212] [REDACTED].

(b) The evidence shows that [REDACTED] is highly competitive in the retail market, including for high-GB customers. The CMA's analysis of the Pure Pricing data showed that, for unlimited data pre-paid tariffs,[213] 12-month PAYM SIMO tariffs, [214] unlimited data 12-month PAYM SIMO tariffs,[215] and 24-month PAYM SIMO tariffs,[216] [REDACTED] was the cheapest provider, and cheaper than Three or SMARTY. Based on data

[210] PFs, paragraph 9.208(b)(i).

[211] Row 167, ILR Annex A; [REDACTED], paragraph 2.11.

[212] PFs, paragraph 9.197(a)(vi).

[213] Phase 1 Decision, Figure 7.

[214] Phase 1 Decision, Figure 8.

[215] Phase 1 Decision, Figure 9.

[216] Phase 1 Decision, Figure 10.

provided by [REDACTED] to 3UK, the proportion of [REDACTED] subscriber base has increased between January 2021 and April 2024, from [REDACTED]% to approximately [REDACTED]%. This is consistent with the fact that the internal document referred to in the PFs[REDACTED]. Currys' annual results describe iD Mobile as an "*increasingly valuable asset in the business"* and notes that it intends to keep growing, *"targeting at least 2m subscribers before year end*".[217] iD Mobile's success has led Currys to describe it as "*the standout performer this year*" within the group.[218]

(c) It follows that [REDACTED].[219] The value of iD Mobile for 3UK is further demonstrated by an internal document noting that [REDACTED].[220] This shows that [REDACTED].

(ii) The remaining internal documents of 3UK referenced in the PFs equally do not support the conclusions on cannibalisation:

(a) Regarding a 3UK internal document [REDACTED], the PFs take the relevant citation out of context.[221] It is evident from the document that [REDACTED].[222]

(b) As discussed in the previous submissions to the CMA,[223] an internal document referring to [REDACTED] merely demonstrates that [REDACTED].[224]

(c) 3UK notes [REDACTED], that 3UK's approach to MVNO opportunities cannot be used to support [REDACTED] – this is a meaningless assessment: references to cannibalisation in internal documents cannot be meaningfully quantified and compared in this way. [225]

6.6 VUK's internal documents illustrate that whilst the self-evident overlap between the MVNO and MNOs retail businesses can be assessed by VUK, the key question when assessing an MVNO opportunity is the appropriate pricing, largely driven by network costs, at which to make an offer - i.e., how winning the account would look from a margins perspective,[226] and what the best pricing would be to make a competitive offer. This is a standard part of bid analysis, rather than

[217] Currys, 'Currys Full Year Results 2023/24', 27 June 2024, available at: https://www.currysplc.com/news-media/press-releases/2024/currys-full-year-results-2023-24/ (accessed 6 July 2024).

[218] Currys, 'Currys Full Year Results 2023/24', 27 June 2024, available at: https://www.currysplc.com/news-media/press-releases/2024/currys-full-year-results-2023-24/ (accessed 6 July 2024).

[219] PFs, paragraph 9.196(c).

[220] CK Hutchison internal document, [REDACTED].

[221] PFs, paragraph 9.197(a).

[222] CK Hutchison internal document, [REDACTED].

[223] [REDACTED]; [REDACTED], paragraphs 8.14(iii) and 8.15.

[224] CK Hutchison internal document, [REDACTED].

[225] CK Hutchison internal document, [REDACTED].

[226] See e.g. Vodafone internal document, [REDACTED], which notes that "*[REDACTED]*"; and [REDACTED], which notes [REDACTED].

an indication of a potential concern regarding cannibalisation that would impact VUK's incentive to make a competitive bid. Further, given the opacity of the wholesale market, such an assessment must be conducted in order for VUK to assess the credibility of an MVNO's claims as to the pricing they suggest they are getting from a competitor MNO.

(i) The CMA refers to a [REDACTED].[227] Whilst this shows that [REDACTED].

(ii) In the context of the Lebara negotiation, the CMA refers to:

(a) An internal email chain with reference to the quote: "*[REDACTED]*".[228] As previously submitted,[229] there is no strong direct link between this statement and the conclusion that VUK was considering the cannibalisation of its retail market share, which would likely be inevitable, in a way which would negatively impact its competitive incentives. Even if such a link existed, [REDACTED], indicate how aggressively VUK chose to compete for this MVNO. Moreover, the context of this quote [REDACTED].[230] This is entirely at odds with the CMA's provisional conclusions regarding MNO incentives to offer competitive terms.

(b) An internal document from VUK regarding the 2021 Lebara opportunity, notes that [REDACTED]".[231] However, [REDACTED],[232] [REDACTED].[233] This document also indicates that [REDACTED].[234] [REDACTED] (as evidenced by this document, and highlighted at paragraphs 7.17 *et seq*.), should be considered indicative of the fact that [REDACTED]. As such, [REDACTED].

(c) A VUK internal document which states that [REDACTED].[235] This document demonstrates that [REDACTED]. This document does not imply that [REDACTED].

(d) A VUK internal document evaluated the Lebara two-year extension, and as part of this, considered [REDACTED].[236] This illustrates that MNOs are incentivised to secure wholesale business which provides predictable revenues and cashflows as well as allowing the MNO to [REDACTED] across a wider subscriber base. [REDACTED] are indeed a key driver in wholesale pricing decisions, and as explained in **Section 2** above, the capacity constraints faced

[227] PFs paragraph 9.197(a)(i), with reference to Vodafone internal document, [REDACTED].

[228] PFs, paragraph 9.197(a)(ii)(3), with reference to Vodafone internal document, [REDACTED].

[229] [REDACTED], para 6.10.

[230] [REDACTED].

[231] PFs, paragraph 9.197(a)(ii)(2), with reference to Vodafone internal document, [REDACTED].

[232] Vodafone internal document, [REDACTED].

[233] Vodafone internal document, [REDACTED].

[234] Vodafone internal document, [REDACTED].

[235] PFs, paragraph 9.197(a)(ii)(1), with reference to Vodafone internal document, [REDACTED].

[236] PFs, paragraph 9.197(d)(ii), with reference to Vodafone internal document, [REDACTED].

by the Parties currently limit the extent to which they are able to compete for MVNOs (which would only worsen in the counterfactual).

(iii) The CMA also refers to a VUK internal document in the context of negotiations with TalkTalk, which [REDACTED].[237] This document clearly indicates that [REDACTED]. The same document notes that [REDACTED].

(iv) Another VUK internal document cited by the CMA notes that "*[REDACTED]*."[238] This shows that [REDACTED].

6.7 The fact that any analysis conducted by an MNO of the overlap between an MNO and MVNOs retail businesses does not impact the MNOs' incentive to compete aggressively to win the MVNO account is substantiated by the views of and internal documents provided by BTEE and VMO2 (who together have a [REDACTED]% wholesale market share by subscribers, and host c.90% of MVNOs, in the UK).[239]

(i) BTEE notes that "[i]*t would be more economic for BTEE to benefit from supporting an MVNO on its own network rather than allow another MNO to benefit*."[240]

(ii) One BTEE internal document notes that [REDACTED] but recognised that this "[REDACTED]". It also recognises that it "[REDACTED]".[241]

(iii) In one internal document BTEE noted that winning Nitrogen [Sky] would [REDACTED].[242]

(iv) One BTEE internal document states that "[REDACTED]".[243]

(v) VMO2 told the CMA that [REDACTED].[244]

(vi) One VMO2 internal document notes that "[REDACTED]".[245]

6.8 The PFs state that a number of MVNOs have told the CMA that they believe the MNOs consider the risk of cannibalisation when deciding on the price and non-price terms to offer them.[246] Given MVNOs have no visibility into the decision-making process taken by MNOs, any conclusion that MNOs offer less competitive terms is therefore wholly speculative and, in any event, not supported by the evidence presented to the CMA. Such views do not provide reliable insight into the actual bidding strategies of the MNOs, and the commercial terms offered to

[237] PFs, paragraph 9.197(iv), with reference to Vodafone internal document, [REDACTED].

[238] PFs, paragraph 9.197(v), with reference to Vodafone internal document, [REDACTED].

[239] Merger Notice, paragraph 15.452.

[240] PFs, paragraph 9.199.

[241] PFs, paragraph 9.201(a).

[242] PFs, paragraph 9.201(b).

[243] PFs, paragraph 9.201(d).

[244] PFs, paragraph 9.202.

[245] PFs, paragraph 9.203.

[246] PFs, paragraph 9.204.

MVNOs (which, as explained, are significantly advantageous to MVNOs and enable them to compete aggressively in the retail market). Such evidence should not be afforded undue weight by the CMA, particularly in comparison with the views and internal documents of all four MNOs, including the two larger MNOs themselves, as outlined above.

6.9 Importantly, the intense competition exerted by MVNOs at the retail level is indicative of the competitive terms they are able to secure at the wholesale level, demonstrating that any hypothetical consideration of cannibalisation does not result in MNOs competing less aggressively for MVNO custom.

It is not correct that the Parties are incentivised to compete due to their smaller retail bases and that larger MNOs compete less aggressively

6.10 As set out in Section 8 of PF Annex 1, MVNOs are the fastest growing players in the consumer retail market (having grown from a 12% aggregate share of supply in 2016 to 21% in Q4 2023), exerting strong and growing competitive pressure. In addition, MVNOs capture a share of gross adds that is far greater than their subscriber share. As explained during VUK's Phase 2 Site Visit on 22 April 2024,[247] [REDACTED].[248] The CMA's Phase 1 Decision shows that Sky Mobile, Tesco Mobile, and other MVNOs had the strongest growth in net adds in the consumer retail segment (excluding pre-paid) since the start of 2022.[249] Accordingly, wholesale revenues can be expected to account for a growing proportion of an MNO's total revenues. [REDACTED], VUK is driven to compete aggressively to win MVNO customers due to: (i) MVNOs' strong retail market share growth leading to MVNOs becoming an increasingly important source of predictable wholesale revenue; and (ii) changes in leadership and overall strategy.[250] VUK's incentives are not driven by its smaller customer base.

6.11 It is clear from the tender and market share data that BTEE and VMO2 are the most effective at securing MVNO business. The Parties agree with the CMA's analysis that their internal documents [REDACTED].[251] Post-Transaction, it will not be the case that MergeCo is similarly unable to compete with BTEE and VMO2: there will be intense and effective competition between these three operators as the implementation of the JNP delivers more capacity and better quality, both of which will improve MergeCo's ability to effectively challenge the market leaders. With an additional credible challenger, MVNOs will benefit from better access terms, ultimately to the benefit of end consumers.

6.12 When pricing deals for MVNOs, the focus of MNOs is network economics. Despite the inevitable loss of retail customers to MVNOs, MNOs are significantly incentivised to secure wholesale business which provides predictable revenues and cashflows as well as allowing the MNO to spread network costs across a wider subscriber base. If an MNO prioritises its retail market share over submitting a competitive wholesale bid, another MNO will host the MVNO, and the MVNO will continue to secure a share of the retail market. In short, cannibalisation occurs

[247] [REDACTED].

[248] [REDACTED].

[249] Phase 1 Decision, Table 13 and paragraph 272.

[250] As recognised by the CMA at paragraph 1.75(c) of the TOH2 Working Paper with reference to third-party evidence, it is not uncommon for an MNO's wholesale strategy to change due to different leadership or market decisions.

[251] PFs, paragraph 9.218

regardless. It is therefore commercially attractive to bid for MVNOs in spite of any cannibalisation risk.

Post-Transaction, larger MNOs will be more incentivised to compete aggressively for MVNO opportunities

6.13 The PFs note that "*BTEE* [REDACTED]" and that "*VMO2 is the largest MNO in terms of wholesale subscribers but is selective in which MVNOs it bids for*".[252] However, this is at odds with the commercial reality (described at paragraph 6.11 above) whereby it is clear from the tender and market share data that BTEE and VMO2 are most effective at securing MVNO business.

6.14 Importantly, post-Transaction, it will not be the case that MergeCo is similarly unable to compete with BTEE and VMO2: there will be intense and effective competition between these three operators as the implementation of the JNP delivers more capacity and better quality, both of which will improve MergeCo's ability to effectively challenge the market leaders. With an additional, credible challenger to BTEE and VMO2, MVNOs will benefit from better access terms. In this respect:

(i) VMO2 considers itself weaker in terms of [REDACTED].[253] However, as explained at paragraphs 2.13 *et seq*. above (and as recognised by the PFs), the Beacon 4.1 developments will significantly enhance VMO2's ability to compete in wholesale post-Transaction, in particular by improving MergeCo and VMO2's network quality and adding network capacity.

(ii) Whilst the PFs consider that BTEE's "[REDACTED]", this strategy will not endure post-Transaction. As explained at paragraphs 2.27 *et seq*. above, MergeCo's enhanced capability to compete for MVNO's will generate a competitive threat (namely the reduction of prices and renewal of network investments) which will trigger a response from both BTEE and VMO2, in particular the reduction of prices and renewal of network investments.

The CMA's cannibalisation theory is a vertical foreclosure theory and must be treated as such

6.15 The PFs fail to engage with the Parties' submission that the CMA's consideration of cannibalisation amounts to a prediction that MergeCo will engage in (partial or full) input foreclosure, other than to state – without providing reasoning or evidence – that it does not agree with the Parties.[254]

6.16 As explained in [REDACTED], an MNO's incentive to participate and offer competitive terms when competing against other MNOs depends on potentially forgone wholesale business, and the potential for additional profit at the retail level.[255] However, the PFs do not present the economic analysis that would be required to substantiate a concern on this basis – in particular,

[252] PFs paragraphs 9.230(b) and 9,230(c).

[253] PFs paragraph 9.226(b)

[254] PFs, paragraph 9.209.

[255] [REDACTED], paragraph 6.3.

there is no assessment of how forgone wholesale profit is likely to compare to any recaptured retail business. The CMA must apply the test set out in its guidance on foreclosure to understand whether there would be such a change.

6.17 Such an analysis should take into account the likelihood that if MergeCo were to refrain from participating in a wholesale opportunity, the prospective MVNO customer would likely obtain wholesale services from either the most successful MNO in the wholesale market in recent years, BTEE, or VMO2, which will have significant additional capacity to see as a result of Beacon 4.1. MergeCo would then experience a loss of share in the retail market but would not increase its wholesale revenues. The only way to mitigate these losses for MergeCo (or any MNO) is to host the MVNO themselves and earn wholesale revenues. By contrast, not hosting the MVNO and accepting the loss of share in retail would not be a profit maximising wholesale strategy for any MNO.

The CMA does not produce compelling evidence to show that MNO's incentives to compete for MVNOs can be affected by existing relationships with other MVNOs

6.18 Finally, the PFs note that *"a number of the Parties' internal documents refer to their existing relationships with MVNOs when considering whether/how to compete for other MVNOs*",[256] yet only refer to two internal documents from VUK considering the same relationship between two particular MVNOs, and none from 3UK, to support this point.

6.19 Specifically, the CMA refers to VUK internal documents [REDACTED] to conclude that "*MNO's incentives to compete for MVNOs can be affected by existing relationships with MVNOs, which could reduce the incentive of larger MNOs to compete aggressively for more MVNO opportunities*".[257] However, documents referred to [REDACTED]. [REDACTED].[258] As such, [REDACTED].

6.20 The CMA presents no evidence that [REDACTED] when bidding for any other MVNO in addition to these documents which reference [REDACTED]. It is not the case that this is a factor impacting VUK's or, by extension, other MNO's incentives to bid for MVNO opportunities. It is inappropriate for the CMA to rely upon such narrow evidence, specific to one MNO and one MVNO, to reach this provisional conclusion.

6.21 Further, and as explained at paragraphs 5.20 to 5.21 above, the CMA cannot speculate on the basis of the documents quoted - one of which explicitly states that [REDACTED] - that [REDACTED].

7. MVNOs have significant bargaining power which will increase post-Transaction due to the significant incentives of MergeCo and its competitors

7.1 As explained previously,[259] MVNOs have seen a substantial increase in their bargaining power as their presence in the wholesale and retail markets has grown and they have successfully grown their subscriber bases. The increase in industry-wide capacity brought about by the

[256] PFs, paragraph 9.197(b).

[257] PFs, paragraphs 9.197(b) and 9.208(c).

[258] [REDACTED].

[259] [REDACTED], Section 7.

Transaction and the Beacon 4.1 arrangements (explained at **Section 2**) will substantially increase the competitive intensity and the bargaining power of MVNOs, as the Transaction will provide MVNOs with three credible options and lead to improved access terms and more competitive pricing for MVNOs. Enders Analysis has commented that "*removing Three as a negotiating party for MVNO wholesale rates will not have a detrimental impact on their ability to secure favourable* terms".[260] The remainder of this Section explains that: (i) intense retail competition is indicative of the commercially advantageous terms MVNOs are able to secure at the wholesale level as a result of their strong buyer power; (ii) MVNOs do offer unlimited and large data tariffs that are akin to unlimited allowances; and (iii) barriers to switching are not in practice preventing MVNOs from switching MNO hosts.

Intense retail competition is indicative of the commercially advantageous terms secured at the wholesale level

7.1 Intense competition at the retail level is indicative of the commercially advantageous terms that MVNOs are able to secure from host MNOs at the wholesale level. This competitive dynamic is supported by the views of both MNOs and MVNOs.

7.2 Evidence provided by third-parties to the CMA demonstrates that MVNOs are successful in leveraging offers from one MNO against another to secure better terms, even in tenders with only two or three participants, for example:[261]

(i) One large MVNO noted that it "*was able to use the comparative bids to indicate to rivals how far off the bidders were from others, resulting in continually improved terms*". [262]

(ii) Another [REDACTED] MVNO noted that it "*was able to negotiate a better deal with its host MNO (*[REDACTED]*) following offers from other MNOs and indicated that its success in the market led to better wholesale economics, with less onerous (volume and revenue) commitments*". [263]

(iii) A [REDACTED] MVNO told the CMA that it considered its host MNO's would likely have believed another MNO to have been an "*active and credible bidder*" which "*enabled it to extract better terms from its host MNO*".[264]

7.3 In the context of the Lyca Mobile opportunity, third-party evidence and documents also exemplify the increased bargaining power from which MVNOs benefit. A BTEE internal document from June 2023 notes that Lyca Mobile was able to extract [REDACTED] from BTEE, as the successful bid was [REDACTED].[265] BTEE's documents also note that Lyca Mobile

[260] Enders Analysis, '*Tread lightly - Response to the CMA's proposed remedies to the Vodafone-Three Merger*', 27 September 2024, page 3.

[261] PFs, paragraph 9.184.

[262] PFs, paragraph 9.184(a).

[263] PFs, paragraph 9.184(c).

[264] PFs, paragraph 9.184(d).

[265] PFs, paragraph 9.139.

"[REDACTED]". A VMO2 internal document from the same time notes that all previous negotiations with Lyca Mobile [REDACTED].[266]

7.4 The intensity of competition between MNOs is further demonstrated by the fact that some MVNOs told the CMA that they have negotiated tracking clauses with their host MNOs in order to maintain pricing competitiveness, for example:[267]

(i) One large MVNO stated that it negotiated a tracking mechanism with its host MNO which enables it to benefit from lower costs over time as consumption grows on the host MNO's network.

(ii) One [REDACTED] MVNO stated that its agreement [REDACTED] which enables the price it is charged to reduce [REDACTED].

7.5 The PFs conclude that wholesale agreements entitle "*most large MVNOs to the same network capabilities (e.g. 5G) offered to the host MNO's own customers*", as supported by third-party views.[268] The PFs however do not draw a conclusion on parity of access with respect to smaller MVNOs.

7.6 Given that the PFs place weight on the largest MVNOs in its analysis of market shares/tender opportunity, it should also place weight on the competitiveness of offers experienced by larger MVNOs and the advantageous terms they secure (and, consequently, their competitiveness in the retail market).

7.7 Whilst the PFs do not provide evidence from smaller MVNOs with respect to parity of access, VUK has previously submitted that [REDACTED].[269] For example:

(i) [REDACTED].

(ii) [REDACTED].

MVNOs compete in all segments and offer unlimited and high data tariffs which are akin to unlimited allowances

7.8 The PFs state that a number of MVNOs find it particularly difficult to offer competitive unlimited tariffs either because:

(i) the prices offered do not enable the MVNO to offer competitive high usage tariffs; or

(ii) (in the case of one large MVNO), it can only offer competitive unlimited plans through cross-subsidisation or targeting customers who tend to use a less than

[266] PFs, paragraph 9.140.

[267] PFs, paragraph 9.185.

[268] PFs, paragraphs 9.266 and 9.187.

[269] [REDACTED], paragraph 7.6

average amount of data. This MVNO told the CMA that it thinks this is at least partly due to cannibalisation concerns.[270]

7.9 In any event, contrary to the position set out in the PFs - which appears to rely on a minority of MVNO views – MVNOs can and do offer unlimited data tariffs today. MVNOs that offer unlimited data tariffs include (as largely set out previously in [REDACTED]):

(i) Tesco Mobile;[271]

(ii) Lebara;[272]

(iii) Lyca Mobile;[273]

(iv) iD Mobile (note that the CMA found, in its Phase 1 Decision, that the cheapest provider of an unlimited pre-paid and PAYM SIMO tariffs was iD Mobile.[274]);[275]

(v) Utility Warehouse;[276]

(vi) Asda Mobile;[277]

(vii) Superdrug Mobile;[278]

(viii) Honest Mobile;[279]

(ix) Spusu; and[280]

(x) 1pMobile.[281]

[270] PFs, paragraph 9.186.

[271] Tesco Mobile, "*Our best SIM only deals*", n.d., available at: https://www.tescomobile.com/shop/sim-only-deals/sim-only-contracts (accessed 21 September 2024).

[272] Lebara, "*Best SIM Only Deals*", n.d., available at: https://www.lebara.co.uk/en/best-sim-only-deals.html (accessed 21 September 2024).

[273] Lyca Mobile, "*New customer SIM only deals*", n.d., available at: https://www.lycamobile.co.uk/en/bundles/sim-only-deals/ (accessed 21 September 2024).

[274] Phase 1 Decision, paragraphs 322 and 326.

[275] iD Mobile, "*Pay Monthly SIM only deals*", n.d., available at: https://www.idmobile.co.uk/sim-only-deals (accessed 21 September 2024).

[276] Utility Warehouse, "*Services – Mobile*", n.d., available at: https://uw.co.uk/mobile (accessed 21 September 2024).

[277] Asda Mobile, "*SIM only contract plans*", n.d., available at: https://mobile.asda.com/bundles/contract (accessed 21 September 2024).

[278] Superdrug Mobile, "*Our SIM only plans*", n.d., available at: https://www.superdrugmobile.com/register/sim-only/deals (accessed 21 September 2024).

[279] Honest Mobile, "*Our Plans*", n.d., available at: https://honestmobile.com/plans (accessed 21 September 2024).

[280] Spusu, "*SIM-only plans*", n.d., available at: https://www.spusu.co.uk/plans (accessed 21 September 2024).

[281] 1pMobile, "*Unlimited",* n.d., available at: https://www.1pmobile.com/siminfo?cprefs=agree&simtype=SBUNLIMITED (accessed 30 September 2024).

7.10 Sky Mobile now also offers unlimited tariffs.[282] In addition, most MVNOs offer large data allowances, which can be practically considered unlimited due to their size – particularly when considering that the average consumption per data user on mobile in the UK is only 9.9GB per month.[283] These are offered at very low prices. Current examples include:

(i) Sky Mobile and its 100GB offering (in addition to its unlimited offers);[284]

(ii) Tesco Mobile and its 100GB offering (in addition to its unlimited offers); [285]

(iii) Lyca Mobile and its 100GB offering (in addition to its unlimited offers);[286] and

(iv) iD Mobile and its 100GB, 120GB, 150GB, 200GB, 250GB, and 300GB offerings (in addition to its unlimited offers). [287]

7.11 Further, the PFs acknowledge that MVNOs have been able to overcome any challenges in offering unlimited contracts with refence to a VUK internal document that shows [REDACTED] listed in the document [REDACTED] (noting that Sky Mobile has started offering unlimited tariffs since).[288]

7.12 The view that MVNOs are restricted in the size of the data tariffs they offer is therefore unfounded. Further, throughout the PFs the CMA claims to place particular weight on evidence from the five largest MVNOs as it considers that they have particular competitive importance on the market. Whilst (and as explained in **Section 4** above), this is not an appropriate approach for the CMA to apply as part of its competitive assessment, the Parties note that the five largest MVNOs the CMA focuses upon all offer unlimited tariffs, or tariffs with very large data allowances, or both. Nevertheless, the CMA does not appear to place the same amount of weight upon the actual competitive behaviour of these large MVNOs when noting that "*a number of MVNOs … find it particularly challenging to offer competitive unlimited tariffs*",[289] as it does when evaluating the opportunity data.

7.13 Finally, VUK explained at its Main Party Hearing that [REDACTED]. In any event, the CMA has not defined the retail market by tariff type and it is therefore not appropriate to place undue weight on the competitiveness of wholesale bids and the ability to offer unlimited retail tariffs as part of its competitive assessment in the wholesale market.

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[282] Sky Mobile, "*Choose your SIM only plan*", n.d., available at: https://www.sky.com/shop/mobile/plans (accessed 30 September 2024).

[283] See Ofcom, *"Communications Market Report 2024"* , 18 July 2024, page 3, available at Communications Market Report 2024 (ofcom.org.uk) (accessed 1 October 2024).

[284] *Ibid.*

[285] Tesco Mobile, "*Our best SIM only deals*", n.d., available at: https://www.tescomobile.com/shop/sim-only-deals/sim-only-contracts (accessed 21 September 2024).

[286] Lyca Mobile, "*New customer SIM only deals*", n.d., available at: https://www.lycamobile.co.uk/en/bundles/sim-only-deals/ (accessed 21 September 2024).

[287] iD Mobile, "*Pay Monthly SIM only deals*", n.d., available at: https://www.idmobile.co.uk/sim-only-deals (accessed 21 September 2024).

[288] PFs, para 8.244(a) and 9.190(c) with reference to Vodafone internal document, [REDACTED].

[289] PFs, paragraph 9.186

The CMA's investigation confirms that any barriers to switching are not significant and are often not a determinative factor for MVNOs when selecting an MNO host

7.14 As the Parties have previously submitted, whilst some barriers to switching exist, they are not in practice significant enough to prevent MVNOs from switching. This was recently demonstrated by the Lyca Mobile switch to BTEE's network (despite its pre-existing "*[REDACTED]*" with VMO2).[290] This is further supported by third-party views, including those of light MVNOs, which should be afforded considerable weight given that the PFs recognise that switching is "*simpler for full MVNOs than for light MVNOs*":[291]

(i) The impact of one MVNO migrating its customers to a different network was not the main reason the MVNO chose to stay with its existing host.[292]

(ii) A light MVNO has recently switched.[293]

(iii) Another light MVNO noted that whilst a switch is difficult it did not feel completely tied to its host, and would consider whether switching would enable it to benefit from competitive pricing, as well as other factors including network quality.[294]

(iv) Another light MVNO did not consider the need for a SIM migration to be a substantial barrier to switching MNO providers, as it was confident the other MNO it had engaged with would have supported the transition well had it decided to switch.[295] This is paralleled by VUK's experience [REDACTED].[296]

(v) One Sky Mobile internal document notes that the objective of its tender was to secure significantly better terms that would "*justify the effort and risks of migration*",[297] indicating that the MVNO would be willing to switch.

7.15 Although Tesco Mobile told the CMA that it would be very difficult and complicated to revisit its JV agreement with VMO2, owing to its deep integration with VMO2,[298] the Parties do not consider that [REDACTED].[299] As recognised in the PFs, "*switching is easier for full MVNOs than light MVNOs*".[300] Moreover, the Parties do not recognise a scenario in which it would cost

[290] PFs, paragraph 9.218.

[291] PFs, paragraph 9.233.

[292] TOH2 Working Paper, paragraph 1.68(b).

[293] PFs, paragraph 9.236.

[294] PFs, paragraph 9.236(b).

[295] PFs, paragraph 9.236(d).

[296] Parties' response to the CMA's [REDACTED]. [REDACTED].

[297] PFs, paragraph 9.238(a)(i).

[298] PFs, paragraph 9.38.

[299] PFs, paragraphs 9.38 and 9.71.

[300] PFs, paragraph 9.240.

[REDACTED] and take [REDACTED]for a full MVNO to switch networks.[301] VUK considers that, for a full MVNO, [REDACTED].[302] As for the time such a migration would take, [REDACTED].

7.16 As recognised in the Phase 1 Decision,[303] there is a trend of larger MVNOs moving from a light MVNO to full MVNO architecture to enable them to take advantage of the increased ease of switching in the industry and their increased bargaining power. Indeed, Enders Analysis notes that one of the key reasons for MVNOs' "*strengthened hand*" and ability to extract "*attractive wholesale rates from the mobile operators*" enabling MVNOs to compete aggressively in the market is precisely "*their ability to move from one mobile network to the next with relative ease*".[304]

7.17 As previously submitted,[305] [REDACTED]. [REDACTED]. [REDACTED].

7.18 [REDACTED]:

(i) [REDACTED];

(ii) [REDACTED]; and

(iii) [REDACTED].

7.19 [REDACTED].

7.20 [REDACTED].

7.21 [REDACTED]:[306]

(i) [REDACTED][307][REDACTED].

(ii) [REDACTED].

7.22 [REDACTED].

7.23 [REDACTED]. [REDACTED].

7.24 Moreover, the threat of switching is entirely credible and is another factor contributing to the strong bargaining position of MVNOs like Lebara. A further example is Sky, whose internal

[301] PFs, paragraph 9.237(c).

[302] [REDACTED], paragraph 7.14(i).

[303] Phase 1 Decision, paragraph 105.

[304] Enders Analysis, '*Tread lightly - Response to the CMA's proposed remedies to the Vodafone-Three Merger*', 27 September 2024, page 3.

[305] [REDACTED]; [REDACTED] paragraph 7.15.

[306] [REDACTED].

[307] [REDACTED].

documents suggest that the threat of switching can be used to extract better terms from incumbent MNOs. One Sky internal document notes that "[REDACTED]".[308]

7.25 This ability will not be reduced post-Transaction. Technological advancements will continue to increase the ease with which MVNOs are able to switch MNO host – for example, the expected move towards eSIMs will further lower barriers for light MVNOs to switch host MNOs.[309] By way of illustration, [REDACTED]. This is reflective of the fact MVNOs are increasingly looking to benefit from eSIM technologies, including the simplicity of switching that they enable, whilst smaller new entrant MVNOs such as Gigs and eSIM Go are building their entire propositions on eSIM technologies. Moreover, a number of MVNOs already offer eSIMs to their customers including, for example:

(i) Tesco Mobile;[310]

(ii) Sky Mobile;[311]

(iii) Lebara;[312]

(iv) Lyca Mobile;[313]

(v) iD Mobile;[314]

(vi) Honest Mobile;[315]

(vii) Spusu;[316]

(viii) Wireless Logic; [317] and

(ix) Gamma. [318]

[308] PFs, paragraph 9.238(c).

[309] Initial Phase 2 Submission, paragraph 4.14(v).

[310] Tesco Mobile, *"Introducing eSIM",* n.d, available at: Introducing eSIM | What is an eSIM? | Tesco Mobile (accessed 27 September 2024).

[311] Sky, "*eSIM Sky Mobile",*n.d, available at: eSIM Sky Mobile | Sky Help | Sky.com | Sky Help | Sky.com (accessed 27 September 2024).

[312] Lebara, *"eSIM: All Information"*, n.d, available at: Lebara eSIM (accessed 27 September 2024).

[313] Lyca Mobile, *"Introducing Lyca Mobile eSIM",* n.d, available at: eSIM Card, Pay as You Go eSIM, UK eSIM Providers (lycamobile.co.uk) (accessed 27 September 2024).

[314] iD Mobile, "*Say "goodbye" to physical SIMs.",* n.d, available at: iD Mobile eSIM Support Page | iD Mobile Network (accessed 27 September 2024).

[315] Honest Mobile, "*eSim: what it is, how it works and why you should get one",* 6 December 2023, available at: Honest Mobile eSIM: what it is, how it works and why you should get one (honestmobile.com) (accessed 27 September 2024).

[316] Spusu, "*Innovation of the SIM card: eSIM",* n.d, available at: eSIM – The benefits of the digital SIM card (spusu.co.uk) (accessed 27 September 2024).

[317] Wireless Logic, "*Why choose eSIM?*", available at eSIM providerIoT eSIMs - eUICC, Embedded And SGP.32 (wirelesslogic.com) (accessed 30 September 2024).

[318] Gamma, "*Do you provide e-SIM?*", Gamma Business Mobile | A network built just for business (gammagroup.co) available at (accessed 30 September 2024).

7.26 As explained above, MergeCo and its rivals will be highly incentivised to secure MVNO custom post-Transaction given the substantial market-wide increase in network capacity from the Transaction for MergeCo, Beacon 4.1 for VMO2, and BTEE's likely competitive reaction. The very real and credible threat of switching will contribute to this incentive, encouraging all competitors to compete aggressively in order to both retain current and secure new wholesale customers.

* * *

SLAUGHTER AND MAY

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ME/7064/23 – Vodafone UK / Three UK

Provisional Findings: Parties' response to Chapter 14 on Rivalry Enhancing Efficiencies ("REEs") and Appendix G (PF Annex 3)

KEY
Confidential to VUK
Highly confidential to VUK (including internal docs)
Confidential to 3UK
Highly confidential to 3UK (including internal docs)
Confidential to both Parties
Confidential against third parties
Confi Ring information

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1. Introduction

1.1 The Parties welcome the recognition in the Provisional Findings ("**PFs**") that:

(i) Investment in mobile networks requires a long-term perspective;

(ii) The efficiencies generated by the merger are in principle rivalry-enhancing;

(iii) A significant part of the REEs – namely greater coverage and capacity through MOCN and 1800 MHz spectrum sharing from Day 1, greater reliability from site densification and the quality increases in VMO2's network as a result of Beacon 4.1 – are likely and timely;

(iv) The likely REEs are merger-specific; and

(v) The likely REEs will directly benefit UK customers.

1.2 However, the PFs raise two main areas of challenge in relation to: (i) the Parties' incentives to deliver the full JBP; and (ii) the sufficiency of the claimed REEs, in particular around the capacity benefits (including their impact on prices), indoor coverage and certain quality improvements such as higher speeds and latency, as well as the extent to which consumers (in particular those with low income) value better quality.

1.3 In this response the Parties demonstrate that the doubts in the PFs are misplaced and its provisional conclusions are not substantiated by robust evidence: not only are the Parties fully incentivised to deliver the JBP (see Section 3 below) but, once all REEs are taken into account, all quantitative analyses produced by the CMA and the Parties show that the Transaction is pro-competitive, increases consumer welfare and more than offsets any potential anti-competitive effects preliminarily identified by the CMA (see para. 5.100 *et seq.*). As explained in further detail in **Annex 4**, the CMA's own modelling – once the quality and capacity REEs are factored in – shows that no SLC will remain with the implementation of the JBP and that instead consumer welfare increases to over £950 million per year.

1.4 At the outset, the Parties note that the quality and capacity of the MergeCo network will be far superior to what 3UK and VUK could ever achieve in the counterfactual. This is a simple engineering outcome that the Parties understand is not in dispute. The concern in the PFs seems to be (beyond questioning whether the quality and capacity efficiencies will be delivered) that, if the expected quality and capacity efficiencies are realised, the MergeCo network will be "too good" – i.e. UK customers will not value or know what do with the improved consistency and reliability, better speeds, coverage, capacity, and latency benefits that MergeCo will be able to deliver.[1] The Parties disagree: this view is too narrow and short-term. The main reason the Parties are pursuing the Transaction is to create a best-in-class network that will bring better quality, coverage and capacity at lower cost to all UK customers. The JBP is the only sustainable way for the Parties to achieve long-term returns that cover the cost of investing in mobile infrastructure so as to be able to compete effectively.

[1] Provisional Findings, para. 14.218.

1.5 For completeness, below we set out how the significant REEs generated by the Transaction meet each of the six cumulative criteria for the CMA's assessment of whether the REEs prevent SLCs in the relevant markets.

1.6 Beyond its pro-competitive effect in the retail and wholesale mobile services markets, the Transaction's transformational impact on network performance (capacity and quality) in the UK will benefit the economy at large. The Parties have provided detailed analysis and quantification of material relevant customer benefits ("**RCBs**") that will improve in real terms everyday mobile connectivity user experience and enable new industry applications and enhance productivity across [REDACTED], as well as increasing FWA.[2]

2. Criteria 1: Rivalry-enhancing in the relevant markets

2.1 The PFs acknowledge the underlying economic reasons why a merger of MNOs may lead to rivalry-enhancing efficiencies.[3] These relate primarily to MergeCo having more sites and more spectrum than the standalone networks, enabling MergeCo's network to achieve greater capacity and coverage, and provide a more reliable and consistent service than either of the Parties' networks could do individually. This provisional finding principally relies on:

(i) **Evidence that quality is a key parameter of competition in the mobile markets**.[4] The PFs agree that the material quality improvements engendered by the Transaction will make both MergeCo (through having more sites and spectrum) and VMO2 (through the spectrum trade and Beacon 4.1) stronger rivals; and

(ii) The "*inevitability of network integration*"[5] enabling more spectrum to be deployed at each site, increasing available capacity and therefore **reducing the longer-term unit cost of expanding capacity**.[6] The PFs accept that network capacity is essential to meet growing data demand, which means that the MergeCo economics will lead to a reduction in long-term incremental cost.

2.2 As shown in further detail below, the PFs then err in considering that MergeCo would have a limited incentive to pass on the benefits of its additional capacity and lower capacity costs through lower prices.[7] This position that network capacity has no impact on retail and wholesale prices is untenable. It is a fundamental economic principle that additional capacity puts downward pressure on prices. The provisional analysis in this respect primarily relies on selective use of evidence from historical/circumstantial internal documents on short-term pricing decisions (which are driven by short-lived factors) rather than: (a) internal documents relating to the Parties' periodic strategic assessments (for example relating to retail offers including unlimited data allowances and the fact that incremental pricing is taken into account for wholesale contracts[8]); (b) economic incentives; (c) legal precedents which accept that capacity

[2] [REDACTED].
[3] Provisional Findings, para. 14.19-14.20.
[4] Provisional Findings, para. 8.27 and 14.174.
[5] Provisional Findings, para. 55, 14.192 and 14.197.
[6] Provisional Findings, para. 14.175.
[7] Provisional Findings, para. 14.175.
[8] Provisional Findings, para. 14.145 "*In relation to bidding for wholesale contracts to supply MVNOs, we have seen some evidence that the incremental cost of capacity is taken into account in bidding, along with a range of other factors*."

constrained MNOs have less incentive to price aggressively;[9] and (d) the commercial logic and historic market evidence regarding the long-term effect of capacity investment decisions.

2.3 The CMA's focus should be on the fundamental cost factors driving market outcomes over time (i.e., capacity investments and costs driving down the price per GB of data paid over time). The Parties demonstrate below (see para. 5.30 -5.34) that, in line with accepted economic theory and the historical relationship between capacity and pricing, the downward pressure effect on retail and wholesale prices of the new capacity brought to the market by MergeCo and VMO2 via Beacon 4.1 is incontestable.

2.4 Whilst the Parties welcome the recognition of some of the capacity, incremental cost and site densification benefits arising from the necessary network integration, the JNP goes beyond that. The Parties will not only merge their sites and spectrum but will also carry out a detailed programme of site and technology upgrades (e.g., deploying new equipment and latest technologies – e.g., 5G SA – upgrades to backhaul, etc.), in order to reposition MergeCo as the best network and deliver the full JNP. Delivering such a network would be commercially unachievable in the counterfactual.

3. Criteria 2: Likelihood – the CMA errs in provisionally finding that the Parties lack the incentives to implement the full JBP (para. 14.88 – 14.137 of the PFs)

3.1 While the CMA has accepted that the Parties have the ability to deliver the JBP and acknowledged the incentive to deliver some investment giving rise to REEs,[10] it considers that the Parties are "*not likely to have the incentive to deliver the full JBP*".[11] It identifies a number of concerns, including in mid and low traffic areas which serve relatively fewer customers and where Ofcom identified that, for some sites, the benefits of cost savings from site decommissioning could outweigh the commercial impact of network congestion in these areas.[12] Overall, the CMA notes that the quantum of any REEs is likely to be less than claimed by the Parties.[13]

3.2 The Parties have consistently demonstrated, supported by extensive evidence (including contemporaneous documents and detailed modelling), that the Parties have clear commercial and economic incentives to commit to and pursue the JNP.[14] The PFs are based on a continued misunderstanding of the commercial rationale and the logic behind the JBP. As previously explained by the Parties,[15] the bringing together of complementary assets (i.e., customer bases, sites and spectrum) through the Transaction makes the pursuit of a 'best network' strategy profit-maximising for MergeCo. This is because:

(i) It will provide the Parties the ability to deliver a higher quality network at much lower cost than the Parties could achieve standalone;

[9] See Case M8792. T-Mobile/ Tele2 – at para 524 where the European Commission concluded: "*Generally, however, if Tele2 NL were to become capacity constrained, it is likely that this will also have an effect on Tele2 NL's pricing strategy. […] Therefore, the competitive situation of Tele2 NL is likely to be further aggravated by such [network] costs which will give rise to incentives to price less aggressively*."
[10] Provisional Findings, para. 14.190 – 14.194.
[11] Provisional Findings, para. 14.189.
[12] Provisional Findings, para. 14.185.
[13] Provisional Findings, para. 14.200.
[14] For example, see [REDACTED]; [REDACTED].
[15] Merger Notice, [REDACTED].

(ii) The financial returns from accelerating network deployment are significantly increased due to the much larger subscriber base of MergeCo (and the consequent margin benefits);[16] and

(iii) The Beacon 4.1 Long-Form Agreements both enable the Parties to achieve the JBP/JNP, [REDACTED] and *incentivise* the delivery of the full JBP/JNP – in particular, the agreements set out a series of financial and operational penalties that are designed to ensure compliance with obligations owed to VMO2 which are consistent with achieving the full JNP.[17]

3.3 There is good evidence that such a strategic repositioning will generate lasting competitive advantage:

(i) BTEE's experience shows that the benefits of having the best network can last for many years. Since EE's formation in 2010 through the merger of T-Mobile and Orange and its early deployment of a 4G network in 2012, BTEE has maintained its network quality leadership in the face of competitive responses from rivals. This competitive advantage brought about by its actions over 12 years ago[18] has allowed it to sustainably capture a dominant share of cashflows and earn returns that are materially larger than those of the other MNOs over a long period.[19] As discussed in **PF Annex 1** paragraphs 7.5(d) and 7.7(c), BTEE's internal documents indicate clear recognition on its part of the advantage of having best network status, referring to its prioritisation of [REDACTED],[20] [REDACTED].[21]

(ii) Evidence of the commercial benefits of having the best network are not confined to the UK. T-Mobile became the best 5G network in the United States following its merger with Sprint[22] and has been delivering industry-leading financial performance and record low churn.[23] The Australian Competition and Consumer Commission found, based on a detailed local area analysis, that the leading Australian mobile operator, Telstra, enjoys a significant advantage from delivering a more consistent user experience through having higher site density.[24]

3.4 Whilst the CMA acknowledges the "*inevitability of network integration*",[25] the CMA has yet to acknowledge the logic of the Parties' network integration plan: as the Parties have further explained, when carrying out a full-scale network integration, the optimal strategy is to deliver a "future proof" network robust to uncertainties over future rates of traffic growth and the magnitude of potential competitive responses from rivals. Given that the additional costs of future proofing the site and deploying all the suitable spectrum are relatively low, any costs

[16] The logic underpinning this is that: (a) retaining sites that MergeCo already has and is committed to pay site rental for and integrating them into the joint network is considerably less costly than it would be for either Party to incrementally expand their individual network to more sites; and (b) all sites must be reconfigured anyway to deliver the combined network, so the incremental cost of deploying a high quality configuration is low.
[17] [REDACTED].
[18] It is 14 years since T-Mobile and Orange merged to form EE and 12 years since it launched the first 4G network in the UK.
[19] EBITDA less capex, see [REDACTED]the Merger Notice.
[20] [REDACTED]
[21] [REDACTED]
[22] T-Mobile press release, "T-Mobile sweeps the competition for overall network experience in latest third-party report", 9 January 2024.
[23] T-Mobile 2023 Annual Report, page 6 and page 14.
[24] ACCC, "Domestic mobile roaming declaration inquiry – Final report, 2017, page 45.
[25] Provisional Findings, para. 55, 14.192 and 14.197.

saved at this stage by reducing the equipment installed would be more than offset by the cost and disruption when the site has to be revisited again to upgrade it in future.[26]

3.5 The Parties' belief in the benefits of a best network strategy is underpinned and supported by their and Altman Solon's analysis and assessment during the JBP/JNP development process, where [REDACTED] rejected by the Parties on the basis that it would not achieve nationwide "best network" status.[27] The Parties are confident in the work undertaken to prepare the JBP, assess alternative network plans and consider the risks of the JBP. If the Parties considered that cost savings were sufficient to outweigh the benefits of best network, they would not have opted for [REDACTED].

3.6 The CMA has not engaged with any of this logic, which is at the heart of the Parties' plans. Instead, the CMA appears to articulate two unrelated arguments, namely that:

(i) there could be other strategies apart from the JBP which may be profit maximising – with rolling out a less dense network in rural areas being a particular case where the costs outweigh the benefits; and

(ii) given that there is uncertainty associated with the benefits of the JBP, the best approach would be to maintain real options by deferring investments.[28]

3.7 Below, the Parties explain that:

(i) the "best network" is a strategy where the resulting benefits are greater than the sum of its parts, and therefore downgrading one element would not just reduce the benefits from the relevant customer group: it would invalidate the entire strategic rationale behind the Transaction; and

(ii) the CMA's sensitivity analysis is not appropriate for assessing the Parties' incentives. The CMA has taken an already conservative plan (i.e., the JBP) and applied a series of downward adjustments to the expected increase in profits from delivering the JBP compared to a scaled back scenario. Such an asymmetric approach, which considers downside risks to the benefits but does not take into account potential upsides, provides no information on the Parties' expectations of their profits from rolling out the JNP, and hence the incentive to deliver the JNP.

The best network is a package where the benefits are greater than the sum of its parts

3.8 The underlying rationale behind the JBP is a strategic repositioning of MergeCo as the best network nationwide which cannot be swiftly matched by competitors. This repositioning will:

(i) make MergeCo's offer more competitive in the core retail and wholesale mobile services markets, resulting in a larger subscriber and MVNO base as network improvements will mean that customers are more likely to stay with the network (lower

[26] [REDACTED].
[27] Transcript of [REDACTED] call between Altman Solon and the CMA, [REDACTED].
[28] Provisional Findings, para. 14.185 – 14.189.

churn) and new customers are more likely to be attracted to the network (more gross adds);[29]

(ii) provide the abundance of capacity necessary to support FWA services;[30] and

(iii) enable MergeCo to gain a larger share of supply across [REDACTED] Advanced 5G use cases reliant on significant network investments. Specifically, it is assumed that MergeCo will reach a [REDACTED]% share across (i) use cases in [REDACTED] that rely [REDACTED], and (ii) use cases in [REDACTED] that rely on nationwide 5G coverage.[31]

3.9 Achieving these objectives requires unambiguous and long-lasting network leadership across a range of parameters and across all geographies. Only once MergeCo has achieved this, can it start to benefit from the marketing claim.[32] As a consequence, the benefits of the best network plan are greater than the sum of their parts – i.e., downgrading the JNP in one area has a disproportionate impact on the expected returns because it means that the Parties lose the benefits of the best network claim, as rivals will be able to exceed the MergeCo network performance for some parameters. The Parties must be committed to the JNP.

3.10 To substantiate the logic underlying their investment case in low and mid traffic areas, and to explain why investment in these areas is required to achieve best network status, the Parties submitted the following in [REDACTED]:[33]

(i) The Parties offer a *mobile* service. A significant part of the UK population lives and works in, and / or travels through mid-traffic areas (which also include motorways, other critical infrastructure, schools, hospitals, etc.) and these customers will want networks offering consistent quality in the same way as the network experience in high traffic areas, which can only be achieved by deploying more spectrum on a denser grid of sites. The Parties demonstrated this in [REDACTED] with the examples of Cambridge and Oxford and showed that there is a significant number of people in areas surrounding the cities who were previously unable to receive mid-band coverage and would benefit from incremental 2100 MHz.[34]

(ii) Customers place high value on the availability of wide coverage when traveling in rural areas, with the higher number of sites in low traffic areas providing enhanced coverage under the JNP.[35] The Parties' discrete-choice modelling consumer survey has

[29] [REDACTED]
[30] [REDACTED]
[31] [REDACTED]
[32] The JBP forecasts benefits from the "best network" effect [REDACTED]. [REDACTED]
[33] [REDACTED].
[34] [REDACTED].
[35] As mentioned in PF Annex 1, a report for the UK Government found that while residents in mobile not-spots would pay the most to be able to have local mobile service, local visitors and tourists also have significant willingness-to-pay ("**WTP**") for mobile signal in non-spot areas, for indoor signals and for better 4G signals. The report finds that residents in not-spot areas have an average WTP of £13.40 and £24.70 per month for 3G or 4G service (in addition to the price of a normal service contract) depending on whether they also get an improvement in their signal strength compared with a signal nearby, local visitors of not-spots areas have a similar average WTP of £13.20 and £22.00 per month and tourists in not-spots areas have an average WTP of £2.30 and £4.90 per month (Rand, Estimating the value of mobile telephony in mobile network non-spots, 2014). This is fully consistent with the CMA's own survey findings that rural respondents were relatively more concerned with network related attributes compared to urban respondents (Provisional Findings, para. 8.32).

demonstrated that consumers would be willing to pay £0.35 extra per month for a service with 1 percentage point fewer areas without a minimum signal of 2 Mbps.

(iii) BTEE has better coverage in mid and low traffic areas than rivals. The Parties substantiated this with data from Umlaut and Ookla and explained that, in order to compete with BTEE in these areas and take the title of best network, MergeCo will need to significantly increase the number of sites compared to the position of VUK and 3UK as standalone operators.

(iv) There is an asymmetry in incentives for MergeCo retaining sites, compared to the standalone operators building new sites in low and mid traffic areas, due to the reputational effect of downgrading network quality at existing sites where customers are already served. As smaller grids would [REDACTED],[36] the Parties would be strongly disincentivised from scaling back in these areas due to the risks of reputational damage.

(v) The PFs do acknowledge that the Parties are reducing the consolidated network from [REDACTED] sites to [REDACTED] sites, which makes the sites target more likely[37] – however, the PFs do not acknowledge that the Parties will not want to decommission sites in the short term only to have to build them back up in a few years' time.

3.11 Rather than engage with this logic, the PFs have instead focused on a narrow assessment of the cost savings (which it considers may be under-stated) and direct benefits (which Ofcom considers may be over-stated) and concluded that scaling back in these areas could be profit-increasing. However, this ignores the fundamental logic at the heart of the best network proposition, which is that it is more than the sum of its parts (see para. 3.9 above) due to the indirect benefits of the "best network" claim.

The Transaction is a strategic repositioning based on conservative assumptions that creates long-term competitive advantage

3.12 The Parties have previously explained that the JBP reflects a conservative approach to estimating the incremental benefits to MergeCo from its "best-in-class" strategy.

(i) The magnitude of the changes in mobile churn and gross adds in the JBP are modest compared to:

(a) the scale of the increases in network performance to be expected from the implementation of the JNP, which are necessary to drive incremental growth in the competitive retail and wholesale mobile markets;

[36] For example, Altman Solon explained to the CMA that the initially envisaged number of 23.6k sites resulted [REDACTED] – see Transcript of [REDACTED] call between Altman Solon and the CMA, [REDACTED].
[37] Provisional Findings, para 50. states: "*We consider the JBP to be a credible integration plan, reflecting detailed due diligence by external consultants and significant time and resource investment by the Parties. We also recognise that the network improvement plans in the JNP involve the consolidation and upgrading of existing mobile sites, to rationalise down rather than scale up the total number of sites held by the Merged Entity. This process contrasts with the identification of locations for and subsequent construction of new sites, which would be required for site footprint expansion by each of the Parties absent the Merger, and which is likely to be significantly more practically challenging*."

(b) the importance customers place on network quality in their choice of network; and

(c) the likely increasing demands on mobile networks from evolving usage patterns and traffic growth[38] - for example, Ofcom's conservative "low growth" scenario forecasts growth rates of 25% per year to 2030 and 20% per year from 2030-2035 (which Ofcom considers a *"reasonable … basis for understanding likely future capacity and congestion constraints"*[39]), which is consistent with the Parties' own modelling assumptions and experience.[40]

(ii) MergeCo's assumed share of supply of new 5G use cases is broadly in line ([REDACTED]%) with its even share of a three-player market, despite the expectation of having a significantly better network than rivals. In addition, the JBP does not model any benefits from the provision of mobile private networks or network slicing.[41]

(iii) MergeCo is assumed to limit additional FWA sales to a small subset of customers (essentially, cross-selling to VUK customers [REDACTED]). This ignores the potential for increased FWA penetration, outside of VUK's upgrades or acquisitions, such as 3UK customers or the wider population,[42] and [REDACTED].[43]

3.13 As explained above in para. 3.7(ii) and expanded upon below, the CMA's asymmetric approach is not appropriate for understanding the Parties' realistic expectations as to their profits and, as a result, is not an informative way of assessing whether the Parties have an incentive to deliver the JNP. The clear commercial incentive is to commit to and deliver the JNP.

3.14 The sensitivities applied by the CMA in order to test the SBS and the commercial value of delivering the JBP are as follows:

(i) Timing of cash flows. Although the CMA does not dispute the Parties' submissions that it is common that strategic decisions include a terminal value calculation, it implements sensitivities without a TV calculation (10, 15 & 20 year NPVs) as: (a) not all of the examples provided by the Parties include a TV calculation; (b) the decision to scale back investment may be more routine than a strategic decision; and (c) Ofcom noted that plans with such a large proportion of value in the terminal value are fairly unusual.[44]

(ii) Revenues from a spectrum sale in the SBS. The CMA runs sensitivities to account for the sale of the SBS's unused spectrum. It runs two sensitivities: (a) using the figure calculated in the Incentive Sensitivities Note ("**ISN"**); and (b) using a higher figure on the basis that the figure in the ISN could be understated due to prices in the 2021

[38] [REDACTED].
[39] Provisional Findings, Appendix G, para. G.11, and Capacity and Congestion Working Paper, para. 2.4.
[40] Ofcom's future approach to mobile markets and spectrum: Conclusions paper, para. 4.5; [REDACTED].
[41] [REDACTED].
[42] [REDACTED].
[43] [REDACTED]. FWA will benefit customers throughout the UK, including price sensitive customers and customers in rural areas or other areas without access to full fibre. As it does not require physical cable installation, FWA offers a higher degree of flexibility which is essential for many UK consumers, including for example those living in temporary and / or rented accommodation, renters whose landlords may not allow adaptations to the property that would permit broadband, or those who cannot afford a fixed broadband connection. For more details regarding FWA and MergeCo offering, see responses to [REDACTED] RFI[REDACTED] as well as Section 2(ii) of the response to the NOPR.
[44] Provisional Findings, para. 14.117.

auction being *'low'*, MergeCo being able to "*play off buyers against each other"*, and the spectrum being available earlier.[45]

(iii) Alternative discount rate. The CMA considers that the WACC used by the Parties (Ofcom's 2021 estimate of mobile industry WACC in 2021) may have changed since 2021 and that the Merged Entity's WACC may not be necessarily similar to the other MNOs in the industry. It therefore carries out sensitivities using a higher discount rate (9.6%) than the one used in the incentive modelling.[46]

(iv) Revenues from future use cases. The CMA considers that "*revenue from new 5G use cases largely does not exist at present for either Party"* and that there is relatively little usage of FWA currently in the UK. Given the CMA's view on the uncertainties around future use cases, it has carried out two sensitivities where it has reduced the revenues associated with FWA and 5G use cases.[47]

(v) Profits post-FY34. The CMA considers that the terminal value calculation builds the MergeCo FY34 ROCE into MergeCo's profits post-FY34. It carries out sensitivities where both the SBS's and the JNP MergeCo's profits decline to WACC.[48]

(i) Timing of cash flows

3.15 As explained above, the JBP is far from "routine". It is a long-term plan that will place the combined business on a sustainable footing for the future. There are clear economic and commercial benefits as to why the competitive advantage from such a repositioning could last for long periods (e.g., the example of BTEE, post formation of EE).The Parties have also provided evidence demonstrating that similar types of investments/M&A transactions routinely include a TV calculation alongside discounted cashflows where the structural (investment) change is permanent; there is no reason why a transformational project of this size would depart from standard practice.[49] The Parties therefore do not consider it appropriate to assess the returns from their plans using anything other than by including a perpetuity calculation.

(ii) Revenues from a spectrum sale in the SBS

3.16 As acknowledged by the CMA, there are a number of good reasons why mobile spectrum trading has been limited in the UK that mean that a spectrum trade could be difficult to achieve.[50] These difficulties raise doubts over the likelihood of a spectrum trade (and therefore it is wrong to assume that the SBS would realise additional benefits).

3.17 However, even proceeding on the assumption that it would be possible for the SBS to negotiate a sale of the spectrum, the CMA's spectrum sensitivity is not an informative approach to assessing the expected benefits under the JBP (and the Parties' incentives more generally). This is because it employs a number of unevidenced, upper bound assumptions in order to calculate the maximum possible benefit that the SBS could earn from the sale of this spectrum.

[45] Provisional Findings, para. 14.119.
[46] Provisional Findings, para. 14.121.
[47] Provisional Findings, para. 14.126.
[48] Provisional Findings, para. 14.129.
[49] See response to [REDACTED] RFI [REDACTED] and [REDACTED].
[50] Provisional Findings, para. 14.118 and 14.159.

3.18 First, the CMA assertion that "*prices at the 2021 auction were low*" is based on a single paper, which alleges that: *"there was clear evidence that bidders successfully engaged in market division (tacit collusion) in the 5G capacity band, leading to the low prices paid by EE, Telefónica, and Vodafone"*.[51]

3.19 In order to conclude that auction outcomes were affected by tacit collusion, the CMA would need to assess evidence that there was tacit collusion against the "null hypothesis" that the bidding reflected bidders' private values and hence the outcome reflected market value. Neither the author of the paper in question, nor the CMA, has carried out such an assessment and nor has the CMA sought to collect any evidence of its own in support of the assertion made in the paper. As a consequence, this conclusion remains entirely unsubstantiated by the CMA.

3.20 Second, the CMA does not engage with the evidence previously submitted by the Parties which explains that, because spectrum generally has diminishing marginal value (and all operators already hold at least 80 MHz of spectrum), any benchmark based on past-auction values would, almost by definition, be an upper bound on the value of additional spectrum.[52]

3.21 Third, the CMA ignores the fact that the price that the buyer would be able to extract would be a function of: (i) the buyer's private valuation, (ii) the seller's private valuation, and (iii) the relative bargaining weights between the two parties. Instead, the CMA jumps to the conclusion that the seller (in this case) would be able to extract the entirety of the buyers' private valuation on the basis of the unevidenced assertion that MergeCo could *"play off buyers against each other"*.[53] The Parties do not agree that MergeCo would hold any leverage over two sophisticated buyers (BTEE and VMO2) with good information on the market value of spectrum (e.g., the prices paid in the 2018 and 2021 auctions).

3.22 Finally, the CMA is wrong to suggest that MOCN could address any potential congestion issues from loss of this spectrum meaning that this spectrum could be released earlier in the integration process. To the contrary, the early sale of 50MHz would undermine MOCN congestion/performance benefits, since it would require reconfiguring the Parties' legacy networks, in many cases reducing the available combined capacity, resulting in higher load at these sites compared to the counterfactual, let alone the JNP. The Parties remain of the view that releasing the spectrum early in the integration process would require them to incur significant additional costs.

(iii) Revenues from future use cases

3.23 In implementing these sensitivities, the CMA has failed to engage with evidence submitted by the Parties which shows that these benefits are estimated conservatively in the JBP (see para. 3.12 above). Therefore, the CMA is applying downside adjustments to an already conservative forecast.

3.24 The CMA's approach further ignores the commercial reality that, while the exact use cases may be uncertain, there is considerable option value in building a network with the coverage and capacity to support new use cases. It is not possible to instantaneously deliver a nationwide 5G SA coverage layer or scale up capacity sufficiently in response to a new use case.

[51] Myers, Geoffrey (2023) Auction bidding and outcomes, page 200.
[52] ISN, para. 28.
[53] Provisional Findings, para. 14.119(a).

Therefore, there is value in having a network in place that can meet future demand, even if it is uncertain. It is imperative that this option value, which is taken into account in the JBP through conservative assumptions on the incremental benefits of 5G use cases and FWA, should also be taken into account by the CMA in an analysis of the Parties' incentives.

3.25 The development of essential infrastructure (such as 5G SA in this case) creates a positive feedback effect on use cases predicated on such infrastructure. For example, by delivering nationwide 5G SA coverage which would enable new use cases to be accessed anywhere in the UK, this (i) provides developers of use cases with the confidence that new 5G use cases can be used widely and consistently across the country and thereby encourages the development, and (ii) accelerates and widens the uptake of such use cases and hence the materialisation of their benefits.

3.26 Additionally, the Parties do not consider the projected revenue from 5G use cases to be as limited, or the projected revenue from FWA to be as uncertain, as the PFs consider. It would be reductive to dismiss the revenue potentials of new 5G use cases as limited solely on the basis that at present they do not generate revenue.[54] The Parties note further that the PFs refer to Ofcom's view that there is limited evidence currently of customer willingness to pay a premium for services relying on 5G SA capabilities.[55] As noted in **PF Annex 1** at para. 2.2(c), consumer usage of new technology (such as 4G in the early years of its launch) have in the past grown substantially over time. The Parties maintain that new 5G use cases (including those relying on 5G SA) are anticipated to generate substantial revenues for MergeCo.

3.27 Similarly, it would be overly simplistic to discount projected revenues from FWA as uncertain solely on the basis that FWA is currently relatively limited in the UK.[56]

(i) Para. 3.12(iii) explains that the JBP forecasts do not account for additional channels of FWA customer acquisition. In terms of the Parties' rationale for expecting increased customer uptake of FWA, the Parties have set out in previous submissions (including [REDACTED]) why FWA is attractive to customers (see for example footnote 43 above), with which the PFs have failed to engage. In particular, [REDACTED] 3UK's 5G FWA customers are located in areas served by ultrafast broadband, which is a clear indication that 5G FWA is an attractive alternative to fixed broadband services even where these are available.[57]

(ii) The currently limited use of 5G FWA in the UK must be explained in the context of MNOs' limited 5G C-band rollout and capacity constraints.

(a) 3UK is currently only able to offer 5G FWA to [REDACTED] premises out of c.32.8 million premises in the UK (i.e. around [REDACTED] of the total number of premises). In the case of the vast majority of the remaining premises, 3UK is unable to offer 5G FWA [REDACTED]. [REDACTED].

(b) With regard to VUK, [REDACTED].

[54] Provisional Findings, para. 14.124.
[55] Provisional Findings, Appendix G, para. G.144
[56] Provisional Findings, para. 14.125.
[57] [REDACTED].

(c) VMO2 does not currently offer FWA and in any case the Parties do not consider that [REDACTED].

(d) In addition, customer awareness of FWA is low compared to fixed broadband, which is well established: 3UK's 5G FWA has only been available since 2019 and, as expected with new solutions, it is unsurprising that uptake is initially limited.[58]

(iii) As the PFs recognise, Ofcom noted that T-Mobile USA has about five million FWA subscribers. As the Parties have previously submitted, significant growth in FWA uptake followed the Sprint/T-Mobile merger. The Parties expect MergeCo's expanded FWA offering (enabled by the capacity uplift generated by the Transaction and site upgrades under the JNP) to similarly encourage growth in customer uptake and that there is substantial headroom in the broadband market for such growth.

(iv) Profits post-FY34

3.28 The CMA explains that it considers that the terminal value calculation builds the MergeCo FY34 ROCE into MergeCo's profits post-FY34. It carries out sensitivities where both the SBS's and the JNP MergeCo's profits decline to WACC.

3.29 The Parties welcome the CMA's recognition that investment to deliver REEs are rivalry enhancing and therefore would lead to a competitive response (demonstrating, consistent with the Parties' submissions in relation to TOH1 and TOH2, that there could not be any SLC as BTEE and VMO2 will continue to exert a strong competitive constraint post-Transaction and deliver a transformational market-wide increase in network capacity). This reaction is entirely consistent with the findings the PFs draw from various internal documents, including:

(i) more recently, "*[REDACTED]*";[59]

(ii) [REDACTED] perceives that the Transaction "*[REDACTED]*"[60] and more generally "*[REDACTED]*";[61]

(iii) VMO2 is a "*[REDACTED]*";[62] and

(iv) The Transaction "*[REDACTED]*".[63]

3.30 However, the CMA's implementation of this sensitivity is based on a misunderstanding of the Parties' modelling:

(i) The best network plan is explicitly designed to result in an outcome where, whatever the response, rivals cannot meet or exceed the JBPs quality through a short-term response.

[58] Merger Notice, [REDACTED].
[59] Provisional Findings, Appendix C, para C.28.
[60] Provisional Findings, Appendix C, para C.164 and C.166.
[61] Provisional Findings, Appendix C, para C.47.
[62] Provisional Findings, Appendix C, para C.32.
[63] Provisional Findings, Appendix C, para C.51 and C.52.

(ii) Competitive responses from rivals were already taken into account in the JBP, which assumes that [REDACTED].[64]

3.31 Therefore, like its approach to future use cases, this sensitivity is an example of the CMA applying further downside adjustments on top of an already conservative forecast.

3.32 In addition, there is no theoretical reason why returns on a sunk investment creating competitive advantage converge to WACC after a certain period of time. On the contrary, empirical evidence from the UK market (such as the example of BTEE or VMO2 following iPhone exclusivity) shows that returns from such an investment can be long-lasting.

4. Criteria 3: Timeliness – the REEs are timely

4.1 The Parties welcome the statements at para. 14.195 to 14.199 of the PFs that the REEs the CMA consider likely to be realised would be sufficiently timely. In particular, the PFs find that the Day 1 benefits are likely to occur shortly after closing and are relatively easy to implement.[65] The PFs also find some degree of network integration timely. The likely rivalry-enhancing network quality improvements of the spectrum transfer to VMO2 pursuant to Beacon 4.1 are likely to occur within the short- to medium-term. These benefits will continue to accrue as the JNP is delivered.

5. Criteria 4: Sufficiency – the REEs delivered by the JBP are robust and more than sufficient to offset any SLC

5.1 The CMA leaves open the question as to whether the full REEs are sufficient to outweigh any competitive harm caused by the SLCs provisionally found in the retail and wholesale markets and raises a number of doubts regarding the extent of claimed REEs, which the Parties consider in this Section. These doubts are primarily driven by:

(i) The CMA rejecting the Parties' submissions in relation to the impact of the Transaction on capacity and mobile prices, on the basis that the CMA has seen no "direct link" between the incremental cost of capacity and retail pricing decisions in the Parties' pricing documents (and, in the wholesale market, that although incremental cost is taken into account in wholesale pricing, the documents did not indicate the precise effect on wholesale prices);[66]

(ii) The CMA downplaying the capacity benefits (in terms of network quality) delivered by the Transaction (and ignoring the impact of Beacon 4.1 in this context);[67]

(iii) The CMA downplaying the other quality benefits delivered by the Transaction;[68]

[64] [REDACTED].
[65] Provisional Findings, para. 14.197.
[66] Provisional Findings, para. 14.144 - 14.148.
[67] Provisional Findings, para. 14.220 - 14.227.
[68] Provisional Findings, para. 14.228 - 14.230.

(iv) The CMA considering that the standalone networks in the counterfactual would deliver a "good enough" service for customers in terms of 5G coverage, speeds and latency;[69] and

(v) The CMA considering that certain quality benefits generated by the merger are not highly valued by a substantial group of consumers, especially those on lower incomes.

5.2 Below the Parties rebut each of the CMA's points, focusing on:

(i) The standalone networks' capacity and congestion projections, which the CMA misunderstands;

(ii) The capacity benefits of the Transaction (reinforced by the impact of Beacon 4.1), which the CMA downplays;

(iii) The link between capacity, cost of capacity and commercial propositions and pricing decisions;

(iv) The substantial value that customers – across income groups - attribute to network quality;

(v) The huge quality improvements generated by the merger, which the CMA mischaracterises/downplays; and

(vi) The REEs delivered by the Transaction which more than offset any anti-competitive effects.

The CMA erroneously considers that the standalone networks in the counterfactual would be able to manage increasing congestion and offer a 'good enough' service for customers (G.30 – G.107)

5.3 At the outset, the Parties note that the CMA's analysis of capacity focuses narrowly on congestion. Capacity measures a network's ability to supply a given traffic demand at a specified level of quality. Capacity determines the number of customers that can be served at a given level of quality. For a given number of customers, the greater the capacity, the higher the average speeds that those customers will receive.

5.4 Congestion (i.e. the number of sites providing average speeds below a threshold during busy hours) is only part of MergeCo's capacity story. The greater the network capacity, the better the service (i.e. the average speeds) customers will receive throughout the network, including in uncongested sites and outside busy hours.

Measuring congestion

5.5 By focussing narrowly on cell-level statistics of congestion, i.e., the proportion of cells that are congested at any given point, the CMA's analysis understates the extent of the impact of

[69] Provisional Findings, para. 14.232 - 14.233.

congestion on customer experience on the Parties' networks and therefore, ultimately, the importance of best network status:

(i) Appendix G to the PFs notes that "*…we consider both site-level and cell-level evidence of congestion*."[70] However, its assessment of the Parties' standalone congestion appears to place more weight on cell-level congestion – for example, the PFs state: "*[o]ur analysis indicates that while [REDACTED]% of 3UK sites are affected by congestion, only [REDACTED]% of 3UK's network is congested at the cell level*."[71] Para. G.36 of Appendix G to the PFs also notes that "*from a customer experience perspective, congestion occurs within the cell where the customer is trying to use the service at a particular point in time*." However, the percentage of cells affected understates the true impact of congestion on customer experience:

(a) The CMA's assertion that "*a customer located in a particular cell and using a particular spectrum band is not affected by congestion in different cells or bands on the same site*"[72] is not correct. Customers are located within *sectors* rather than cells, with the capacity in each sector being delivered by multiple cells, one for each carrier deployed at the site.[73] Congestion in a single cell will directly impact customer experience across all other cells within the relevant sector – this is because customer handsets will draw on capacity from multiple cells within a sector in order to deliver the best performance. Therefore, congestion within any cell limits the capacity available to all customers in the sector.

(b) Customers towards the edge of sectors that are *adjacent* to a sector with a congested cell (including from other sites) will also be affected. This is because sectors overlap and customers towards the edge of one sector often draw on capacity from cells at a neighbouring sector.

(ii) Further, as the Parties explained at [REDACTED] of the Parties' [REDACTED], congested cells are typically affected for several hours over the course of the day (not just the busy hour)[74] and customers typically move between sectors/ cells given their close proximity. Even though, as the CMA observes, customers "*may also move in the opposite direction (ie from a congested to an uncongested cell), or to an adjacent site*,"[75] customers that move in and out of congested cells (regardless of the direction) will suffer from a poor, inconsistent experience and are impacted by congestion (e.g., a Microsoft Teams call being dropped or being unable to load a webpage, download a file or access a service when they want to because of congestion).

[70] Provisional Findings, Appendix G, para. G.35.
[71] Provisional Findings, para. 14.60.
[72] Provisional Findings, Appendix G, para. G.36.
[73] The physical footprint covered by each site is divided into multiple distinct sectors and each customer that is served by a given site will be located within one of the site's sectors. Within each of these sectors, there are multiple overlapping cells – one for each carrier – and customers at any given location will typically be able to access multiple cells/carriers at a given point in time, aside from customers that are further away from the site that may only be able to access the site's low band spectrum/ cells.
[74] On 13 August 2024, [REDACTED]% of VUK-managed congested sites were congested for at least 3 hours per day, and [REDACTED]% were congested for at least 7 hours (at a threshold of [REDACTED] Mbps); on 8 August 2024, [REDACTED]% of 3UK's congested sites were congested on average for at least 3 hours a day, and [REDACTED]% for at least 7 hours a day (at a threshold of [REDACTED] Mbps).
[75] Provisional Findings, Appendix G, para. G.36.

(iii) Having a congested cell indicates that the sector as a whole is highly loaded / utilised (even if not all the cells on the sector are congested at the relevant threshold in the busy hour), and hence that all customers at the sector can expect to experience relatively poor performance. This is likely to also extend to the other sectors on the site, as there is significant correlation between traffic on different sectors of the same site (for a detailed analysis of speeds at VUK congested sites see para. 5.12 below).[76]

(iv) Further, sites that are congested tend to have a disproportionately high number of users, meaning that the percentage of customers affected is higher than the equivalent percentage of sites (and cells) – specifically: [77]

(a) Whilst [REDACTED]% of VUK's sites are currently congested at a [REDACTED] Mbps threshold, this equates to around [REDACTED]% of customers.

(b) In the case of 3UK, [REDACTED] ([REDACTEDD]%) of its customers were located in areas served by [REDACTED] congested sites during the busy hour as at the week commencing 6 May 2024 (week 19).

5.6 Regarding the choice of speed threshold, para. G.37 of Appendix G to the PFs implies that the [REDACTED] Mbps threshold adopted by the Parties' congestion modelling may be too high, noting that "*according to Ofcom 'good' performance can be delivered at 2Mbps*." However, Ofcom set the 2 Mbps as the *minimum* threshold for coverage in 2012 on the basis that "*a 2Mbps minimum data rate is seen by Government as the minimum level of service acceptable to deliver a reasonable broadband experience for users*".[78] Since then, customers' bandwidth demands have increased significantly as uptake of data-intensive use cases has grown and the Parties consider that the [REDACTED] Mbps congestion threshold is conservative for a forward-looking assessment and at odds with the approach adopted by other regulators (see para.5.88) – as detailed at para. 5.90, speeds of less than 5 Mbps are already insufficient to deliver a good quality/reliable experience for every-day activities such as HD streaming and video-conferencing and speeds below 2 Mbps significantly frustrate the customer experience (see paragraph 5.17(iii)).

3UK

5.7 The PFs significantly understate 3UK's current and future congestion problem – specifically:

(i) The Parties explained in [REDACTED] that the [REDACTED] 3UK sites that were reported as congested in week 19 do not capture the full extent of congestion on the network. In fact, this represents only a subset of all congested sites: only those sites that contain [REDACTED] are marked as congested. An additional [REDACTED] sites experienced [REDACTED] congestion at the [REDACTED] Mbps threshold (i.e., up to [REDACTED]) but were not reported because they did not satisfy that internal criterion.

[76] This is also confirmed by the fact that MNOs, when addressing congestion, typically invests to add capacity to all sectors on the site, even though the congestion might be measured only on one sector.
[77] See [REDACTED].
[78] Second consultation on assessment of future mobile competition and proposals for the award of 800 MHz and 2.6 GHz spectrum and related issues (January 2012).

(ii) Even when measured at a cell level, [REDACTED] of 3UK customers are affected by congestion as of May 2024.[79] The PFs ignore this evidence and, instead, focus on the share of cells congested, which does not account for the fact that more customers and more traffic are in the busiest areas. When [REDACTED] of customers are affected by congestion it is not tenable for the CMA to maintain that it has not seen evidence that 3UK is facing congestion levels that would materially weaken its competitive position. At the site level, 3UK expects the share of subscribers in congested areas to [REDACTED]. The actual number of customers affected will be [REDACTED] because customers move between cells, sectors, and sites.

(iii) The fact that congestion will be significant on the 3UK network is robust to the chosen measure of congestion. Even considering a very low speed threshold of 2 Mbps, 3UK's network modelling shows that by 2027, [REDACTED]% of its customers would be in areas where sites are congested.[80]

(iv) As noted in the Merger Notice, 3UK's standalone congestion levels could be even higher in future. [REDACTED], it applied a set of assumptions to forecast congestion up to Year 10 (para. 11.52 to 11.55 of the Merger Notice). These are optimistic assumptions [REDACTED].[81] [REDACTED].[82] [REDACTED].[83] As Appendix C to the PFs notes, BTEE's internal documents show that, [REDACTED].[84]

5.8 The PFs are incorrect to state that 3UK's internal documents do not show evidence that 3UK is currently facing, [REDACTED], capacity constraints.

(i) The PFs wrongly attach weight to 3UK's May 2022 submission to Ofcom forecasting [REDACTED] and consider this to be in tension with 3UK's more recent account of congestion on its network.[85] The low congestion forecasts for the mid-2020s in this document are [REDACTED], as set out in [REDACTED], which the PFs do not properly engage with. In particular, in May 2022, 3UK expected [REDACTED] congestion on its network going forward than under its current congestion forecasts. As noted in [REDACTED], this forecast was made in the context of 3UK's then-current plan to deploy 5G to [REDACTED] sites by 2025. REDACTED]. [REDACTED]. It is therefore unsurprising that congestion on the 3UK network is [REDACTED]. There is no tension between 3UK's May 2022 submission to Ofcom and its current view of congestion on its network.

(ii) Additionally, the lower level of congestion reported in 3UK's May 2022 submission was partly due to its use of [REDACTED] Mbps as the congestion threshold for the Extended Coverage Area ("**ECA**")[86] whereas 3UK now uses [REDACTED] Mbps as the threshold

[79] While the [REDACTED]% of customers affected by congestion is measured at a representative moment of the day, the fraction of customers connecting to a congested cell at least once during the day will be greater.
[80] [REDACTED].
[81] [REDACTED]. See Merger Notice, [REDACTED].
[82] Merger Notice, [REDACTED].
[83] [REDACTED].
[84] Provisional Findings, Appendix C, para. C.29.
[85] Provisional Findings, Appendix G, para. G.39.
[86] Appendix G to the Provisional Findings notes that 3UK's May 2022 submission did not specify the speed threshold used to identify a site as congested (para. G.41). This is incorrect – [REDACTED] of that submission notes that 3UK's analysis in this submission [REDACTED].

for its strategic forecasting as part of its network plan.[87] As the PFs observe,[88] using a lower congestion threshold typically means finding less congestion. The use of [REDACTED] Mbps as the speed threshold for the ECA (i.e. areas further away from the mast and served by low frequency spectrum) is [REDACTED] with 3UK's note in another submission to Ofcom (around the time of its May 2022 submission) that the SRN will only deliver 4G coverage with a download speed of at least 2 Mbps.[89] However, as explained at para. 5.6 above, [REDACTED] Mbps is no longer an appropriate threshold for measuring congestion.

(iii) The PFs seem to discount evidence from documents after 2022 as occurring after discussions of the proposed Transaction. As set out in [REDACTED] (and again in PF Annex 1), it is incorrect to imply that 3UK's investment plans have been impacted by the anticipated Transaction.[90] [REDACTED]. [REDACTED]. A contemporaneous BTEE internal document from [REDACTED] states [REDACTED][91] – plain evidence that [REDACTED]. Any implication that 3UK scaled back its 5G rollout plans after 3UK entered into intensive merger discussions ignores the evidence that a [REDACTED], leading to the revised network plan.[92]

(iv) The PFs incorrectly attach significance to a [REDACTED] slide [REDACTED] referring to 3UK's strategic vision.[93] As set out in response to [REDACTED] RFI [REDACTED], this slide [REDACTED]. This presentation [REDACTED]. For example, [REDACTED]and that 3UK[REDACTED]. [REDACTED]. The same document shows that [REDACTED].[94] In any event, as previously submitted, [REDACTED].[95]

5.9 The PFs omit the full context of the information provided in previous submissions by 3UK and erroneously find 3UK to [REDACTED]

(i) In Figure G.6, the PFs reproduce a table provided in the Parties' response to [REDACTED]the CMA's RFI [REDACTED], in relation to which the PFs state, [REDACTED].[96] As 3UK noted in response to [REDACTED] RFI [REDACTED], the items set out in Figure G.6 were [REDACTED]),[97] i.e. [REDACTED] [REDACTED]. Figure G.6 clearly shows that 3UK [REDACTED] – for example, [REDACTED].

(ii) The PFs point to Figure G.8 (Congested hours on 3UK 4G cells) which ostensibly *"[REDACTED]"*.[98] As the Parties noted in response to [REDACTED]RFI [REDACTED], congested hours on 4G cells is [REDACTED].[99] As such, Figure G.8 is of limited probative value and does not meaningfully reflect [REDACTED].

[87] As submitted in response to [REDACTED] RFI [REDACTED], the minimum speed customers expect from mobile networks has increased significantly over time, and will continue to increase in the future, and as such 3UK applies a [REDACTED].
[88] Provisional Findings, Appendix G, para. G.37.
[89] See footnote 43 of 3UK's response to Ofcom's future approach to mobile markets in April 2022, available at https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-3-4-weeks/232279-ofcoms-future-approach-to-mobile-markets/responses/three/?v=200772 (accessed on 24 September 2024).
[90] See [REDACTED].
[91] Provisional Findings, Appendix C, para. C.29(e).
[92] See CK Hutchison's response to [REDACTED] s109 [REDACTED].
[93] Provisional Findings, Appendix G, Figure G.10.
[94] [REDACTED]
[95] Merger Notice[REDACTED].
[96] Provisional Findings, Appendix G, para. G.52.
[97] [REDACTED]
[98] Provisional Findings, Appendix G, para. G.57.
[99] Parties' response to [REDACTED] RFI[REDACTED].

5.10 The PFs suggest that 3UK's performance and third-party measures do not show evidence of 3UK's poor network quality. The Parties, however, consider that the evidence shows that 3UK has substantial network quality problems.

(i) 3UK's network still delivers a patchy quality of service, with unreliable coverage and lack of consistency depending on the geographical area. Customers notice 3UK's network problems, and its reputation for poor network quality resulting from inferior coverage and congestion on material parts of its network results in high churn. [REDACTED].

(a) While approximately [REDACTED]% of the 3UK network has been upgraded, [REDACTED].[100]

(b) The resulting reputation of poor network quality [REDACTED].[101]

(c) [REDACTED].[102] [REDACTED].[103]

(d) [REDACTED].

(ii) While the CMA refers to evidence that [REDACTED], value-for-money reflects that customers consider both price and quality in choosing between operators. Figure G.15 is consistent with quality improvements in some areas. However, 3UK's [REDACTED]. Further, [REDACTED]. The PFs refer to an internal document to find that [REDACTED].[104] However, as explained in PF Annex 1, [REDACTED]. As the PFs note at G.63 of Appendix G, the [REDACTED] coincides with 3UK's increased investment in its network during the 2020 to 2022 period, [REDACTED]. This is corroborated by evidence from BTEE's internal documents which, as noted at paragraph 5.7(iv) above, indicate that [REDACTED].

(iii) The CMA's own survey of the Parties' customers finds that customers are sensitive to network reliability, e.g., 57% - 60% of the Parties' customers would choose a different provider if their network were only "*a bit less reliable*".[105]

5.11 The above evidence shows that [REDACTED].3UK does not have the ability or incentive to compete aggressively and sustainably. Winning more customers (and retaining existing customers, whose demand is expected to increase year-on-year) means increasing demand, [REDACTED]. [REDACTED]. The creation of MergeCo removes that impediment to competition.

[100] Merger Notice, [REDACTED].
[101] [REDACTED]
[102] [REDACTED].
[103] [REDACTED].
[104] Provisional Findings, Appendix G, para. G.63; citing [REDACTED].
[105] Provisional Findings, para. 8.27.

5.12 The PFs significantly understate the negative impact that capacity constraints are having on VUK's customer experience.

(i) Para. 14.64 of the PFs states that "*VUK's congestion levels currently appear to be at manageable levels, affecting around [REDACTED]% of cells on its network, across [REDACTED]% of sites."* However:

(a) Whilst Vodafone Group (and by extension VUK) uses % of cells congested (at 3 Mbps) as a simple universal KPI for network planning purposes and to monitor/track congestion over time and across OpCos, the Parties consider site-level statistics to be a more appropriate measure when assessing the impact on customer experience, for the reasons outlined at para. 5.5. As at March 2024, VUK estimates that,[106] at a [REDACTED] Mbps threshold, [REDACTED] of users in the busy hour ([REDACTED] users) are affected by congestion.[107]

(b) Vodafone Group adopted a [REDACTED] Mbps threshold in January 2019, as a benchmark for the minimum speed that customers will need for an acceptable quality of service for basic applications. However, as noted above, customers' bandwidth requirements have increased significantly as uptake of more data-intensive applications grow. Today, 3 Mbps is insufficient for many everyday activities including HD streaming and videoconferencing, for which a speed of above 5 Mbps is necessary to ensure a good/consistent experience (see Table 5.4 below). In the medium term, even 5 Mbps may be insufficient for what will soon to be considered 'basic' applications, given the development of mobile applications including heavy video features, or augmented/virtual reality.

(c) When considering a 5 Mbps threshold, as noted above, the percentage of VUK congested sites is almost [REDACTED], at around [REDACTED]% of sites which corresponds to [REDACTED]% of customers – which is a key metric for an assessment of the impact of congestion on customers.

(ii) The CMA also notes that "*[REDACTED]*."[108] However, as explained in response to [REDACTED] RFI [REDACTED],[REDACTED] ([REDACTED] the Merger Notice), [REDACTED]. [REDACTED]. [REDACTED]. In addition, as explained at para.5.5(i)(b), congestion in lower bandwidths negatively impacts performance for all customers at the affected sector (and neighbouring sectors). Further, a large portion of customers – in particular those that are indoors or further towards the cell edge - will rely exclusively on low-band coverage and will therefore be particularly badly affected.

5.13 Contrary to the CMA's assessment, VUK is already failing to invest in sufficient capacity to meet unconstrained growth in data demand:

[106] Customer Experience Note, para. 14.
[107] The busy hour is a metric used by VUK network planners to understand the peak demand on their infrastructure which then allows them to dimension and design the network capacity effectively. The busy hour in a given month is defined [REDACTED]. It therefore reflects the periods where users on that cell have the highest demand for data over the period.
[108] Provisional Findings, para. 14.64.

(i) Para. G.76 of Appendix G to the PFs suggests that "*[REDACTED]*" on the basis that it has [REDACTED] its target of limiting congestion to around [REDACTED]% of [REDACTED]. However:

(a) VUK's capacity investments alone have not been sufficient to maintain network quality at acceptable levels as demand for data continues growing. VUK has therefore had to rely on traffic management measures to limit load on the network – for example, through the use of speed caps on its unlimited data plans.[109] These measures, which constrain the bandwidth available to customers are effectively an increase in quality adjusted prices, and ultimately impede VUK's ability to compete effectively.

(b) As explained at para. 5.72, VUK has been unable to launch innovative new data products due to lack of capacity and concerns about the impact that these could have on its ability to keep congestion below its target level (e.g., guaranteed speed tariff).

(c) Focussing on one, narrow measure of congestion (cells) does not capture the wider impact that increasing capacity constraints is having on overall customer experience. As explained above, capacity determines not only congestion but also average speeds across the network. As Figure 5.1 below shows, average 4G speeds (depicted by the red line) [REDACTED] VUK's significant investments in capacity, indicating that these investments have [REDACTED] in the face of rapid demand growth, with traffic more than quadrupling between January 2019 and July 2023.

Figure 5.1 – Data service evolution from January 2019 to 2023

[REDACTED]

Source: VUK

VUK standalone congestion and internal documents

5.14 With regard to VUK's standalone congestion and internal documents, the PFs note that:

(i) "*Internal documents suggest that congestion is currently having [REDACTED]*[110] and [REDACTED][111], and

(ii) "*Internal documents indicate that [REDACTED]*[112]

5.15 For this analysis, the CMA primarily relies on a Vodafone Group report dated October 2022 ([REDACTED]).

[109] Vodafone's "unlimited lite" plan (recently discontinued) capped speeds at 2 Mbps. Vodafone currently offers three unlimited tiers - "Unlimited" has a maximum speed of 10 Mbps; "Unlimited Plus" has a maximum speed of 100 Mbps and "Unlimited Max" has no speed cap. See https://www.vodafone.co.uk/mobile/unlimited-data-plans.
[110] Provisional Findings, para. 14.64.
[111] Provisional Findings, Appendix G, para. G.85.
[112] Provisional Findings, para. 14.64.

(i) The objective of this report [REDACTED][113] and [REDACTED]. As such, it does not represent a detailed analysis of the state of VUK congestion nor of the measures to manage such congestion.

(ii) There are a number of factual inaccuracies which mean that the actual congestion level is understated. [REDACTED]. Site congestion tends to be multiple times greater than cell congestion: as explained in [REDACTED], cell congestion of around [REDACTED]% on VUK's network has translated into approximately [REDACTED]% sites being congested.

(iii) In any event, instead of showing that VUK experiences "acceptable" levels of congestion, the document [REDACTED]:

(a) In terms of congested cells by user throughput split, [REDACTED].

Figure 5.2 – Congested Cells User Throughput Split

[REDACTED]

Source: [REDACTED]

(b) In terms of % of average cells congested in the network, [REDACTED].

Figure 5.3 – Average User Congested Cell Network Share

[REDACTED]

Source: REDACTED]

5.16 The CMA also refers to this report as [REDACTED]. In particular, the PFs hold that the document:

(i) "*[REDACTED]*" and

(ii) "*[REDACTED]*".[114]

5.17 These conclusions are misleading and ignore key parts of the report:

(i) Based on Vodafone Italy's data, the document clearly shows that [REDACTED]. This clearly would have an impact on customer experience and would translate into higher churn; it is, therefore, highly unlikely that [REDACTED].

(ii) Regardless, the fact that this document [REDACTED] – is inconsequential and cannot be used as evidence that a higher threshold of congestion might have been considered (particularly when the document as a whole points in the opposite direction).

Figure 5.4 – Impact of congested cells on detractors (based on Vodafone Italy data as of September 2022)

[REDACTED]

[113] [REDACTED] [REDACTED]
[114] Provisional Findings, Appendix G, para. G.80.

Source: [REDACTED]

(iii) [REDACTED]. As explained in further detail at paras. 5.12 and Table 5.4, speed levels below 2 Mbps significantly frustrate the customer experience and are below the minimum Ofcom threshold for 'good' performance. For instance, at such low speeds, browsing experience is affected by slow loading time and media rich social media content cannot be displayed; videoconferencing and gaming are not possible; the download of a 6GB file (i.e., HD movie) takes c. 400 minutes; etc.

(iv) It is unclear how the CMA concluded that [REDACTED], [REDACTED], significantly hindering customer experience for the users connected to those cells. The document further shows that, [REDACTED]. This can be seen from Figure 5.5 below [REDACTED]. As the chart shows, [REDACTED].

Figure 5.5 – **[REDACTED]**

[REDACTED]

Source: [REDACTED]

5.18 To support its findings regarding the alleged effectiveness of VUK traffic management measures in managing congestion, the CMA refers[115] to certain VUK and Vodafone Group internal documents which discuss initiatives [REDACTED], such as [REDACTED].[116]

5.19 VUK notes that:

(i) [REDACTED].

(ii) [REDACTED].

(iii) [REDACTED].

5.20 In terms of network investments, the PFs hold that VUK "*[REDACTED]*".[117] The CMA supports this finding by reference to "5G Built Right"[118] ("**5GBR**") – a Vodafone Group initiative. According to the CMA, this strategy is detailed in two internal documents, i.e., [REDACTED] ([REDACTED]) mentioned at para. 5.15 above, and [REDACTED] ([REDACTED]). The CMA considers that "*[REDACTED]*".[119]

5.21 VUK considers such conclusion to be incorrect. [REDACTED]. Even on the face of the documents, [REDACTED]: [REDACTED]. In any event, [REDACTED].[120] The two documents relied on in the PFs clearly link the 5GBR to these financial concerns:

(i) The Vodafone Group report dated October 2022 [REDACTED]: "*[REDACTED]*". The document also refers to "*[REDACTED]*" and states that "*[REDACTED]*.

[115] Provisional Findings, Appendix G, para. G.81-G.83.
[116] See [REDACTED], slide 4.
[117] Provisional Findings, Appendix G, para. G.103.
[118] Provisional Findings, Appendix G, paras. G.92 – G.96. Please note that a detailed rebuttal of the CMA arguments on VUK network costs in the counterfactual (Provisional Findings, para. G.88-G.91) can be found at para. 4.54-4.61 of response to TOH1.
[119] Provisional Findings, Appendix G, para. G.94.
[120] Response to Phase 1 Decision, paras. 2.33-2.36.

(ii) Similarly, the October 2023 Vodafone Group presentation acknowledges that:

(a) [REDACTED]: "*[REDACTED]*, and

(b) [REDACTED]: "*[REDACTED]*" and "*[REDACTED]*.

5.22 Additionally, given the limited penetration of devices that have 5G capabilities (c. 45% as of March 2024), the 5GBR, even assuming full implementation, would have a limited impact.

5.23 Finally, in support of its provisional finding that congestion is having a limited impact on customer experience, the CMA refers to third-party reports of VUK's (and rivals') network quality. In particular, the PFs refer to the following:

(i) RootMetrics reported VUK as having the second-highest scoring network after BTEE in the second half of 2023, with 3UK replacing VUK at second place in the first half of 2024.[121]

(ii) Umlaut's 2024 Mobile Network Test reports that: "*Vodafone reaches a good second place [after EE] and achieves the biggest score improvement over its previous year's results with a plus of 34 points. This makes Vodafone the most improved network in the UK this year and closes about 30 percent of the gap to EE*".[122]

(iii) Based on Ofcom 2023 Connected Nations data, VUK has comparable 4G coverage to other operators in England and Northern Ireland, while its coverage in Wales and Scotland is behind BTEE but ahead of VMO2 and 3UK.[123]

5.24 However, VUK notes that second best positions have limited benefits from a commercial and marketing perspective – it is the best network claim that matters. As explained at para. 3.3(i) above, BTEE has benefitted from UK best network claim for more than 12 years and this has allowed it to sustainably capture a dominant share of cashflows and earn returns that are materially larger than those of the other MNOs over a long period. The fundamental driver and commercial logic of the JBP is the attainment of 'best network', for the same reason.

5.25 In summary, the CMA's analysis of the quality of VUK's standalone network in the counterfactual relies on an overly narrow and misleading focus on cell-level congestion and is otherwise based on a small selection of internal documents which do not carry material evidential weight. If anything, the same documents referred to in support of the CMA's assessment also show that VUK's capital constraints are impeding its ability to invest at scale in the rollout of a national 5G SA network and that the low speeds and congestion affecting significant parts of VUK's network deteriorate customer experience. These struggles will be further exacerbated in the counterfactual as VUK's lack of scale hinders its ability to generate sufficient to cover the costs of further investment (see further Section 4 of PF Annex 1).

[121] Provisional Findings, Appendix G, para. G.98.
[122] Provisional Findings, Appendix G, para. G.99.
[123] Provisional Findings, Appendix G, para. G.100.

The PFs erroneously downplay the capacity benefits delivered by the Transaction (para. 14.43 – 14.69 of the PFs)

5.26 Regarding high-traffic areas, the CMA distinguishes between locations where (broadly speaking) both MergeCo and the standalone networks would deploy all available spectrum (Area 1) and areas where MergeCo but not the standalone networks would deploy all available spectrum (Area 2):

(i) The capacity boost that MergeCo will deliver in both Area 1 and Area 2 will be substantial, given the multiplicative effect of combining spectrum and sites (with a denser grid) – network capacity in a particular area is the product of (i) the number of sites; (ii) the amount of spectrum deployed on each site; and (iii) spectral efficiency.[124] As such, in Area 1, even if it is assumed both MergeCo and the standalone networks would deploy all available spectrum, MergeCo will nevertheless deliver a net increase in capacity given the multiplicative effect of combining a denser network grid with the deployment of the Parties' combined spectrum.

(ii) Area 1: The CMA wrongly suggests that the capacity uplift "*… may have a limited effect on commercial incentives in these areas*."[125]

(a) Whilst it is true that [REDACTED], Area 1 covers sites within the highest traffic locations (as the CMA notes), which will be at greatest risk of becoming congested in the future as traffic continues to grow:

(I) The traffic projection for MergeCo, used as a basis for the JBP, implies a [REDACTED] increase in traffic across the network by FY34. Ofcom's "low growth" scenario, which (as noted above in paragraph 3.12(i)(c)) Ofcom considers a "*reasonable… basis for understanding likely future capacity and congestion constraints*", implies an 8-fold increase in traffic over the same period.

(II) The Parties' congestion modelling indicates that congestion on MergeCo's network [REDACTED].[126] Both the MergeCo network and the standalone networks are expected to experience congestion in Area 1 sites at some point, but the MergeCo network will do so much later than the standalone networks and will have a much lower cost of adding capacity when it does.

(b) In the long run traffic growth is not exogenous but is instead a function of the capacity available. Adding capacity puts MergeCo in a position where it can compete aggressively to win market share without facing any material incremental costs from congestion, unlike the standalone networks. This will lead to increased traffic growth.

(c) The CMA's assessment also overlooks the benefits of additional low-band capacity and of providing higher average speeds across these areas. Whilst

[124] Merger Notice, [REDACTED]; CK Hutchison's response to [REDACTED] S109 [REDACTED].
[125] Provisional Findings, para. 14.68(a).
[126] See [REDACTED].

the Parties' do not currently face congestion in C-band areas, they nonetheless experience congestion in low-band frequencies at a significant portion of sites where C-band has been deployed.

If any of the additional capacity remains unused for mobile, it would be made available for FWA through the managed sales process as described in [REDACTED].[127] It would be erroneous to conclude that the additional capacity in Area 1 would have a limited effect on commercial incentives.

(iii) Area 2: The CMA wrongly concludes that it "*appears likely that much of the additional capacity would be redundant (or at best delivered well ahead of need)*" in these areas on the basis that traffic at these sites is low relative to Area 1:[128]

(a) Traffic is high and growing rapidly across all high-traffic areas:

(I) When developing the JNP, the Parties identified the [REDACTED] "high-traffic" sites as those that faced the highest demand, where the need for capacity is greatest, and which would benefit from full deployment of the Parties combined spectrum (including C-band).

(II) The Site Upgrade Model submitted as part of the [REDACTED] shows that all of these sites will need to be upgraded to address traffic growth over the period of network integration and that the JBP's "one-step" upgrade strategy makes commercial sense compared with an incremental upgrade approach.[129] In particular, [REDACTED]% of MergeCo's sites will need to be high configuration sites by the end of the JBP period. A smaller share would result in congestion on low or mid configuration sites.[130]

(b) Absent C-band deployment, these sites would be reliant on the much lower capacity offered by mid and low-bands. Whilst deploying C-band at sites these sites will provide significant "headroom" above demand initially, it is the most efficient means of adding capacity at these locations once the capacity at in lower bandwidths has become exhausted.

(c) C-band deployment in these areas will also deliver wider performance benefits: beyond being able to deliver the minimum quality of service threshold used to define a site as congested. C-band spectrum will ensure that MergeCo can reliably support more demanding applications (including new 5G use cases) over a wide area and deploy any available capacity for FWA through the managed sales process.

5.27 Regarding the capacity benefits outside high traffic areas and in lower bandwidths, the CMA notes that the Transaction "*may have some benefit in addressing congestion in low frequency*

[127] [REDACTED].
[128] Provisional Findings, para. 14.68(b).
[129] See [REDACTED].
[130] See [REDACTED].

bands".[131] However, the CMA downplays the impact based on an incorrect and incomplete interpretation of the capacity uplift analysis:

(i) The CMA notes that "*The model assumes that the Merged Entity will have 19,800 sites by 2029 – around [REDACTED] more than each of the standalone sites*."[132] However, as the Parties have explained, this is a snapshot of the forecast integration process and erroneously overlooks the additional c.[REDACTED] sites in the final MergeCo grid, that will not yet have been integrated by this point but will provide significant additional capacity.[133]

(ii) The CMA observes that "*…there is only a [REDACTED]% capacity uplift in low and medium traffic sites by 2029*".[134] However, this statistic is misleading and significantly understates the long-term capacity benefits in low and mid traffic areas:

(a) The CMA appears to have calculated the above figure by comparing (i) the total capacity at low and mid traffic MergeCo sites as at 2029 with (ii) the sum of the total capacity across all of 3UK and VUK's low and mid-traffic sites (i.e., all sites without C-band deployed).

(b) This comparison is not like-for-like, as it does not take into account the fact that the area covered by low and mid-traffic sites under MergeCo is significantly smaller than the respective standalone networks, due to the much more extensive deployment of the Parties' full spectrum holdings, as shown in Table 5.1 below. It also only takes account of the sites integrated as at 2029, rather than the long run JNP.

Table 5.1 – Split of mid and low traffic vs high traffic area sites and coverage (2029)

		MergeCo	3UK	VUK
Low + mid-traffic areas	Sites	[REDACTED]	[REDACTED]	[REDACTED]
	% Population	[REDACTED]	[REDACTED]	[REDACTED]
High-traffic areas	Sites	[REDACTED]	[REDACTED]	[REDACTED]
	% Population	[REDACTED]	[REDACTED]	[REDACTED]

Source: The Parties.

(c) Instead, the more appropriate comparison would be to consider the capacity uplift within the area covered by the [REDACTED] MergeCo low and mid traffic sites. The Parties estimate that total capacity will be in the region [REDACTED]% higher within this area as a result of the Transaction.[135]

[131] Provisional Findings, para. 14.69.
[132] Provisional Findings, para. 14.69
[133] As explained at [REDACTED], 5G MOCN will relieve congestion at sites that have not yet been integrated by providing the Parties with reciprocal access to C-band sites. Whilst the CMA correctly notes at footnote 1728 that non-C-band sites that have not yet been integrated will serve either 3UK or VUK customers (i.e., customers with 3UK or VUK SIMs) and not both, these will nonetheless provide additional capacity on top of the integrated sites, that is not reflected in the capacity uplift calculations.
[134] Provisional Findings, para. 14.69.
[135] Due to uncertainties around the precise distribution of site configurations across different locations on the Parties' standalone networks in the counterfactual, the Parties have estimated the capacity uplift in low and mid-traffic areas in the counterfactual as the sum of (i) the first [REDACTED] low/mid-traffic 3UK sites and (ii) the first [REDACTED] low/mid-traffic VUK sites when ranked in order of capacity, from low to high.

5.28 The CMA concludes based on its assessment of the capacity uplift analysis that "… *it does not appear that the additional capacity that would be delivered by the Merger (in the Parties' modelling) is necessarily well targeted to meet future demand for usage.*"[136] However, as explained above, MergeCo will deliver a significant boost in capacity across *all* regions including low and mid as well as high-traffic areas, which will in turn ensure that MergeCo has sufficient capacity to meet future growth in demand as well as drive significant improvements in performance and reliability for all customers (see also para. 5.90- 5.97). Further, the Parties' congestion modelling, which considers the precise distribution of capacity and traffic across sites, clearly shows that the JNP will deliver capacity where it is needed, resulting in steep reductions in congestion.[137] Further evidence suggests that the Parties' competitors [REDACTED], with a BTEE internal document noting that "*[REDACTED]*".[138]

5.29 In addition, the CMA's assessment of the incremental cost of capacity to MergeCo misunderstands the evidence provided by the Parties. Specifically:

(i) The CMA states that the incremental cost of capacity to MergeCo following a hypothetical 10% increase in subscribers is £[REDACTED] per subscriber per year based on the sum of core and RAN costs.[139] However, the inclusion of RAN costs is incorrect. This is because, even with a hypothetical 10% increase in subscribers, MergeCo's number of congested sites remains low ([REDACTED]% on average between FY25-34[140]) and insufficient to trigger RAN investment.[141] In practice, no additional RAN costs would be incurred and MergeCo's incremental cost of capacity would only be £[REDACTED] per subscriber per year (a significant reduction compared to the standalone operators' costs).

(ii) The CMA suggests that the Parties' estimate "*understates the longer term cost of incremental capacity (for the Merged Entity)*",[142] because the estimate reflects increases in capacity following the merger as well as longer-term reductions from combining spectrum. However, this approach to assessing incremental cost is correct and does not lead to an underestimation as the capacity uplift is material and delivers a significant, *long-lasting* reduction in incremental cost, well into the 2030s, which is clearly relevant for the comparison.

Capacity increases delivered by the merger will impact pricing and have a significant pro-competitive effect (para. 14.144-14.153 of the PFs)

5.30 The Parties' submission is that MergeCo will have much greater capacity and lower incremental costs of expanding capacity than the Parties would in the counterfactual. This gives MergeCo

[136] Provisional Findings, para. 57.
[137] See [REDACTED].
[138] [REDACTED].
[139] Provisional Findings, para. 14.142.
[140] Based on a simple average of reported congestion between FY25 and FY34 as reported in [REDACTED].
[141] [REDACTED].
[142] Provisional Findings, para. 14.143.

a stronger incentive to monetise its capacity (given rapid traffic growth) and compete aggressively on price, putting downward pressure on retail and wholesale prices.

5.31 The PFs dismiss this submission, arguing that MergeCo's incentive to reduce prices would be limited[143] for the following reasons:

(i) In the retail market, the PFs consider there is no evidence from internal documents of a "*direct*" link between incremental costs and prices, or that longer run cost savings would be *"directly*" passed onto retail customers.[144] The PFs note "*strong evidence that retail prices are set relative to competitors*" instead.[145]

(ii) In the wholesale market, while the PFs acknowledge some evidence that additional costs of capacity are taken into account in wholesale pricing decisions, they consider that: (i) these documents do not indicate the effect this had on the price ultimately agreed with MVNOs; and (ii) the loss of competition at both the wholesale and retail levels will reduce the rate of cost pass-through of any efficiencies at the retail level.[146]

5.32 The PFs' position that network capacity has no impact on mobile prices is untenable. The CMA's focus should be on the fundamental cost factors driving market outcomes over time not factors driving short-term tactical pricing decisions. Once the following facts are recognised, it is clear that the Transaction puts downward pressure on the prices paid by retail and wholesale customers:

(i) The substantial new capacity that MergeCo and VMO2 (through the spectrum and sites provided by Beacon 4.1) will bring to the market will benefit UK consumers by expanding output and putting downward pressure on prices: that an increase in supply leads to lower prices is a fundamental tenet of economics and has been recognised and applied in merger control assessment by regulators worldwide; and

(ii) In mobile telecoms, "price" means price per GB of data: reductions in the price per GB paid by retail and wholesale customers can reflect both reductions in headline prices and increases in data consumption.[147] Besides being a fundamental feature of the mobile market, price per GB is recognised as a measure of competition in the EC's decision in TMO/Tele2, where the EC considered Tele2's ability to continue offering unlimited bundles in light of its capacity constraints (paragraph 524 read in conjunction with paragraph 697).

(iii) When considering the impact of the expansion in capacity delivered by the Transaction on prices, it is helpful to distinguish between short-term and long-term effects:

[143] Provisional Findings, para 14.175
[144] Provisional Findings, paras 14.151-14.152.
[145] Provisional Findings, para. 14.151.
[146] Provisional Findings, para. 14.153.
[147] The Provisional Findings at para. 14.149 dismiss examples of incremental costs reductions enabling more data to be provided for a given price. The PFs (i) describe these examples as showing a change in the amount of data a customer obtains for a given price rather than price changes and (ii) claim that this change only impacts customers with larger data usage rather than across the customer base. However, this is a price reduction. When customers receive more data for a given price, the average price per GB is lower. Customers who do not want additional data can switch to products with less data available at a lower price. Regarding the claim that the impact is limited to customers with larger data usage rather than across the customer base, see paragraphs 5.40 *et seq*. where evidence shows a fall in average price/GB over time and a general shift from smaller data bundles to larger data bundles whereby, for instance, the share of SIM-only data bundles < 1GB has fallen from 16% in 2019 to c.9% in 2021.

(a) In relation to short-term effects, the PFs are erroneously focussed on attempting to identify a direct, mechanical link between capacity costs and day-to-day pricing decisions. It is common in retail markets that day-to-day pricing is driven by competitor activity and benchmarking rather than a "cost-plus" approach. For significant strategic decisions, such as the [REDACTED], the Parties have provided extensive evidence of capacity costs playing a key role.

(b) Over the medium to long-term the structural impacts of substantial capacity increases at market level are indisputable: this can be seen from the massive historic decline of price per GB (96% between 2010 and 2017[148]) paid by customers with every new generation of mobile technology, as a result of new capacity available in the market.

5.33 These factors should be central to the CMA's competitive analysis of the Transaction and its impact on UK consumers. Anti-competitive mergers reduce output and raise prices. The Transaction, reinforced by the effects of Beacon 4.1, does the opposite – it creates huge volumes of new capacity market-wide, thereby leading to greater output and downward pricing pressure compared to the counterfactual. It cannot reasonably be argued that the additional capacity that MergeCo and VMO2 will bring to the market as the JNP is fully implemented would have no effect on mobile prices.

5.34 This subsection explains that the additional capacity that MergeCo and VMO2 will bring to the market will put downward pressure on prices, due to the fundamental link between capacity, capacity costs and price per GB:

(i) Network capacity and capacity costs are fundamental in driving mobile market outcomes – particularly UK consumers continually getting more data at a lower price per GB;

(ii) MergeCo will pass on capacity benefits and incremental cost reductions to UK consumers via lower prices;

(iii) The PFs adopt a double standard: they provide no evidence of a *"direct"* link between pricing pressure in the GUPPI and merger simulation analysis and mobile prices and yet place weight on the findings of this analysis that the Transaction will lead to price rises; and

(iv) Despite the PFs' view, the Parties have provided clear evidence that capacity, congestion and the cost of capacity affect their commercial propositions and prices.

(i) Network capacity and capacity costs are fundamental in driving mobile market outcomes, with customers continually getting more data for less

5.35 As the PFs recognise, network capacity is essential to meet rapid growth in mobile traffic and provide a good service to customers.[149] Mobile telecoms is a capacity-driven industry. All major steps forward in competition and consumer outcomes have been supported by investments in

[148] Abdirahman, M., Coyle, D., Heys, R. & Stewart, W. (2020), "A Comparison of Deflators for Telecommunications Services Output", Economie et Statistique.
[149] Provisional Findings, paras 14.57.

capacity-increasing technology and spectrum, which enable substantially higher data volumes to be provided at a lower incremental cost per GB. From one generation of mobile technology to the next (2G to 3G, 3G to 4G, 4G to 5G), the principal change has been a substantial increase in mobile capacity (due to a combination of greater spectral efficiency and more spectrum deployed).

5.36 Capacity investments are the most important factor driving down the price per GB of data paid by UK consumers, because the resulting capacity drives an MNO's ability and incentive to offer competitive prices for its data bundles.[150] Investment delivers increased capacity and increased capacity reduces incremental costs (because the cost of serving new subscribers is very low once investments have been sunk). For instance:

(i) In 2012, the VUK cost of 1 GB of data was £234 (when the average customer used c. 0.09GB of data per month), compared to more than [REDACTED]% less at £[REDACTED] in 2023 (when the average customer used c. [REDACTED]GB of data per month).[151]

(ii) This is also reflected in the evolution of 3UK's data production costs (calculated as network costs divided by data usage) over time shared in [REDACTED]. Specifically, the figure below shows that 3UK's data production costs [REDACTED] over the much shorter period between February 2019 and May 2024. 3UK's revenue per GB fell from £[REDACTED] per GB in February 2019 to £[REDACTED] per GB in March 2024, with the vast majority (i.e. over [REDACTED]%) of this reduction being accounted for by the reduction in the data production cost from £[REDACTED] per GB to £[REDACTED] per GB.[152]

Figure 5.6: [REDACTED]

Source:[REDACTED].[153]

5.37 In the retail market, MNOs are then incentivised to reduce mobile prices and sell larger data packages to encourage consumers to join the network (up to the limits dictated by maintaining acceptable quality during peak hours). MNOs' business cases for FWA and mobile broadband (dongles, MiFis, tablets) are similarly built on extra capacity – e.g. once its 5G network has been deployed, 3UK markets its 5G FWA offer aggressively as users in the area bring extra revenues at minimal incremental cost. Likewise, in the wholesale market MNOs look to monetise spare capacity by offering attractive prices in tenders to attract MVNOs to their networks. Capacity is a more important driver of wholesale prices than the number of potential

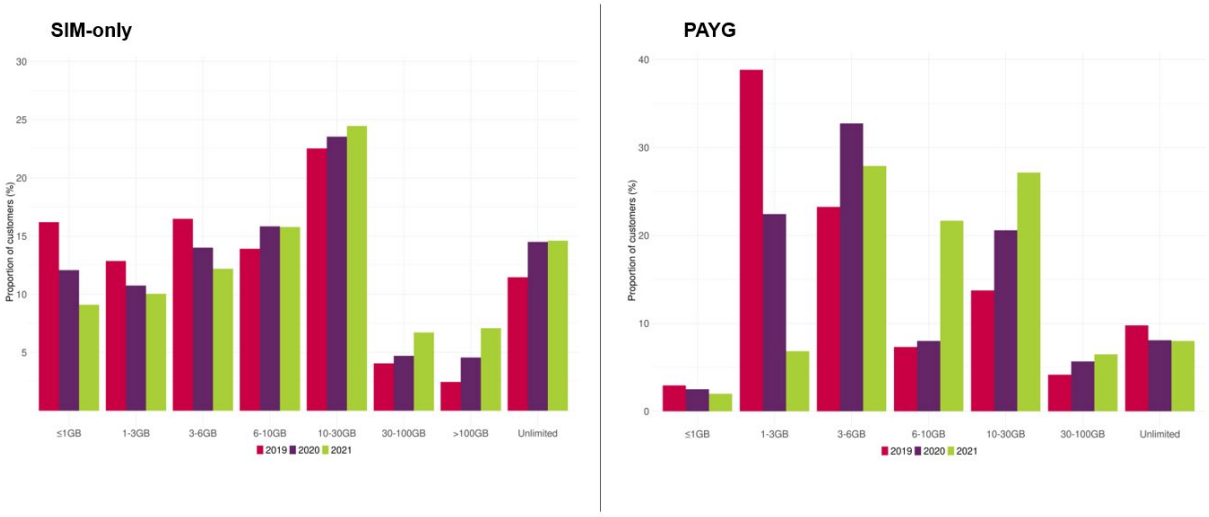
[150] 4G investment since 2011 has allowed UK MNOs to increase data supply from 9PBs per month in 2011 to 905PBs per month in 2023 (a 47% CAGR). In the context of the latest technological upgrade, while deploying 5G is much more costly than 4G and requires significant investments across all network domains, the greater capacity of a 5G site allows it to deliver significantly more data as compared to a 4G site. This creates the potential for a lower incremental cost per unit as compared 4G. Ericsson estimates that cost of providing incremental capacity is 54% lower using 5G than LTE, enabling operators to remain competitive by continuing to reduce the cost per GB (Ericsson, "Is it still worth to invest in 5G in a flat revenue scenario?", 2023).
[151] VUK site visit pack, slide 10.
[152] The difference between the cost per GB charged by VUK (£[REDACTED] in 2023) and the cost per GB charged by 3UK (£[REDACTED] in March 2024) is likely driven by higher usage per subscriber on the 3UK network. For example, [REDACTED] the Merger Notice shows that, in Q3 2023, data traffic per subscriber was over 3.5 times higher on the 3UK network relative to the VUK network.
[153] [REDACTED].

network hosts because, as the CMA has found, MNOs sometimes do not bid aggressively in tenders (or do not bid at all), particularly when they do not have enough capacity.[154]

5.38 This shows that capacity cost reductions and decreases in the price paid per GB of data go hand in hand, such that cost savings are in fact passed on to retail consumers – regardless of the fact that operators also [REDACTED] (as the PFs have found).

5.39 These cost reductions enable MNOs to offer larger data allowances at similar price points, or similar data allowances at lower price points, leading to customers getting much more data for less.[155] Ofcom has reported a shift of sales from tariffs with low data (<1GB) to tariffs with high and unlimited data over time.[156] As Figure 5.7 below shows, smaller data packages are becoming less common. More recent data from Ofcom confirms this trend: more than half of UK consumers now have a data allowance of more than 10GB per month, with the proportion of consumers with more than 10GB or unlimited data increasing from 32% in 2019 to 53% in 2022 to 55% in 2023.[157]

Figure 5.7: UK consumers shifting towards higher data bundles



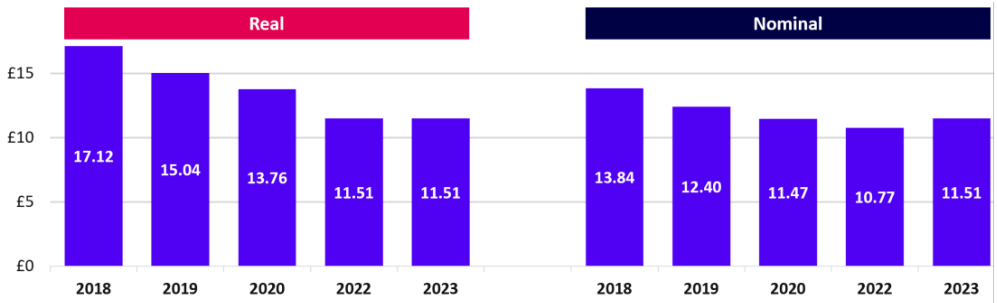
Source: Ofcom (2022), "Conclusions: Ofcom's future approach to mobile markets", Pricing Annex.

5.40 Consistent with the above, Ofcom has also found that despite average data consumption having increased by 249% between 2018 and 2023, the price of a bundle of services representing average usage each year fell by 33% in real terms and 17% in nominal terms. In other words, the market evidence shows that operators have been providing customers with more data while charging less. UK operators' average revenue per GB fell by 87% between 2016 and 2022.[158] In addition, the Compass Lexecon meta study found that the four-to-three mergers in Austria and Ireland led to a faster rate of decline in average revenue per GB post-merger compared to

[154] Provisional Findings, paras. 9.62(a), 9.268(g), 9.257.
[155] Paras. 5.57 to 5.59 below explain the corollary to this – i.e. when faced with congestion, all options available to an MNO introduce a cost that is either directly or indirectly borne by customers.
[156] Ofcom's future approach to mobile markets and spectrum: pricing annex, 6 Dec 2022, Figures 19, 20.
[157] Ofcom's Net Neutrality Review, para 5.44 (Statement Net Neutrality Review (ofcom.org.uk)).
[158] Merger Notice, [REDACTED].

the pre-merger trend, while mergers in Germany, Italy and the US led to no statistically significant change in rate of decline in average revenue per GB.[159]

Figure 5.8: Weighted average monthly ARPU for average mobile use (excl. handset)



Average monthly use	2018	2019	2020	2022	2023 (E)		1 year Δ	5 year Δ
Data (GB)	2.5	3.3	4.4	7.1	8.7		23%	249%
Minutes	170	168	198	176	157		-11%	-8%
SMS	78	68	51	38	33		-13%	-58%

Source: Ofcom (2023), Pricing trends for communications services in the UK, Figure 12.

5.41 In summary, there is clear evidence that – consistent with expectations rooted in fundamental economic principles – capacity investments and reductions in the incremental costs of expanding capacity have driven large reductions in the price per GB of data in the UK mobile telecoms market. Capacity investments reduce incremental costs and incentivise MNOs to compete by offering lower prices and larger data packages. Consumers make use of the larger allowances by consuming more data, which reduces the price per GB over time. In short, increasing the supply of data reduces price per GB.

5.42 This link between capacity and mobile prices is widely accepted (including by regulators, Ofcom and the FCC) and has been acknowledged by the European Commission (EC) in its own assessment of mobile mergers.[160] Specifically:

(i) The European Commission has noted that, after new spectrum was made available in the Netherlands, "*…the additional capacity from this spectrum increased the ability and incentive of market players to compete aggressively for new subscribers by offering larger data bundles coupled with lower prices".*[161]

(ii) In the same case, the EC noted that congestion translated into higher prices: *"Generally, however, if Tele2 NL were to become capacity constrained, it is likely that this will also have an effect on Tele2 NL's pricing strategy. […] Therefore, the competitive situation of Tele2 NL is likely to be further aggravated by such [network] costs which will give rise to incentives to price less aggressively".*[162]

[159] Padilla et al. (2023), *Do four-to-three mobile mergers harm consumers? A review of post-merger effects and concentration studies* (accessed 3 October 2024).
[160] [REDACTED].
[161] European Commission, Case M.8792 – T-Mobile NL/Tele2 NL, para.453.
[162] Ibid., para.524.

5.43 It is therefore untenable for the PFs to hold that capacity and capacity costs have limited or no impact on mobile competition. To hold that prices are simply set by reference to competitors offers no explanation for continuous decline in mobile prices observed in the UK.

(ii) MergeCo will pass on capacity benefits and incremental cost reductions to UK consumers via lower prices

5.44 The CMA has (wrongly) assumed that it must find documentary evidence of capacity considerations being explicitly considered in short-term pricing decisions in order to accept that capacity increases have a pro-competitive effect over the longer investment cycle.

5.45 As regards the retail market, the PFs state that there is no "*evidence of a direct link between retail prices and capacity or network costs, or that longer run cost savings would be directly passed onto retail customer*"[163] (emphasis added). Because the Parties' internal documents show "*strong evidence that retail prices are set relative to competitors*",[164] and because the CMA has not found sufficient evidence *"that capacity considerations are ordinarily considered in retail pricing decisions*",[165] the PFs provisionally consider that MergeCo is unlikely to pass on any cost reductions to retail consumers. The PFs go so far as to state that there is *"no link between the incremental cost of capacity and retail pricing"* (emphasis added).[166]

5.46 With regards to the wholesale market, the PFs recognise "*that there is some evidence that any additional cost of capacity resulting from an MVNO contract is taken into account in bidding*".[167] However, the PFs discount the possibility that MVNOs will benefit from incremental cost reductions on the basis that internal documents "*did not indicate the effect this had on the price ultimately agreed with MVNO customers*" and an expectation that "*the loss of competition at both wholesale and retail levels will reduce the rate of pass-through of any efficiencies to customers at the retail level*".[168] The PFs further point to some internal documents on wholesale pricing that do not mention investment costs.

5.47 The Parties believe that this approach is wrong and at odds with established economic principles and the history of pricing in the mobile market set out above:

(i) The CMA's focus should be on the fundamental cost factors driving *market outcomes* (i.e., the reduction in average price per GB over time), not factors driving short-term tactical pricing decisions; and

(ii) There should be a strong presumption that MergeCo will pass on any incremental cost reductions to consumers in the form of lower prices, especially given the fact that VMO2 will also benefit from increased capacity as a result of Beacon 4.1.

[163] Provisional Findings, para. 14.151.
[164] Provisional Findings, para. 14.151.
[165] Provisional Findings, Appendix E Gross Upward Pricing Pressure, para. 5.36
[166] Provisional Findings, Appendix D, para. D.73.
[167] Provisional Findings, para. 14.153.
[168] Provisional Findings, paras. 14.153 and 14.243.

The CMA's focus should be on the fundamental cost factors driving market outcomes (i.e., the reduction in average price per GB over time) not factors driving short-term tactical pricing decisions

5.48 As the PFs have found, the Parties typically consider rivals' prices when making short-term, tactical pricing decisions in the retail market. As explained at the Main Party Hearings, MNOs do not generally set retail prices based on a "cost +" approach – i.e. by computing the cost of serving customers and then charging a margin on top of that cost.[169]

5.49 However, it would be a logical fallacy to conclude from this that network capacity and capacity costs have no impact on the price per GB of data paid by UK consumers, or that cost reductions are unlikely to be passed on to consumers. Short-term pricing decisions in many industries are made with a focus on competitor prices rather than costs – e.g. supermarkets set prices particularly by reference to competitor prices, but clearly the underlying cost of goods sold influences grocery prices.

5.50 Capacity considerations are not ordinarily considered in short-term, tactical retail pricing decisions because, when an MNO is considering its price response to a rival promotion on a specific tariff on a specific day, it does so in the context of a given level of network capacity (which is largely fixed in the short-term). Ordinarily, the MNO's response will affect a relatively small number of subscribers and the cost of adding individual subscribers to the network is typically very small.

5.51 As the Parties have already explained, MNOs typically consider incremental cost specifically in the context of major decisions involving significant numbers of subscribers (both in retail and wholesale pricing decisions) – see below Table 5.2 for more details. When considering whether to host an MVNO, or launching a major retail proposition, capacity costs become relevant because they vary with the decision – for instance, onboarding an MVNO with millions of customers would impact network costs directly, so capacity costs are relevant and are in fact routinely considered in such decisions (as the Parties have shown).

5.52 Economists have long understood that costs may not always influence market prices in the very short run – over that timeframe, supply is given and demand alone determines price.[170] This does not mean that costs do not influence price at all, or that cost reductions are not passed on to consumers. The influence of changes in cost of production on market prices occurs via changes in supply beyond the immediate, very short run (in which, by definition, there is insufficient time for supply to adjust to changes in demand).

5.53 As explained above, the substantial new capacity that MergeCo and VMO2 (through Beacon 4.1) will bring to the market will benefit consumers market-wide by expanding output and putting downward pressure on prices – a fundamental tenet of economics is that increased supply leads to lower prices.

[169] CKH Main Party Hearing, page 110.
[170] For example, see A. Marshall. Principles of Economics Book V, Chapter 3-5. "Thus, we may conclude that, as a general rule, the shorter the period which we are considering, the greater must be the share of our attention which is given to the influence of demand on value; and the longer the period, the more important will be the influence of cost of production on value. For the influence of changes in cost of production takes as a rule a longer time to work itself out than does the influences of changes in demand"

5.54 The reasoning in the PFs in relation to the wholesale market is similarly misguided:

(i) First, while internal documents on wholesale pricing do not always refer to the incremental costs of capacity, this lack of reference is not a reliable basis to conclude that incremental costs do not affect wholesale prices, particularly where there is evidence positively showing that the additional cost of capacity resulting from an MVNO contract has already been taken into account when bidding.

(ii) Second, the fact that the relationship between cost and price or the rate of pass-through are not precisely quantified in the internal documents – although there is concrete evidence demonstrating the impact of capacity on commercial propositions – does not provide a reasonable basis for the CMA to dismiss the cost efficiency. Rather, the CMA needs to assess the likely level of pass-through based on the evidence in the round, including economic reasoning. In this case, the likelihood of pass-through is significantly increased by the fact that VMO2 is also benefitting from increased capacity;

(iii) Third, the parties have already explained the role of incremental costs in wholesale bids – a decision to host a new MVNO (or extend an MVNO contract) must as a minimum cover the incremental and other network costs it generates – otherwise the MNO will lose money. This is why commercial teams ask the network team to estimate the incremental network cost, which will then feed directly into the MNOs' pricing. In effect, incremental cost sets a floor on wholesale prices (e.g. an MNO will not price below a certain £ per GB threshold). This is a feature of the market and not just an approach shared by the Parties – [REDACTED][171]; and

(iv) Finally, the view that the Transaction reduces the rate of cost pass-through on the wholesale market provides no justification to dismiss the cost efficiency. As noted below, significant pass-through can be expected even in concentrated markets.[172] Indeed, the extent of cost pass-through might be greater in concentrated markets.[173] Again the impact of Beacon will likely increase the extent of pass- through in this case.

5.55 Consistent with long established economic principles, the CMA's focus should therefore be on the fundamental factors (i.e. capacity investments and the cost of expanding capacity) which persistently drive a reduction in average price per GB over time, not the factors considered in short-term tactical pricing decisions.

5.56 The Parties have explained that, in the real world, there is no mechanistic link between incremental costs and retail prices. Consumers benefit from incremental cost reductions not only via lower prices but also via larger data allowances, reduced congestion, better quality of service, etc. This is because congestion relief is costly to the Parties in the counterfactual, and the Transaction, by delivering a substantial increase in capacity, removes this cost disadvantage, enabling MergeCo to compete more effectively than the Parties would in the

[171] [REDACTED]
[172] "Cost pass-through: theory, measurement and potential policy implications – A report prepared for the Office of Fair Trading", 2014, p.32-33.
[173] Yde and Vita, Merger Efficiencies: Reconsidering the "Passing-On" Requirement, 64 ANTITRUST L. J.735 (1996) and "Cost pass-through: theory, measurement and potential policy implications – A report prepared for the Office of Fair Trading", 2014, p.32-33.

counterfactual (as demonstrated by the market evidence on the impact of capacity on price outlined above).

5.57 As set out in [REDACTED], when faced with congestion, an MNO faces a range of choices:

(i) invest in increased capacity to maintain an adequate level of service during peak hours;

(ii) reduce the number of customers (and therefore data traffic) on the network by:

(a) increasing price, which increases churn and decreases customer acquisitions;

(b) reducing data allowances, introducing tighter data caps, speed caps, tethering restrictions and other demand management measures to curb data usage and limit traffic growth; and/or

(c) "doing nothing", allowing service quality to degrade and accepting that customers who are dissatisfied with network quality issues that result from congestion will churn away. This is effectively an increase in quality-adjusted prices.

5.58 In practice, MNOs will attempt to balance network investment, pricing, data allowances and congestion. The balance depends on a range of factors including current levels of congestion on the network, the incremental cost of adding capacity, and any potential financial or operational constraints which may limit their ability to make the necessary capacity investments. In practice, this means MNOs adjust prices and/or other elements of their tariffs (e.g. size of data allowances or speed caps) in response to changes in capacity costs, which can translate into:

(i) increased prices – as explained at para. 5.73(ii), customers wanting to remain on 3UK's unlimited plan were required to pay a much higher price of £30 a month. The decision was attributed to exponential data usage making the all-you-can-eat (AYCE) tariff uneconomical;

(ii) limiting the number of customers for which a certain tariff is available – as explained at para. 5.73(ii) below, 3UK stopped offering its £17 a month unlimited data and calls package and later informed existing customers remaining on that tariff that they would be moved to a £30 a month tariff. VUK has also considered [REDACTED]; and

(iii) not launching a certain tariff as too expensive – as explained below at para 5.71(i), [REDACTED].

5.59 Out of the choices available, only one involves an obvious direct pricing mechanism (i.e., increasing price), but they are all equivalent in effect as all introduce a cost that is either directly or indirectly borne by customers. Congestion, and associated costs, therefore, have a negative impact on an MNO's ability to compete effectively.

There should be a strong presumption that MergeCo will pass on any incremental cost reductions to consumers in the form of lower prices

5.60 The fundamental finding of economic theory that marginal costs impact prices creates a presumption of significant pass-through of incremental cost savings. In particular, a firm will be incentivised to reduce its prices where doing so brings additional customers and revenues which exceed the additional costs of supplying those customers. To do otherwise would require the firm to be irrational or not-profit-maximising. This is an established economic principle, leading to this presumed behaviour by the Parties as profit-maximising entities meaning that they should not be held to the excessively high standard of proof currently found in the PFs.[174]

5.61 As noted above, the European Commission explicitly accepted this link in the retail mobile market in its *Three/O2* and *T-Mobile/Tele2* decisions, for instance:[175]

> "*The Commission acknowledges that a reduction in incremental costs of network expansions increases, all else being equal, the incentives of firms to engage in capacity expansions. A reduction in incremental costs of network expansions can hence be expected to benefit consumers."*

5.62 A presumption that benefits will be passed on to consumers is fully aligned with the CMA's merger guidelines, which require that "*the merged entity would have the incentive to allow customers in the UK to benefit from the efficiencies*" (emphasis added). There is no requirement to separately adduce a "direct link" between cost reductions and prices in the Parties short term pricing decisions. Similarly, the CMA's "A quick guide to UK merger assessment" refers to rivalry-enhancing efficiencies as "*efficiencies that change the incentives of the merger firms and induce them to act as stronger competitors to their rivals – for example, by reducing their marginal costs giving them the incentive to provide lower prices or a better quality, range or service*".[176]

5.63 Indeed, contrary to the PFs' view, the rate of cost pass-through can increase with the level of concentration.[177] A report for the OFT, CMA's predecessor, found that significant pass-through of cost efficiencies into prices can be expected even in concentrated markets.[178] The pass-through of costs reflects profit maximisation. Even a monopolist would be expected to pass-through 50% of marginal cost savings (assuming linear demand).[179] In addition, in this case, the rate of pass-through is likely to be significantly increased by the fact that VMO2 is also benefiting from increased capacity.

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[174] In line with Lord Hoffman's view in Secretary of State For the Home Department v. Rehman (AP) [2001] UKHL 47 that *"it would need more cogent evidence to satisfy one that the creature seen walking in Regent's Park was more likely than not to have been a lioness than to be satisfied to the same standard of probability that it was an Alsatian,"* the link between increased capacity and lower prices is an established one; the suitable standard of proof which the Parties should be held to is likened to the Alsatian level as opposed to the lioness level.
[175] M.7612 – para. 2536; M.8792 – para. 524.
[176] CMA's "A quick guide to UK merger assessment", 2024, p.12-13.
[177] See OFT report as well as Yde and Vita, Merger Efficiencies: Reconsidering the "Passing-On" Requirement, 64 ANTITRUST L. J.735 (1996) and "Cost pass-through: theory, measurement and potential policy implications – A report prepared for the Office of Fair Trading", 2014.
[178] "Cost pass-through: theory, measurement and potential policy implications – A report prepared for the Office of Fair Trading", 2014, p.32-33. See also Yde and Vita, Merger Efficiencies: Reconsidering the "Passing-On" Requirement, 64 ANTITRUST L. J.735 (1996)
[179] "Cost pass-through: theory, measurement and potential policy implications – A report prepared for the Office of Fair Trading", 2014, p.60.

5.64 As discussed above, the empirical evidence also shows strongly that reductions in the cost of capacity are associated with lower prices per GB in a capacity-driven market. There should therefore be a strong presumption that MergeCo will pass on capacity benefits and reductions of the incremental cost of capacity to consumers and MVNOs, because it will increase profits by doing so:

(i) The PFs acknowledge that network capacity is essential to providing a good service to mobile customers, and that MNOs invest heavily in their networks to meet rapid growth in mobile traffic.[180]

(ii) MergeCo will have lower marginal costs and more extra capacity than the capacity required to serve the Parties' combined existing customer base – unlike the Parties, MergeCo will not experience significant congestion until well into the 2030s, and will also be able to expand capacity at lower incremental cost.

(iii) MergeCo will have clear and strong incentives to monetise this capacity by offering larger retail packages for any given price point (to attract customers away from rivals), and by bidding more aggressively in MVNO tenders. MergeCo will increase profits by adding subscribers to the network, as those subscribers will increase revenues and can be accommodated at little additional cost.

(iv) It would be irrational for MergeCo not to reduce prices in the presence of substantial additional capacity with a low marginal cost given the opportunity to profitably seize market share from BTEE and VMO2 and the likelihood that VMO2 in particular will deploy its own increased capacity from Beacon 4.1 to compete harder– if MergeCo does not compete aggressively, the (sunk) investment in capacity will be wasted.

(v) More generally, increasing the supply of data that MergeCo can deliver compared to VUK and 3UK in the counterfactual will put strong downward pressure on prices.

5.65 In short, the Transaction will deliver clear efficiencies that fundamentally change MergeCo's incentive to compete (and VMO2's through Beacon 4.1) and improving competitive performance in retail and wholesale markets, which can be presumed to result in lower prices, increased output and higher quality services for consumers and MVNOs.

(iii) The PFs adopt a double standard – they provide no evidence of a "direct link" between the pricing pressure in the CMA's pricing analysis and mobile prices

5.66 It is noteworthy that in the context of the description of the CMA's own merger simulation model, the PFs concede that marginal costs in general and the cost of capacity in particular influence prices. The PFs further note that the relevant margins to analyse price effects are "*economic margins which typically differ from accounting margins due to the inclusion of implicit costs such as the opportunity cost to the f*irm".[181] Opportunity costs are relevant where there are capacity constraints. The CMA's own reasoning implies that capacity constraints affect pricing.

5.67 Like the Parties' merger simulation models, the CMA's GUPPI and merger simulation analyses are also based on an economic model. Using these models, the PFs have assumed that upward

[180] Provisional Findings, para 14.57
[181] Provisional Findings, Appendix D, para. D.98 and footnote 437.

pricing pressure would be passed through into prices (i.e. pass-through is less than 1), with prices predicted to rise by 7.0% for 3UK customers and 3.8% for VUK customers.[182]

5.68 However, the CMA does not attempt at any point to adduce evidence of a "*direct*" link between its upward pricing pressure and mobile prices. The CMA's GUPPI and merger simulation analysis assume – inherent in the oligopoly model of differentiated Bertrand competition – that MNOs optimise their prices by balancing two countervailing effects on profits when prices are increased: the loss of margins on the number of customers who would switch to other operators in response to a price rise versus the larger margins earned on those customers that would still purchase despite the price increase.[183] The PFs do not present any evidence from the Parties' internal documents that MNOs set prices in the way modelled by the CMA, or that the resulting pricing pressure would be directly passed on to consumers via higher prices.

5.69 If the PFs' logic is applied here, the absence of such clear documentary evidence should lead to the conclusion that MergeCo's upward pricing pressure (as presented in the PFs) would not necessarily lead to an expectation of higher mobile prices. Additionally, given the observation in the PFs that MNOs set retail prices relative to competitors, this should invalidate the PFs' conclusions about an upward impact of the Transaction on mobile prices – MergeCo should be expected to continue to set prices relative to its competitors instead of unilaterally raising prices.

5.70 If the PFs in this context are to be consistent with the stance adopted by the PFs to assess the relevance of the incremental costs of capacity for pricing, the CMA should not place any weight on its pricing analyses. Based on the fact that the relevance of the volume-margin trade-off described above is widely accepted in economics, the CMA cannot at the same time dismiss the Parties' submissions on the relevance of marginal cost efficiencies. As set out above, it is similarly widely accepted in economics (and in competition policy guidelines) that marginal cost reductions create incentives to reduce prices and can be assumed to be passed on to consumers.

(iv) The Parties have provided clear evidence that capacity, congestion and the cost of capacity affect prices

5.71 The Parties have provided extensive evidence over the course of the proceedings showing the link between capacity, capacity costs and an MNO's ability to offer attractive prices and data packages in both the retail and wholesale markets. This evidence, together with some additional evidence provided in this response, is summarised in the paragraphs below and Table 5.2 below.

5.72 In relation to VUK, below we provide additional evidence that the cost of additional capacity influences commercial proposals (i.e., whether a certain tariff is to be put forward) even before they get to the stage of considering short-term retail pricing:

[182] Provisional Findings, Appendix D, para. D.91.
[183] Provisional Findings, Appendix E, para. E.1.

(i) In October 2022, [REDACTED]. [REDACTED].[184] [REDACTED].[185] [REDACTED][REDACTED][REDACTED]. [REDACTED]. [REDACTED] [REDACTED][REDACTED].

(ii) [REDACTED] [REDACTED].

Figure 5.9 – [REDACTED]

[REDACTED]

Source: [REDACTED]

(iii) As explained at para. 3.27(ii) above, [REDACTED].

5.73 In relation to 3UK, as explained in WP Annex 3,[186] [REDACTED].

(i) [REDACTED].[187] [REDACTED][188].

(ii) The evolution of 3UK's unlimited data tariffs shows a clear link between capacity and capacity costs and retail offers. 3UK launched its popular AYCE "One Plan" in 2010, but the plan became increasingly uneconomical to offer with increasing levels of data consumption. 3UK decided to phase out the "One Plan" and move customers on to alternative price plans, including a cap on the previously unlimited tethering.[189] 3UK also stopped offering its £17 a month unlimited data and calls package to new customers due to constrained capacity following continuing growth in data consumption.[190] By 2016, 3UK customers that remained on the £17 AYCE tariff were told they would be moved onto a £30 a month tariff.[191] [REDACTED].

(iii) [REDACTED].[192]

(iv) With regard to wholesale, 3UK's internal documents [REDACTED]. [REDACTED][REDACTED].[193]

5.74 Table 5.2 below summarises the evidence provided by the Parties.

[184] For more details on this assessment, please see [REDACTED].
[185] For more details on these estimates, please see [REDACTED]. VUK also calculated the capex costs to offer the "guaranteed speed" to all customers on the Unlimited tariff: for [REDACTED] Mbps, the capex costs were estimated above £[REDACTED] million; for [REDACTED] Mbps, the capex costs were estimated at above £[REDACTED] million.
[186] [REDACTED]
[187] Revenues include total internet and data access revenue (excluding voice related revenue and wholesale) and data production costs include network opex and network depreciation (excluding one-offs).
[188] See [REDACTED] for a detailed description of [REDACTED].
[189] https://forums.digitalspy.com/discussion/2022847/three-phases-out-the-one-plan-and-unlimited-tethering and Three's new tariffs; Free 0800 calls, cheap 0845/0870 access, unlimited texts, plus a tethering cap | JMComms.
[190] https://www.bbc.com/news/technology-35441452 and Updated (1) : Three (3 Mobile) The One Plan Comes to a Crashing End - for me anyway. - TBNI.Blog - The Official TBNI.Blog.
[191] https://www.bbc.com/news/technology-35441452
[192] See response to [REDACTED] RFI [REDACTED].
[193] [REDACTED].

Table 5.2 – Evidence of cost of capacity accounted for in the Parties' pricing decisions

Topic	Reference	Summary
Retail/ Wholesale	[REDACTED] [REDACTED]	[REDACTED].
Retail	[REDACTED] [REDACTED]	[REDACTED].
Retail	Restrict access to unlimited data bundles (2014/15) [REDACTED]	3UK considered that its One Plan was no longer economic because of increasing data demand which would require greater investment or increasing congestion. 3UK ceased to offer the plan to new customers and also prevented customers taking unlimited data from tethering their devices.
Retail	Price increase to unlimited data bundles (2016) [REDACTED]	Customers wanting to remain on 3UK's unlimited plan were required to pay a much higher price of £30 a month. The decision was attributed in a report at the time to exponential data usage making the tariff uneconomical.
Retail	[REDACTED] [REDACTED]	[REDACTED]),(the introduction of a 250 GB plan).
Retail	[REDACTED][REDACTED]	[REDACTED]
Retail	[REDACTED] [REDACTED]	[REDACTED]
Retail	[REDACTED][REDACTED]	[REDACTED]
Wholesale	[REDACTED] [REDACTED]	[REDACTED]
Retail	[REDACTED]	As explained above[REDACTED].
Retail	[REDACTED]	[REDACTED]
Retail	Demand management measures [REDACTED]	[REDACTED].
Retail	[REDACTED][REDACTED]	Prior to the launch of the unlimited data offer[REDACTED]
Retail	[REDACTED]	It is technically and commercially unfeasible to [REDACTED]
Wholesale	[REDACTED][REDACTED]	[REDACTED]
Wholesale	[REDACTED][REDACTED]	[REDACTED]

Conclusion

5.75 Economic reasoning shows that it would be rational and profit-maximising for MergeCo to price more aggressively so as to attract additional customers when it has substantial available capacity to supply those customers at little cost (especially given that VMO2 will also have additional capacity as a result of Beacon 4.1). The evolution of mobile prices over time shows that investments in expanding capacity (and, correspondingly, reductions in the incremental cost of serving additional customers) have driven substantial reductions in prices per GB over time. The Parties' documents show evidence of capacity impacting retail and wholesale commercial and pricing decisions. The finding in the PFs that MergeCo's available capacity would have no impact on prices, including by rejecting the available evidence, cannot hold. Such a view fails to explain the actual development of prices seen in the market.

The Provisional Findings are wrong to doubt the importance of network quality to consumers

5.76 The weight of evidence shows that network quality is important to customers and is a key parameter of competition in the retail mobile services market. The Parties respond to the PFs' comments on the importance of network quality in full in PF Annex 1. The PFs incorrectly discount the value of network quality, relying heavily on a narrow subset of the overall evidence, which is of limited probative value. In particular:

(i) The PFs rely on the responses to two survey questions to conclude that most customers would not be willing to pay more for a faster network or a more reliable network. However, as already pointed out in [REDACTED],[194] and as explained in PF Annex 1,[195] no weight should be given to this evidence. Importantly, these responses are also contradicted by other evidence from the same CMA surveys, which proves the importance of network quality to customer choice; for example, 57%-60% of the Parties'

[194] [REDACTED].
[195] PF Annex 1, para.2.2(a).

customers would have chosen a different provider or not purchased a tariff at all if the network had been a bit less reliable at the time of purchase.

(ii) The PFs further rely on the CMA's demand estimation to argue that consumers' valuation of network quality is low.[196] However, the CMA's demand estimation yields implausible findings and the CMA's chosen approach to modelling is subject to significant methodological flaws (as explained in PF Annex 4). In particular, it is highly questionable whether the indicators used as proxies of network quality in the CMA's demand estimation are capable of capturing the influence of network quality on consumers' tariff choices.

(iii) The PFs disregard substantial evidence showing high valuations for network quality, including market evidence of 3UK's and BTEE's pricing, Compass Lexecon's demand estimation based on the Parties' discrete choice consumer survey, evidence from the Parties' leaver surveys, the Parties' [REDACTED] and the Parties' submission on the impact of the Transaction on customer experience.[197]

(iv) In the context of the PFs' claim that low-income subscribers may be willing to pay less per month for network improvements,[198] the Parties submit that network quality is especially important in underprivileged and marginalised communities, as the costs of being digitally excluded are considerable (as explained at para. 2.11 of PF Annex 1).[199]

(v) Improving network quality across the UK will also be important to bridge the digital urban-rural divide. Over half (46%) of the constituencies that are both rural and fall within the 40% most deprived areas in the country are classified as 5G total not-spots, compared to just 2.7% in predominantly urban constituencies with a similar degree of deprivation.[200] Consistent with this finding, the CMA's surveys find that respondents located in rural areas are most concerned with network quality across a range of questions.[201] It is also important to note that significant percentages of rural premises still rely on 3G (for 3UK) and 2G (for VUK) in areas where there is no 4G or 5G coverage (or where there is only 4G or 5G coverage outdoors).

(vi) As noted in PF Annex 1, evidence from third parties further demonstrates the importance of network quality to customers. A BTEE internal document notes that "customers are willing to pay more for the quality of our [BTEE's] network", citing evidence that its brand reputation is stronger than 3UK's.[202] One third party noted that there is a "balance between value for money and network reliability, where there is a

[196] The CMA's econometric estimation (in para. D.151) estimated that customers do value faster 4G download speeds and 4G coverage. See also PF Annex 1, para. 2.2(b).
[197] The Parties submitted the Quality-focused Merger Simulation [REDACTED].
[198] Provisional Findings, para. 8.43.
[199] For example, a report to the CMA found that service reliability is particularly important for consumers on low incomes: *"In addition, consumers who have unreliable internet access or who are less confident online have emerged as groups who are likely to be excluded from the full benefit of the internet as a gateway product. This includes consumers on low incomes who rely on their available mobile data rather than paying for a separate broadband connection…While not being completely excluded, these consumers would struggle to use services such as price comparison websites as it would take them too long to complete forms".* See Britainthinks, Getting a good deal on a low income, 2018, p.48.
[200] See WPI Economics, Connecting the Countryside, November 2023, page 3.
[201] Provisional Findings, para. 8.31-8.33.
[202] [REDACTED].

minimum level of network quality a provider needs to meet in order to be credible to customers".[203]

The merger delivers significant network quality improvements which will improve customer experience and are a significant step-up compared to the standalone networks *(G.112 – G.139)*

5.77 The Parties have made submissions and provided extensive evidence to show how MergeCo's network improvements will positively impact everyday mobile customer experience. In particular, in [REDACTED], the Parties explained in practical terms how customer experience will improve along the three key dimensions in Ofcom's Connected Nations Report: availability, reliability and performance.

5.78 Whilst the CMA recognises that quality improvements generally benefit customers,[204] it challenges whether the claimed improvements will lead to a stronger competitive offer from MergeCo compared to the standalone networks.

5.79 This sits at odds with the CMA's acknowledgment in the PFs that the capacity, spectrum and site densification related benefits – from which these key quality improvements derive – are rivalry-enhancing.[205] This analysis in the PFs is incompatible with the reality of poor network quality that many UK customers currently experience and will continue experiencing in the counterfactual. As demonstrated by the delta in all the main KPIs between MergeCo's performance and the standalone networks in the counterfactual, it is undeniable that MergeCo's offer, delivered by the full JNP, will be much stronger in terms of customer experience, which in turn will determine rivals to compete harder on quality. As set out above (para. 5.30-5.47), the PFs understate the likely extent of congestion the standalone networks will face absent the Transaction.

5.80 The PFs have in particular challenged the following points, which are rebutted in turn below:

(i) 5G coverage (focus on indoor): while the CMA recognises that there may be benefits from improved 5G coverage particularly as the majority of mobile use is indoors, it notes that C-band is not the most suitable means of delivering 5G coverage and that there are other means of delivering indoor data coverage such as WiFi. The CMA also queries the value of 5G coverage to customers.[206] The CMA expects that the Parties in the counterfactual would roll out their own 5G SA network.[207]

(ii) Speed/throughput: the CMA considers that the Parties' forecasts for the standalone networks' average speeds appear to be sufficient to meet the required download speeds for existing and new use cases, at least in high traffic areas. While a denser network may allow for better speeds in mid/low traffic areas, these account for c. 15% of mobile traffic.

[203] Provisional Findings, paragraph 8.56.
[204] Provisional Findings, Appendix G, para. G.112
[205] The Provisional Findings recognise that there will be a change in network performance – see, e.g., paras. 50, 14.69, 14.81,14.82, 14.153, 14.181, etc.
[206] Provisional Findings, Appendix G, para. G.121.
[207] Provisional Findings, Appendix G, para. G.122.

(iii) Latency: the CMA notes that the Parties' forecasts for the standalone networks in the counterfactual are below the current Ofcom threshold for 'very high performance' (30 ms) and that "*REDACTED]*"[208] (para. G.128 of Appendix G to the PFs). The CMA also refers to the applications for which latency is important as "*niche*".

5G coverage[209]

5.81 Better indoor coverage means that customers can connect to a mobile service from every room in their house, including from locations deep indoors, without being disconnected or experiencing an extremely slow service, and can, for example, speak via a voice or video call to their school/university tutor, doctor, employers, co-workers etc., throughout the building they are in. Better indoor coverage in particular means better connectivity and hence more opportunities for low-income groups (i.e. the customer group for whom the PFs identify particular concerns), who are more likely to be unable to afford or access fixed broadband. A study commissioned by the UK Government found that even in 2014, customers were willing to pay £6.00 per month to have a signal in their home over cost of their normal contract (as an alternative to having to go outside for connection).[210]

5.82 MergeCo will provide indoor C-band coverage to [REDACTED]% of the population in the largest 20 cities compared to only [REDACTED]% and [REDACTED]% indoor coverage from the 3UK and VUK standalone networks in 2032, respectively.[211] This means that customers will be better able to make full use of their mobile devices in hospitals, shopping centres, and other large indoor areas as coverage in those areas will improve. As previously provided in [REDACTED], Table 5.3 below sets out a breakdown of C-band indoor population coverage for each of the Parties on a standalone basis vs MergeCo's far improved indoor coverage, across the country's top 20 largest cities.

Table 5.3 - C-Band indoor population coverage of top 20 cities - 2032

City	3UK	VUK	MergeCo
Belfast	[REDACTED]%	[REDACTED]%	[REDACTED]%
Birmingham	[REDACTED]%	[REDACTED]%	[REDACTED]%
Bradford	[REDACTED]%	[REDACTED]%	[REDACTED]%
Bristol	[REDACTED]%	[REDACTED]%	[REDACTED]%
Cardiff	[REDACTED]%	[REDACTED]%	[REDACTED]%
Coventry	[REDACTED]%	[REDACTED]%	[REDACTED]%
Edinburgh	[REDACTED]%	[REDACTED]%	[REDACTED]%
Glasgow	[REDACTED]%	[REDACTED]%	[REDACTED]%
Hull	[REDACTED]%	[REDACTED]%	[REDACTED]%
Leeds	[REDACTED]%	[REDACTED]%	[REDACTED]%

[208] Provisional Findings, Appendix G, para. G.128.
[209] The Parties note that the Transaction will also lead to 4G geographic coverage improvements. The Rand report for the Government (cited above at footnote 356 and in PF Annex 1) found that residents in mobile not-spots, local visitors and tourists have significant willingness-to-pay for mobile signal in non-spot areas, for indoor signals and for better 4G signals overall.
[210] Rand, Estimating the value of mobile telephony in mobile network non-spots", 2014.
[211] [REDACTED].

City	3UK	VUK	MergeCo
Leicester	[REDACTED]%	[REDACTED]%	[REDACTED]%
Liverpool	[REDACTED]%	[REDACTED]%	[REDACTED]%
London	[REDACTED]%	[REDACTED]%	[REDACTED]%
Manchester	[REDACTED]%	[REDACTED]%	[REDACTED]%
Newcastle	[REDACTED]%	[REDACTED]%	[REDACTED]%
Nottingham	[REDACTED]%	[REDACTED]%	[REDACTED]%
Reading	[REDACTED]%	[REDACTED]%	[REDACTED]%
Sheffield	[REDACTED]%	[REDACTED]%	[REDACTED]%
Southampton	[REDACTED]%	[REDACTED]%	[REDACTED]%
Stoke	[REDACTED]%	[REDACTED]%	[REDACTED]%
Total across Top 20 cities	[REDACTED]%	[REDACTED]%	[REDACTED]%

Source: [REDACTED]

5.83 MergeCo's extensive deployment of its full spectrum holdings, including C-band, in combination with significant network densification will provide customers with far higher quality 5G coverage and a much more reliable user experience:

(i) MergeCo will deliver 5G services to indoor (and outdoor) users through a combination of C-band and mid- and low-band spectrum. Low-band spectrum will provide the coverage layer ensuring that customers can are able to reliably connect to a 5G at all times, including hardest to reach deep indoor locations.

(ii) C-band and mid-band spectrum will provide additional capacity, which is critical to ensure a good quality of service at high and mid traffic locations, where lower bandwidths can quickly become congested. MergeCo will significantly boost indoor coverage of both C-band and mid-band spectrum by:

(a) **significantly densifying the network –** the weaker propagation characteristics of C-band and mid-band spectrum can limit the extent to which users are able to access these frequencies indoors. This means that indoor users rely more heavily on scarce low-band spectrum, which can become congested resulting in a poor, inconsistent experience. By incorporating c. [REDACTED]% more sites, MergeCo will significantly reduce inter-site distances, increasing signal strength and allowing many more customers to access capacity from these bandwidths.

(b) **deploying the Parties' full spectrum holdings more extensively, using high-powered mMIMO antennas**: as explained at para. 24.11 of the FMN, MergeCo will deploy all of the Parties' spectrum, including C-band at [REDACTED] sites by FY32 compared to just [REDACTED] for 3UK and [REDACTED] for VUK in the counterfactual.

(iii) Better C-band and mid-band coverage will significantly improve the quality of experience for users indoors by:

(a) **relieving congestion in lower bandwidths**; and

(b) **delivering a step-change in performance**, providing sufficient bandwidth to support the most demanding use cases, significantly reducing reliance on 3G/2G especially in rural areas.

5.84 The CMA also notes that "*other means of delivering indoor data coverage are available*".[212] However there are no viable, alternative means of delivering equivalent benefits in the counterfactual:

(i) Low-band spectrum cannot on its own deliver a good quality indoor 5G coverage in high and mid-traffic areas – as explained above, the scarce nature of low-band frequencies means that C-band and mid-band is critical for capacity and performance.

(ii) Whilst the PFs identify WiFi as an alternative means of delivering indoor coverage, in practice it is not a satisfactory substitute for mobile coverage from a consumer perspective – in particular, the availability of WiFi in public locations is patchy and inconsistent and, where it is provided by third-party WiFi providers, typically requires users to login and incur a fee which acts as a barrier to usage. Wi-Fi cannot support seamless mobility and thus customers may experience connectivity issues when transitioning between two Wi-Fi spots. Regarding the usage of WiFi for making calls, Ofcom has noted that "*Wifi calling has some limits. Some people don't have a handset or package that allows them to use it, or people might struggle to connect to public networks. It's also not ideal for visitors when a password is required*."[213] Additionally, future applications may require 5G SA capability, i.e., if future applications are associated with network slices then Wi-Fi cannot deliver them; similarly, WiFi cannot guarantee low latency levels.

(iii) The PFs also refer to the deployment of small cells as an alternative means of delivering indoor coverage. However, the business case for a large-scale deployment of small cells, that could deliver comparable indoor C-band coverage to MergeCo, is highly challenging and unproven – indeed no MNOs (or third-parties) have thus far deployed (or plan to deploy) small cells at scale, instead focussing on macro cell deployment. This reflects the significant costs associated with deploying small cells indoors and their much more limited reach vs macro cells.

5.85 In relation to the CMA's "*uncertainty as to the value of 5G indoor coverage to customers*" claimed in the PFs,[214] the Parties note that the PFs are relying on outdated 2020 Ofcom analysis which at the time did not fully capture post-Covid realities. Indeed, it is no longer the case that the "*provision of data-intensive services deep indoors [...] is very much a sub-set of*

[212] Provisional Findings, Appendix G, para. G.121 (c).
[213] Ofcom, Improving your indoor coverage, 2 June 2023, available at https://www.ofcom.org.uk/phones-and-broadband/coverage-and-speeds/improving-indoor-coverage/
[214] Provisional Findings, Appendix G, para. G.121(b).

consumers' concerns", when, as of September 2024, 39% of UK workers work from home (13% working only from home, 23% working in a hybrid set-up)[215].

(i) Even if applications required for working from home may be supported by fixed broadband, users still need to rely on quality mobile broadband for voice and video calls (e.g., WhatsApp), accessing apps on their smartphones, video streaming, etc. This becomes particularly acute as household size increases, and several household members simultaneously require access to consistently high speeds which may not supported by WiFi. This is a common everyday family scenario rather than a "niche" concern of a sub-set of customers.

(ii) While customers may be able to connect to WiFi in some circumstances when away from home – e.g., at the bank, at school/university, in hospitals, etc. – a high-quality WiFi connection may not always be available or reliable/secure. The need for accessing reliable high-quality data may indeed be highest when away from home and in an emergency, when indoor coverage becomes key.

(iii) The value of reliable high-quality indoor coverage increases further for those who cannot afford or are not in a position to secure a long-term fixed contract for broadband (e.g., because they do not have a fixed tenancy or are moving often). These customers may be among the most vulnerable in society. Given the increasing importance of internet access to partake within society, for these individuals, the merger provides a value-for-money solution, despite the CMA's concerns. This is also confirmed by the UK Spectrum Policy Forum's report on the utilisation of the 470-694 MHz Band which states that "*Mobile needs additional low-band spectrum to deliver more wide-area rural and deep indoor capacity. Mobile is a key broadband access mechanism where fixed alternatives are unavailable, and among lower-income user groups who cannot afford a fixed broadband connection*."[216]

5.86 Indeed, more recently (as at 2023), Ofcom has recognised the value of indoor coverage in its Connected Nations reports and other publications. For example, in its "Improving Indoor Coverage" report, Ofcom states that: "*It might be difficult to buy goods and services online if you can't easily receive text messages, which some banks and debit or credit card companies send for security purposes. Patchy coverage in some areas means some people struggle to make mobile phone calls or get online if they're using their mobile to do so. In addition, the materials used in the construction of some homes and business premises can affect indoor signal, for example traditional thick stone walls and slate roofs, and also newer glazing and materials used for insulation.*"[217]

Speed/throughput

5.87 The PFs imply that speeds as low as 2 Mbps are considered to be *"good"* (according to Ofcom's 2023 Connected Nations report) and indicate that the Parties' average speed forecasts for the

[215] Statista, Share of people working remotely, hybrid working, or at work in the United Kingdom from May 2020 to September 2024, available at https://www.statista.com/statistics/1207746/coronavirus-working-location-trends-britain/
[216] Coleago Consulting, Future Utilisation of the 470-694 MHz Band in the UK, prepared for UK Spectrum Policy Forum. Available for download from UK SPF Reports: Key insights into future spectrum policy (techuk.org). This report is part of the UK Spectrum Policy Forum reports relied on by CMA at para. G.121(iii)(c).
[217] Ofcom, "Improving your indoor coverage", 2 June 2023, available at: Improving your indoor coverage - Ofcom

standalone networks are sufficient to meet the requirements of emerging use cases (such as augmented reality) in the medium term (G.125). The Parties dispute these findings.

5.88 First, much higher and consistent speeds are required for routine applications, let alone for emerging use cases. According to international benchmarks:

(i) ARCEP in France considers that 3 to 8 Mbps is only suited to "*the least demanding mobile internet uses such as Web browsing*" and that 8 to 30 Mbps is "*suited to the most common uses, such as watching videos*";[218]

(ii) Denmark and Ireland have imposed mobile coverage obligations requiring the provision of 30 Mbps to 90% of the area and 95% of the population respectively;[219] and

(iii) The German regulator, BNetzA, is currently consulting on proposed coverage obligations on each of the three established German mobile network operators to provide minimum coverage of 50 Mbps for 99.5% of Germany's land mass by 2030;[220] and

(iv) The United States Federal Communications Commission ("**FCC**") considered setting a mobile speed threshold sufficient to ensure consistent, reliable connectivity in 2016. The FCC found that a 5 Mbps download speed (/ 1 Mbps upload speed) would be insufficient in 2016 and would "*not account for uses that require high speeds, such as video calls, streaming media and real-time educational courses*", which were becoming increasingly common. The FCC considered that the threshold should be forward-looking and rejected 10 Mbps as well, as that would not reflect the projected trajectory of consumer demand for mobile data. The FCC declined to set a benchmark for mobile but uses a threshold of 35 Mbps / 3 Mbps to evaluate the availability of 5G in the US.[221]

5.89 Today millions of customers are unable to use their mobile devices properly in the UK due to significant congestion or lack of 4G/5G coverage on both standalone networks (especially in rural areas), resulting in very low localised speeds – the maximum speed on VUK's 2G network is less than [REDACTED] per second. This makes daily routine tasks impossible or very slow to complete and may lead customers to give up. For example, loading a webpage, using online maps, online ticket purchasing for trains, pay-by-phone parking, comparing prices of groceries in real-time when shopping for groceries online, joining a Microsoft Teams call, or watching YouTube videos may take excessive time and/or be subject to severe buffering. With their current and forecast levels of congestion, this means that, on a standalone basis, the Parties would often struggle to meet even basic customer needs, let alone more data-intensive applications such as video conferencing or streaming (see para. 5.5(ii) above for an explanation that congested cells are typically affected for several hours over the course of the day and not just the busy hour).

5.90 Indeed, MergeCo's key achievements will be in relation to enabling a consistent, reliable mobile experience for everyday uses. The vast majority of mobile uses are impossible or unreliable in

[218] ARCEP, Mobile coverage – new deal for mobile, 1 February 2024, available at Mobile Coverage | Arcep
[219] Telecom TV, "Denmark hands over free spectrum for better mobile coverage", 29 March 2019, available at Content | TelecomTV; ComReg, "Comreg to hold multi-band spectrum award", 18 December 2020, available at https://www.comreg.ie/comreg-to-hold-multi-band-spectrum-award/.
[220] BNetzA, "Consultation on extending mobile spectrum usage rights", 13 May 2024.
[221] For further details, see Federal Communication Commission *2024 Section 706 Report*, available here: https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf [accessed on 27 September 2024].

congested cells – i.e., where speeds fall below 5 Mbps. This is not merely a view held by the Parties – [REDACTED][222] This highlights the importance of tackling congestion to offer a baseline of consistent quality of experience for key uses (see Table 5.4 below).

Table 5.4 – Indicative impact on customer experience at 1 Mbps, 2 Mbps and 5 Mbps congestion thresholds[223]

Speed	Browsing / web content	Video streaming	Video conferencing	File download (6 GByte)	Gaming
< 1 Mbps	Struggle to access basic web services/ applications e.g. online banking, reading the news, parking apps, etc.	Low resolution, some buffering	Not possible	c. 800 mins for HD movie	Not possible
< 2 Mbps	Poor browsing experience, with standard web pages taking several seconds to load Insufficient for media-rich social media content (Instagram, TikTok, Facebook, etc.)	Low resolution		c. 400 mins for HD movie	
< 5 Mbps	Heavy webpages slow to load (> 9 seconds)	Basic (720p) HD video possible at > 3 Mbps but susceptible to buffering	Susceptible to buffering/ stalling, particularly as more users join	c. 160 mins for HD movie	Unreliable / inconsistent experience

Source: The Parties.

5.91 Second, MergeCo customers will enjoy significantly increased data speeds from the early years of the JNP that neither standalone network could achieve even over a much longer term. For instance, MergeCo's average maximum available speed is forecast to increase from [REDACTED] Mbps to reach [REDACTED] Mbps in Year 1 (a [REDACTED]% increase) and to [REDACTED] Mbps by Year 3, which is much higher than the speeds either standalone network expects to achieve by Year 8.[224]

5.92 MergeCo's speeds will support any application, from the most basic (such as browsing) to the most advanced (such as augmented reality or driverless vehicle applications). Crucially – unlike for the standalone networks – such speeds will benefit not just customers who are close to the mast where the signal is stronger, but also customers who are close to the cell edge and who in the counterfactual may not even be covered by a network or would receive weak coverage with very low speeds.

5.93 The CMA's focus on average speeds is therefore misleading: millions of customers are affected by weak, unreliable signal (in particular, customers that are far from their nearest site) and low speeds (in particular, customers that are at highly loaded/congested sites and/or close to the cell edge); for these customers the question is not whether they would be able to perform e.g. remote surgery, but whether even basic browsing or messaging applications would be available – for example, as explained at para. 5.17(iii) above, [REDACTED].

[222] [REDACTED]
[223] See [REDACTED].
[224] See [REDACTED]. By 2032, MergeCo will achieve average speeds of [REDACTED] Mbps for customers in high traffic areas and [REDACTED] Mbps for customers in mid and low traffic areas, which is around a [REDACTED] and [REDACTED] increase respectively compared to what the Parties could deliver absent the Transaction.

5.94 Third, the CMA's demand estimation found that customers value faster speeds and improvements in coverage, i.e., they would be willing to pay GBP 0.86 per month for 5 Mbps extra of 4G download speed and GBP 0.33 per month for 5% extra 4G coverage.[225] Multiplying the CMA's valuation of 4G download speed improvements with MergeCo's first year speed increase of [REDACTED] alone suggests a valuation of GBP [REDACTED] per customer per month.

5.95 As set out in **PF Annex 4**, the results of the CMA's merger simulation model, when adjusted to account for the speed and coverage improvements delivered by the JNP in the first year after the completion of the Transaction, confirm that the Transaction increases consumer welfare. This prediction holds for all customers, including those on very low incomes.

5.96 Fourth**,** MergeCo's greater capacity will ensure that customers receive good speeds even in circumstances when they would receive poor speeds from the standalone networks, such as when they are further from the cell site and when the network is more loaded. By Year 3, MergeCo will ensure that [REDACTED]% of customers receive speeds above [REDACTED] Mbps, while 3UK will only provide speeds above [REDACTED] Mbps for [REDACTED]% of customers.[226] The Parties' survey found that customers attach significant value to receiving good speeds most of the time. In particular, consumers would be willing to pay GBP 1.73 per month for 5Mbps extra of additional minimum speed below 10Mbps and GBP 0.33 extra per month for 5Mbps of additional minimum speed above 10Mbps, such that a change for example from 5Mbps to 15Mbps of speed would be valued on average at GBP 2.06 per month.

5.97 Other MNOs recognise that customers are likely to value the higher speeds that MergeCo will offer. A VMO2 internal document from June 2022 considers that MergeCo will seek to achieve best network by "*[REDACTED]*" and "*[REDACTED]*", calculated at up to [REDACTED].[227] [REDACTED]

Latency

5.98 The merger will deliver material improvements in terms of reduced latency compared to the standalone networks: it almost [REDACTED] latency for 3UK's current subscribers in urban areas and [REDACTED] it in rural areas. Given the nature of applications requiring low latency, even a small reduction can make a difference, which is why the fact that [REDACTED] does not change the overall conclusion.

5.99 With respect to the applications which require low latency, and the CMA's characterisation of such applications as "niche":

(i) **Mobile gaming**: since the pandemic, the mobile gaming sector has experienced substantial growth, both in terms of number of players and revenues:

[225] Provisional Findings, Appendix D, para. D.51. While the estimation did not find a willingness to pay for faster 5G speeds, there is no reason why over time customers should value faster 5G speeds any less than faster 4G speeds. The PFs note that finding with respect to 5G speeds may simply be a temporary factor based on 2023 data: "eg because some consumers do not have a 5G-enabled phone or because it is still being rolled out in some areas" (Provisional Findings, Appendix D, para D.54).
[226] [REDACTED].
[227] [REDACTED].

(a) Number of players: according to the 2022 Ofcom Online Nation report, 37% of UK adults use smartphones to play games.[228] In 2023, almost two-thirds of the UK population used a mobile gaming app in the previous 12 months; [229] online gaming also appeals to a wide demographic, with players' ages ranging from 16 to 65+.[230]

(b) Revenues in the UK: in 2023, online gaming generated more than £1.5 billion in revenues, up from £1.44 billion in 2022, making it the second-largest gaming software segment of the economy behind digital console game sales.[231] More generally, the mobile gaming sector has outperformed the sector as a whole, accounting for 49% of revenues in 2023 and is projected to account for up to 55% of total gaming revenues by 2026.[232]

(ii) **Other applications**: there are many other 'common' applications which require low latency for a more seamless and integrated user experience:

(a) **Business critical applications** such as Zoom, Teams, Skype, Google Meet, etc., all require low latency to ensure there are no discernible delays between words spoken and live video.

(b) **Remote healthcare:** remote healthcare ensures fewer missed appointments and increased patient throughput. Around 5% of healthcare appointments in the UK are missed, many of which are not reallocated.[233] Further, thanks to the high bandwidth and low latency of 5G SA, remote healthcare solutions can move far beyond the capacities of standard video consultations, allowing GPs to assess and record clinical information in real-time via the device to a degree as accurate as an in-person check-up.[234]

(c) **Transport and logistics**: navigational, ridesharing and delivery apps are reliant on real-time, live data to ensure a seamless user experience and reduce customer churn.[235]

(d) **Streaming**: a 2022 Sky Mobile study showed that 37% of fans in the UK watch more sports on their phone than a year prior, with more than two in five of these respondents watching on their phone on the go.[236] Overall, the streaming industry has been adopting low-latency protocols to target a sub-five second, end-to-end delay, which aims at delivering a comparable experience to a live TV broadcast. Beyond live sporting events, e-sports and gaming, low latency

[228] See Ofcom, Online Nation Report 2022, p.83 available at https://www.ofcom.org.uk/siteassets/resources/documents/research-and-data/online-research/online-nation/2022/online-nation-2022-report.pdf?v=327992
[229] UK Mobile Gaming Market Report 2023, available at https://store.mintel.com/report/uk-mobile-gaming-market-report
[230] See Statista, Mobile phone gaming penetration in the United Kingdom (UK) from 2012 to 2023, by age group, available at https://www.statista.com/statistics/300522/mobile-gaming-in-the-uk-by-age/
[231] See Statista, Consumer spending on mobile gaming in the United Kingdom (UK) from 2011 to 2023, available at https://www.statista.com/statistics/324352/consumer-spending-on-mobile-gaming-united-kingdom-uk
[232] Newzoo, Global Games Market Report, 2023.
[233] See UKTIN, 5G in Medical Treatment, available at https://uktin.net/how-to-deploy-5G/health/medical-treatment.
[234] *Ibid.*
[235] See Ably, Why low latency is important for transportation and logistics companies providing real time updates, 12 October 2023 available at https://ably.com/blog/why-low-latency-is-important-for-transportation-and-logistics-companies.
[236] See Sky Group, It's Finally Coming Home – Fans Predict England Women's Team Will Win The Euros, 20 July 2022, available at https://www.skygroup.sky/article/it-s-finally-coming-home-fans-predict-england-women-s-team-will-win-the-euros

has application in security/ surveillance and real-time monitoring such as smart doorbells and similar products.

The REEs delivered by the Transaction more than offset any anti-competitive effects

5.100 The PFs provisionally conclude that "*the REEs that [the CMA provisionally finds] are likely to result from the Merger would not be sufficient to countervail the anti-competitive effects found in the Markets*"[237].

5.101 However, the CMA's assessment otherwise leaves open the question around the sufficiency of the full REEs. In the more detailed analysis of the full REEs in Appendix G the CMA misunderstands counterfactual outcomes, downplays capacity benefits and the importance of network quality, and dismisses the link between capacity and competitive outcomes despite the economic and empirical evidence.

5.102 When accounting for the likely magnitude of REEs, both the Parties' and the CMA's own model, when adjusted to take into account efficiencies, clearly show that the REEs are more than sufficient to eliminate the anti-competitive effects provisionally found in the Markets.

(i) The Parties' merger simulations show that the REEs are more than sufficient to offset any upwards pricing pressure from the GUPPI effects. These models demonstrate that, once the REEs are properly accounted for, the Transaction is pro-competitive and will substantially increase consumer welfare. As shown in PF Annex 4, the PFs' criticisms of these analyses are not justified and the results from these models are robust to these criticisms.

(ii) As set out in **PF Annex 4**, the Parties have assessed the impact that the REEs would have under the CMA's own model presented in the PFs. The PFs' baseline merger simulation model in the PFs suggests that consumer welfare – absent any REEs - would reduce by £329 million per year. However, the Parties' assessment confirms that, once REEs are factored in, even the CMA's own model shows that consumer welfare increases substantially as a result of the Transaction, and that the PFs' provisional conclusion that the REEs would not offset anti-competitive effects is not supported. In particular:

(a) Incorporating incremental cost reductions into the CMA's model suggests that consumer welfare would increase by £92 million per year.

(b) Incorporating just the Day 1 quality improvements that the CMA has accepted – in particular, network coverage and speed improvements – suggests an increase in consumer welfare of £510 million per year.

(c) Incorporating both incremental cost reductions and Day 1 quality improvements suggests an increase in consumer welfare of £966 million per year.

[237] Provisional Findings, para. 14.247.

6. Criteria 5: Merger-specificity – the REEs are merger specific

6.1 The Parties welcome and agree with the CMA's provisional finding that the efficiencies in the JBP are unlikely to be brought about by other means (para. 14.245 of the PFs).

7. Criteria 6: The REEs directly benefit UK customers

7.1 The Parties welcome the CMA's finding that the REEs would benefit customers in the UK, therefore recognising the REEs' ability to offset anti-competitive effects. As demonstrated in paras. 5.100- 5.102, the JBP – which the Parties are incentivised to deliver – fully offsets any anti-competitive effects, and so in accordance with the CMA's finding, will directly benefit UK customers.

7.2 The benefits generated by the Transaction go beyond the mobile market, and as explained in the Parties' [REDACTED], these include: (i) lower quality adjusted prices and higher quality services to all MergeCo customers as a direct consequence of the JNP, representing **£1.8 billion** of value from improved mobile connectivity; (ii) accelerated access to advanced 5G use cases (with MergeCo's business revenues expected to be at least **£[REDACTED]** larger by FY30, with the difference increasing to **£[REDACTED]** by FY32, representing **[REDACTED] value** to businesses and customers); and (iii) an expanded and improved FWA proposition, supporting **[REDACTED]** FWA customers by 2032.[238]

7.3 Given the necessity of the ubiquity of mobile connectivity in modern society, there is an extensive breadth of customers nationwide (including both vulnerable and underserved customers) likely to benefit from MergeCo's improved nationwide mobile connectivity is extensive – as shown in Figure 7.1 below. These include:

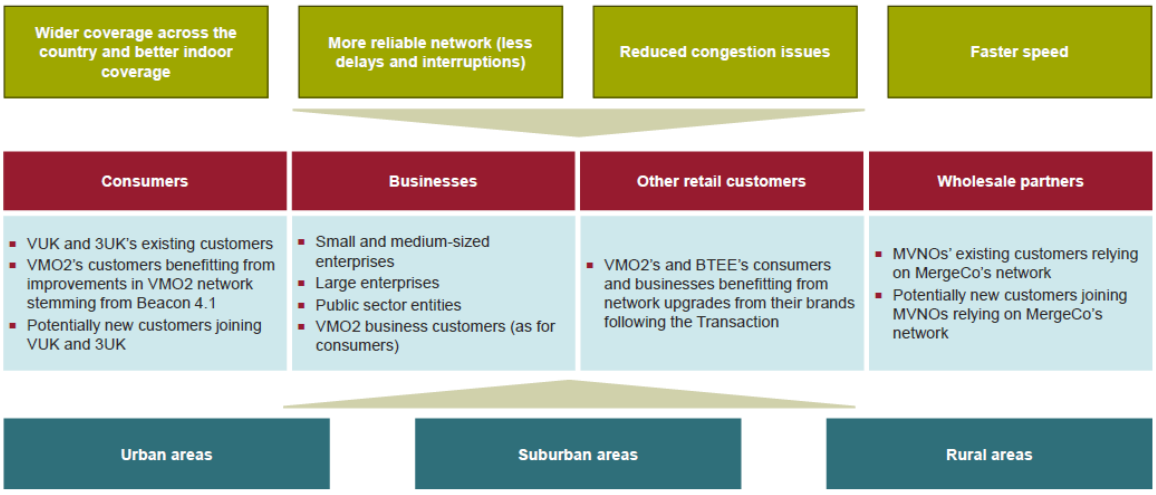
(i) Consumers and businesses on (i) MergeCo's network (including SMEs, large enterprises and public sector entities) (ii) MergeCo's wholesale partners (i.e. MVNOs relying on MergeCo's network or who will join this network in future) and (iii) the VMO2 network and its hosted MVNOs due to the impact of Beacon 4.1);

(ii) Customers living in urban, suburban and rural areas, and all four nations of the UK; and

(iii) All customers, who, with MergeCo's improved network quality – particularly in relation to speed and latency – will be able to expand the set of activities that they are able to perform on mobile devices, beyond traditional services.

[238] See [REDACTED].

Figure 7.1 Key customer groups likely to benefit from improved mobile connectivity

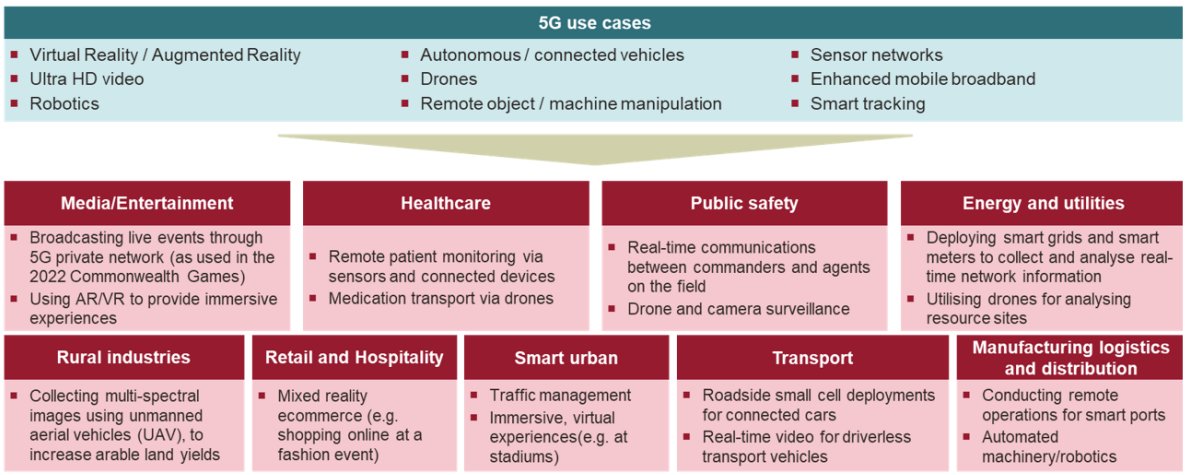


Source: Frontier Economics

7.4 Advanced 5G use cases are also wide-ranging and likely to benefit various sectors, including healthcare, media/entertainment, public safety, energy and utilities, rural industries, retail and hospitality, smart urban, transport, manufacturing, logistics and distribution. Consumers will also benefit indirectly from the adoption of Advanced 5G use cases within key sectors.

7.5 Figure 7.2 below illustrates the key industries likely to benefit from the adoption of Advanced 5G use cases. The use of Advanced 5G within these sectors is expected to deliver significant gains, ranging from operational efficiencies to cost savings.

Figure 7.2 Key industries likely to benefit from Advanced 5G use cases



Source: Analysys Mason "Realising the benefits of 5G", Section 3

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ME/7064/23 – Vodafone UK / Three UK

Annex on Econometric Analysis and Merger Simulations to Provisional Findings Response

1. Executive summary

1.1 The PFs consider four different economic approaches to quantifying the impact of the Transaction on consumers. These are:

(a) the CMA's analysis of pricing pressure/GUPPIs;

(b) the CMA's econometric estimation of demand and the merger simulation based on this model;

(c) the Parties' capacity-focused merger simulation model; and

(d) the Parties' quality-focused merger simulation model.

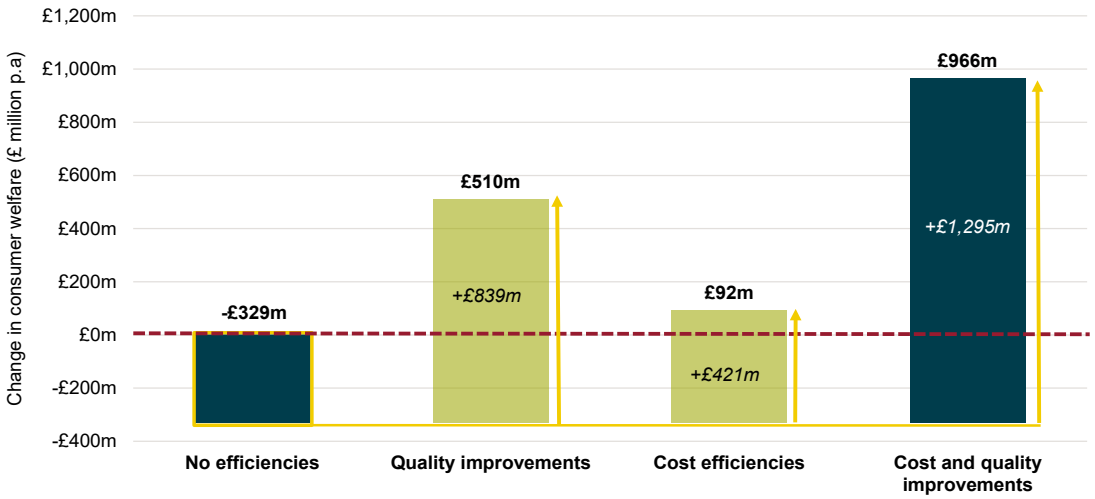
1.2 The PFs find both of the CMA's own analyses to be worthy of weight in its provisional assessment of the SLC, and set out their criticisms to conclude that zero weight should be attached to the Parties' models.

1.3 The PFs are the first opportunity the Parties have had to understand and review the CMA's econometric demand estimation and merger simulation. The Parties consider that:

(a) **The CMA's own modelling shows that no SLC will remain with the implementation of the JNP.** The modelling set out in the PFs does not reflect the REEs brought about by the Transaction. This is unjustifiable, as the PFs themselves accept that the Transaction will bring about network quality improvements that are likely, timely, and will benefit consumers. Even if only the improvements of download speeds and coverage achieved on Day 1 are taken into account in the CMA's own merger simulation model, this already leads to a prediction that such efficiencies will outweigh any SLC and the Transaction will substantially increase consumer welfare (by over £500 million per annum). Importantly, consumer welfare will also increase for consumers in all income groups, including those on the lowest incomes.

(b) **Full implementation of the JNP and MergeCo's higher capacity will further increase the net benefits of the Transaction.** The quality benefits from the Transaction (beyond those accepted in the PFs) will be larger with the full implementation of the JNP and this will increase the net benefits of the Transaction substantially. In addition, MergeCo's higher capacity will lead to downward pressure on prices and when this cost efficiency is accounted for in the CMA's model (in addition to the quality benefits above), consumer welfare increases by over £950 million per annum. This is illustrated in Figure 1.1 below.

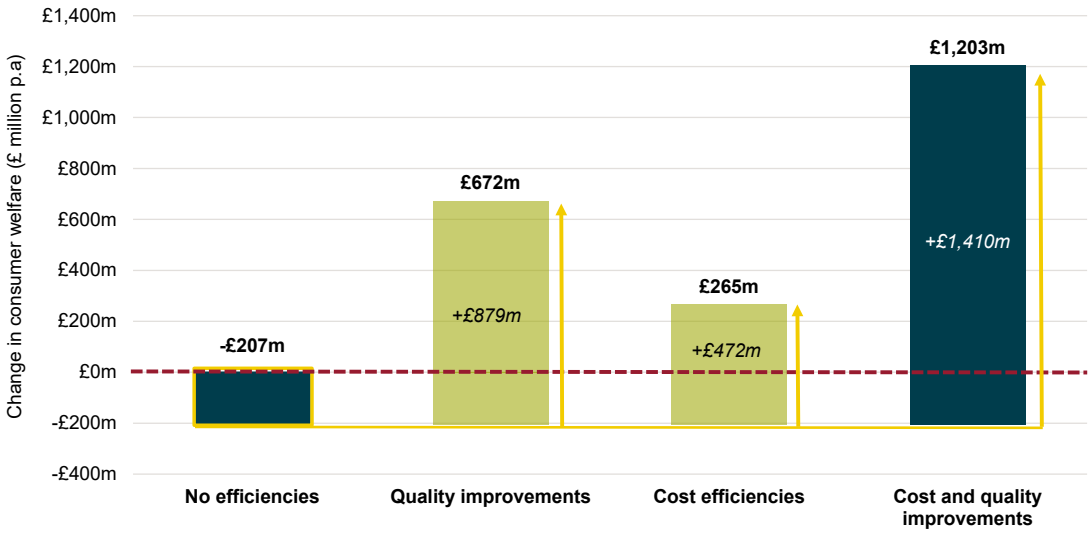
Figure 1.1: The impact of adding REEs to the CMA's economic modelling[1]



(c) **The CMA would be wrong to consider its own modelling as the only source of evidence.** There are significant limitations and errors in the methodology set out in the PFs. The model is still – by construction – unable to fully assess the benefits of the Transaction. As a result, it generates a range of implausible results with respect to consumers' valuation of network quality, including that a significant proportion of customers have a negative willingness to pay for certain quality attributes or larger data allowances. In addition, the CMA's modelling includes a coding error that must be corrected. When this is done, the CMA's results appear less implausible and its model – when additionally accounting for REEs – predicts even larger welfare gains, as shown in Figure 1.2 below.

[1] The impact of adding in quality improvements and cost efficiencies separately does not sum to the impact of adding both effects as these effects interact with one another when added to the modelling.

Figure 1.2: The impact of adding REEs to the CMA's economic modelling correcting for the sample[2]



(d) **The CMA should place positive weight on the Parties' merger simulation models.** As set out in this response, the results from these models are robust to the key criticisms set out in the PFs. Importantly, these analyses fill a key evidential gap left by the PFs, i.e. assessing the *net* effect of the REEs versus any assumed effect from the loss of rivalry between the Parties.

(e) **The PFs accept that the capacity-focused merger simulation model may be a useful tool for assessing how the Transaction may affect long-run market outcomes.** In response to the issues raised in the PFs, the Parties have produced a new version of the model and this confirms that the additional capacity resulting from the Transaction will have a major positive impact on the market, worth at least an additional £290 million per annum.

(f) **The Parties have also fully addressed the PFs' concerns in relation to the quality-focused merger simulation model**, including many which would apply to the CMA's own analysis. The conclusions from this model are consistent with those from the CMA's model when accounting for quality efficiencies and demonstrate that the Transaction is strongly pro-competitive.

1.4 The following sections set out the evidence for these conclusions in more detail. In summary:

(a) Section 2 sets out the key limitations in the CMA's **upward pricing pressure** analysis. This analysis is inherently limited because it excludes the impact of the efficiencies on the Transaction, which will have an integral effect on pricing incentives. Incorporating the effects of efficiencies into the analysis results in downward pricing pressure from the Transaction. In addition, there are a number of other reasons why the "GUPPI" measures in the PFs overstate

[2] The impact of adding in quality improvements and cost efficiencies separately does not sum to the impact of adding both effects as these effects interact with one another when added to the modelling.

the impact of this Transaction even without efficiencies – in particular using margin inputs that are too high and ignore important commercial realities (not captured by the model) that would in practice act to constrain post-Transaction pricing.

(b) Section 3 considers the **CMA's econometric demand estimation and merger simulation model**. The CMA's model is – by construction – unable to obtain reliable consumer valuation estimates of network quality. This causes the analysis to produce implausible results, such as negative valuations associated with 5G, and customers placing no value on larger data allowances, which is clearly inconsistent with the CMA's conclusions in other contexts. Most importantly, there is no reason why the PFs' model should not incorporate relevant REEs generated by the Transaction. Once the quality and capacity REEs are implemented, the Parties find that the merger produces an improvement to consumer welfare of *£966 million per annum.* Importantly, all customer segments will benefit – consumers on low incomes will also experience an increase in consumer welfare.

(c) Section 4 considers the Parties' **capacity-focused merger simulation model**. This section presents new modelling results that shows that the predictions of the model are robust to the key technical criticisms set out in the PFs. In particular, given the CMA's concern that the choice of modelling framework might unduly drive the model's predictions, the Parties have been able to rebuild the model from scratch using the same family of economic models used by the CMA in its analysis. This new analysis, along with other key sensitivities, confirms that the results of the model are robust.

(d) Section 5 considers the Parties' **quality-focused merger simulation**. It explains how each of the concerns laid out in the PFs regarding the (i) survey, (ii) calibration and estimation, and (iii) merger simulation stages of the analysis are unfounded. The PFs' concerns regarding the survey have been fully addressed in previous submissions, which the PFs fail to consider. The PFs' concerns regarding the calibration and estimation of the underlying model emerge from a misunderstanding and/or misrepresentation of the technical implementation in the analysis. Finally, the PFs' concerns regarding the merger simulation would apply equally to the CMA's own analysis. Therefore, the CMA should give full weight to the quality-focused merger simulation analysis, including its finding that the Transaction is strongly pro-competitive, in its Final Decision.

1.5 Overall, the PFs rely on a GUPPI analysis and a merger simulation to argue that the Transaction will give rise to price increases, harming consumers. However, the PFs' quantitative analyses disregard the substantial REEs that the Transaction will generate. An analysis that excludes efficiencies is wholly inappropriate given that it cannot accurately determine the overall competitive effect of the Transaction or the Parties' post-Transaction incentives to compete, particularly in circumstances where the PFs accept that at least some of the REEs are both timely and likely, in addition to being capable of benefiting customers. Once REEs are considered, both the GUPPI analysis and the CMA's merger simulation render a prediction of a pro-competitive outcome

that yields benefits for consumers. In particular, accounting for the Day-1 improvements of download speeds and coverage within the CMA's own merger simulation model, the SLC is eliminated. These results are in line with the findings of the merger simulation models put forward by the Parties. The PFs criticise both models submitted by the Parties on technical grounds; however, these criticisms are entirely unfounded and the results of the Parties' merger simulation analyses are reliable.

2. The PFs' analysis of pricing pressure is flawed

2.1 The PFs present a GUPPI analysis to inform its assessment of the impact of the Transaction on the prices of retail mobile services in the absence of efficiencies. The CMA's GUPPI estimates range between [0-5]% and [5-10]% for VUK and [5-10]% and [10-20]% for 3UK. On this basis, the PFs conclude that "*there is likely to be significant upwards pricing pressure as a result of the Merger in the absence of efficiencies*".[3]

2.2 The CMA should place limited weight on the GUPPI evidence in reaching its final decision. This is for two main reasons:

(a) First, the GUPPI approach is an inappropriate and misleading tool for considering pricing incentives *in this merger* because it does not take into account the significant efficiencies brought about by MergeCo's new network and their impact on the market and other competitors.

(b) Second, the GUPPI analysis as set out in the PFs is not reliable, in particular because of the approach that is taken to determining the key input of variable margins.

A simple GUPPI approach is inadequate for assessing this Transaction

2.3 The GUPPI framework assumes that post-merger capacity and quality remain unchanged, which is directly contrary to the objective facts relevant to the Transaction, as it will bring about a substantial increase in network capacity and quality (see **PF Annex 3** for further detail). In these circumstances, the standard GUPPI approach is inadequate for assessing post-merger pricing effects.

2.4 This concern was first raised by the Parties in the [REDACTED], but has not been accounted for adequately in the PFs.

(a) The PFs state that "*the GUPPI is a useful measure which can provide an indication of pricing pressure arising from a merger and has previously been applied in cases by the CMA and other authorities*".[4] However, this does not engage with the concern raised by the Parties which is that, in the context of this Transaction (in which the CMA has accepted that "*based on the evidence we have seen thus far, the Merged Entity would have the incentive (and ability) to deliver the so-called 'Day 1' benefits*"),[5] it is critical that the substantial

[3] PFs, para. 8.306.

[4] PFs, Appendix E, para. E.3.

[5] PFs, paragraph 14.192.

REEs delivered by the Transaction are considered alongside the impact of any loss of rivalry between VUK and 3UK.

(b) In addition, the PFs state that "*the GUPPI forms just one part of [its] evidence base on the impact of the Merger on competition in the supply of retail mobiles services*".[6] However, as explained at paragraph 9.6 of **PF Annex 1**, REEs have not been accounted for at all in the CMA's assessment of MergeCo's post-Transaction pricing incentives. It would be wrong for the CMA to rely on the GUPPI even as "one part" of the evidence base for assessing the change in post-merger pricing incentives, as an accurate assessment of pricing incentives in this case must include a joint assessment of all relevant effects resulting from the Transaction, namely: (i) the effect of any loss of rivalry between the Parties; (ii) the effect of the increase in capacity and corresponding reduction in marginal costs; and (iii) the effect of the increase in quality.

2.5 As the Parties explained in the [REDACTED],[7] it is possible to extend the standard GUPPI approach to account for REEs, i.e. accounting for the effect on prices of the reduction in marginal costs and the increase in quality ('**Willig extension**').

2.6 The results of this extended GUPPI approach show that:

(a) When accounting for the cost reduction effect only, GUPPI estimates that use congestion-adjusted acquisition margins ('**CAAM**'), which the Parties consider to be the correct margin measure (see paragraphs 2.12-2.16 below), are negative for 3UK ([REDACTED]) and close to zero for VUK ([REDACTED]).[8]

(b) Once the Day 1 quality improvements are also accounted for and the "Net" GUPPI is calculated (see Table 2.1 below), any upward pricing pressure is more than offset. This applies to GUPPI estimates that use CAAM as well as the GUPPI estimates presented in the PFs (which are based on alternative margin measures).

[6] PFs, Appendix E, para. E.3.

[7] [REDACTED].

[8] Calculated by subtracting the cost reduction effect of -[REDACTED]% for 3UK and [REDACTED]% from GUPPI estimates based on the CAAM ([REDACTED]% for 3UK and [REDACTED]% for VUK).

Table 2.1: GUPPIs incorporating Willig extension and quality improvements from the Parties' quality-focused merger simulation

Margin measure	PFs		Cost reduction effect		Quality improvement effect		"Net" GUPPI	
	3UK	VUK	3UK	VUK	3UK	VUK	3UK	VUK
Contribution Margin - Parties	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
Contribution Margin A	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]			[REDACTED]	[REDACTED]
Contribution Margin B	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
Acquisition Margin	[REDACTED]	[REDACTED]			[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CACM – Parties	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
CACM – A	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]			[REDACTED]	[REDACTED]
CACM – B	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
CAAM	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
Range	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]

*Source: Compass Lexecon analysis. Notes: [1] The Parties' incentives to compete are affected by the incremental costs of removing congestion (see PF Annex 3). On this basis, only congestion-adjusted contribution martins (**'CACM'**) and CAAM are appropriate for assessing the pricing incentives generated by the Transaction. As these costs are not taken into account in the proposed margins in the PFs, for the purpose of computing GUPPIs based on these margins, the cost efficiencies brought about by the Transaction have been ignored for internal consistency only. [2] The quality improvement effect in the table above has been quantified using the estimated average quality benefit of **£[REDACTED]** per subscriber per month derived from the demand estimation underlying the quality-focused merger simulation.*

2.7 This is consistent with the Parties' and the CMA's own merger simulation models, which are more comprehensive quantitative techniques compared to the GUPPI. These models clearly show that the REEs are more than sufficient to eliminate any upwards pricing pressure, confirming that the Transaction is pro-competitive (see paragraphs 9.7 onwards of **PF Annex 1**).

2.8 The PFs do not engage with the Willig extension, merely noting that *"these results are directly related to the size of the expected cost and quality improvements"*.[9] The Parties agree. It is precisely because there are substantial expected cost and quality improvements, some of which the PFs recognise themselves (as explained in **PF Annex 3**), that the standard GUPPI framework must be extended.

[9] PFs, Appendix E, para. E.62.

2.9 However, the Parties acknowledge that the results of the Willig extension presented in Table 2.1 above rely on the results of the valuations of network quality derived from the Parties' demand estimation underlying the quality-focused merger simulation, which the PFs propose to place no weight on. While the Parties maintain that the PFs' criticism of the Parties' demand estimation is misplaced (see section 5 below), for completeness, the Parties have repeated the Willig extension based on valuations derived from the PFs' demand estimation.

Table 2.2: GUPPIs incorporating Willig extension and quality improvements from the CMA's demand estimation

Margin measure	PFs		Cost reduction effect		Quality improvement effect		"Net" GUPPI	
	3UK	VUK	3UK	VUK	3UK	VUK	3UK	VUK
Contribution Margin - Parties	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Contribution Margin A	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
Contribution Margin B	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
Acquisition Margin	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
CACM – Parties	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
CACM – A	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
CACM – B	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
CAAM	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]
Range	[REDACTED]	[REDACTED]					[REDACTED]	[REDACTED]

Source: Compass Lexecon analysis. Notes: [1] The Parties' incentives to compete are affected by the incremental costs of removing congestion (see PF Annex 3). On this basis, only CACM and CAAM are relevant for the assessment of the pricing incentives generated by the Transaction. As these costs are not taken into account in the proposed margins in the PFs, for the purpose of computing GUPPIs based on these margins, the cost efficiencies brought about by the Transaction have been ignored for internal consistency only. [2] The quality improvement effect in the table above relates to 4G download speed improvements, and has been quantified using the estimated average quality benefit [REDACTED] per subscriber per month derived from the PFs' demand estimation. This figure has been calculated using the median income, age and 4G download speeds of 3UK and VUK subscribers in the PFs' data sample, as well as the median observed 4G download speeds for 3UK and VUK.

2.10 The results of this show that incorporating only 4G speed-related quality improvements is sufficient in most cases to offset any upward pressure on quality-adjusted prices. As the Parties note below in Section 3, the PFs' demand estimation model is unable to reliably estimate consumer valuation for 5G improvements arising from the Transaction. These improvements would further reduce any incentive to increase quality-adjusted prices, and indeed – given the scale of improvements in the JNP – are likely to yield incentives to significantly reduce quality-adjusted prices.

The GUPPIs presented in the PFs are unreliable

2.11 There are a number of issues with the GUPPI analysis presented in the PFs which means that it overstates the impact of the Transaction on prices. For the purposes of this response, the Parties focus on the PFs' margin selection, in relation to which there are two material concerns, which are explained in detail in the following paragraphs.

2.12 First, the PFs exclude congestion-adjusted margins on the basis that there is insufficient evidence that "*capacity considerations are ordinarily considered in retail pricing decisions*".[10] However, as explained in Section 5 of **PF Annex 3**, this is incompatible with an assessment of MergeCo's likely incentive in response to large available capacity, the evidence of incremental cost reductions driving down the price per GB and evidence from internal documents. In rejecting this evidence, the PFs adopt a view of pricing which is irrational and that does not explain the actual price developments in the market.

2.13 The PFs note that the CMA "*had some reservations about the methodology used to produce this adjustment, which uses estimates of capex and opex (costs which are usually considered to be 'fixed' in nature over the short run) projected over a significant time period, in order to theoretically measure observed margins 'today'*".[11]

2.14 However, as the Parties have previously explained in [REDACTED] and **PF Annex 3**, [REDACTED] making it more challenging for the Parties to acquire new customers.[12] In this context, the high and increasing network capex and opex incurred by the Parties are marginal costs of serving additional subscribers.[13]

2.15 The Parties have presented evidence that the costs of accommodating additional subscribers will be significant, estimated at [REDACTED]and [REDACTED] per subscriber per year for VUK and 3UK, respectively. The Parties have also explained the role of the incremental cost of capacity when setting prices, data allowances and their commercial strategy more widely, both in the wholesale and retail markets (see **PF Annex 3**, Section 5).

2.16 It is critical that congestion-adjusted margins are used when assessing the likely competitive effects of the Transaction, as well as the related marginal cost savings set out above. Correcting for this, as outlined in paragraph 2.6 and Table 2.1 above, it is clear that the Transaction does not result in an SLC.

2.17 Second, the "upper bound" estimates of the GUPPI for VUK and 3UK are based on incorrect margin estimates. Specifically, "upper bound" GUPPIs are calculated using what the CMA defines as "Contribution A" margins, which:

(a) only include certain categories of variable costs as requested by the CMA; and

[10] PFs, Appendix E, E.36.

[11] PFs, Appendix E, para. E.36.

[12] [REDACTED]

[13] As explained in [REDACTED]. However, each of these options [REDACTED], and shows [REDACTED].

(b) are based on the Parties' total subscriber bases.[14]

2.18 The PFs justify the use of these margins by stating:

(a) "*it has required each MNO in the UK to submit the same categories of revenues and costs, which aids comparability across different operators and minimises inconsistencies in definitions and accounting treatments*";[15] and

(b) one MNO does not meaningfully consider any further costs to be "totally" variable in nature.[16]

2.19 However, the comparability of margins across MNOs is not a meaningful justification for rejecting the use of appropriate margin inputs for the GUPPI analysis. It is also unreasonable to dismiss the detailed evidence provided by the Parties on the variability of the additional cost items (as provided in response to [REDACTED] of RFI [REDACTED] and in the [REDACTED] and, as noted below, meets the principles outlined by the CMA) on the basis of one MNO's view.

2.20 In addition:

(a) Contribution A margins exclude additional variable costs set out by the Parties, which – by the CMA's own admission – meet the principles used by the CMA to assess whether these are variable with subscriber volumes (see paragraphs E.30-E.32 of Appendix E).

(b) The PFs are incorrect in considering that contribution margins on the subscriber base are "*an appropriate proxy for the upper-bound of [the longer-run value of winning a customer]*".[17] This is based on the view that while acquisition margins provide a useful indication of the value of customers during their initial contracts, a proportion of customers will remain beyond their initial contract term. However, contribution margins on the subscriber base are unlikely to be indicative of the longer-run value of recaptured customers. This is because the customers who switch in response to a price increase are by definition price-sensitive and therefore more likely to switch/search for better deals. This group of customers is unlikely to be captured by the average subscriber on the Parties' network – which includes customers that have been with the Parties for more than eight years.

[14] See [REDACTED]; [REDACTED] to the CMA's s109 notice [REDACTED]; [REDACTED] to the CMA's s109 notice [REDACTED].

[15] PFs, Appendix E, para. E.33.

[16] *Ibid*.

[17] PFs, Appendix E, para E.46.

The PFs set out a number of incorrect conclusions on the application of the GUPPI in this case

2.21 The Parties disagree that the PFs' GUPPI analysis can be regarded as a lower bound for post-merger pricing effects, even when keeping network capacity and quality constant.

(a) The PFs consider that GUPPI estimates are "*likely to underestimate the pricing pressure created by the Merger"* as they exclude the impact of recaptured MVNO sales and changes in post-merger competitive constraints.[18] On the contrary, as the Parties have explained the GUPPI estimates in the PFs are likely to overestimate pricing pressure because they entirely ignore downward pricing pressure from MergeCo's improved network capacity and quality (and VMO2's from the effects of Beacon 4.1) and use accounting measures of average variable costs (instead of the marginal cost of serving additional subscribers, which is the relevant measure and is much higher as VUK and 3UK will be operating at or near capacity in the counterfactual). Moreover, the GUPPI analysis in the PFs does not reflect the evidence provided by the Parties. Specifically:

(i) The Parties' analysis in the [REDACTED] shows that the impact of recaptured sales on GUPPI estimates is immaterial relative to the impact of incorporating REEs. The PFs do not engage adequately with this analysis, simply stating that they "*do not agree"* without further substantiation.[19]

(ii) The PFs conclude that "*if the Merged Entity raises its prices, its rivals may follow"* on the basis of internal documents relating to previous price interactions and the views of third parties.[20] However, this approach is overly narrow as it focuses only on price as a competitive parameter and does not account for the impact of REEs on rivals. The CMA's own merger simulation analysis also suggests that competitors' reactions to MergeCo's price increases will be modest, with competitors predicted to react with price increases of less than 1% (e.g. BTEE 0.6%, VMO2 0.5%).[21]

(iii) The PFs consider that there is scope for an SLC in the wholesale market.[22] However, the PFs' analysis of the wholesale market includes a number of significant mischaracterisations and misinterpretations, as explained in further detail in **PF Annex 2**.

[18] PFs, Appendix E, para E.55.

[19] PFs, Appendix E, para E.58.

[20] PFs, Appendix E, para E.57.

[21] PFs, para D.90.

[22] PFs, Appendix E, para E.58.

(b) The PFs incorrectly disregard the Parties' analysis showing that there are important commercial factors that would further limit the likelihood and magnitude of any incentive to raise prices:

(i) The PFs claim that the CMA has "*not seen evidence that commercial factors cited by the Parties have prevented them from making price rises in practice*".[23] However, the relevant question should instead be what is the likely constraint on prices when the overall evidence is addressed in the round, including whether there is evidence that the commercial factors cited by the Parties (e.g. the magnitude of the profit impact, the impact of rivals' responses) are considered in their commercial decision making.

(ii) The PFs argue that there is evidence that the Parties have increased their prices, stating that "*3UK has been increasing its pricing in recent years and that all MNOs have introduced inflation-linked price rises"* and "*Parties closely and regularly [monitor and respond] to their competitors' price changes which suggests that they are actively seeking opportunity to commercial benefit from incremental price changes"*.[24] However, the relevant question is not whether the Parties have increased prices previously, but instead whether a post-merger price increase is the most commercially attractive strategy to MergeCo when considered in the context of the wider market and the Transaction. As explained in the [REDACTED], there is substantial evidence to suggest that this is not the case.[25]

(iii) The PFs claim that "*the commercial benefits to raising prices are likely to be greater than suggested"*.[26] The Parties explain a paragraph 2.21(a) why this is incorrect.

(iv) The PFs set out that the "*the examples the Parties provided of operators launching new products or sub-brands were in the context of a purported increase in competitive pressure, rather than a decrease"*.[27] However, this does not rule out that rivals would respond to a price increase with a similar strategy. As explained by the Parties in the [REDACTED], the market is characterised by heterogenous consumers and multiple offers being provided by operators. This means that rivals may respond to a price increase by launching a new product or sub-brand in order to increase profits with only a limited impact on the margin on existing sales.

[23] PFs, Appendix E, para E.61(a).

[24] *Ibid.*

[25] [REDACTED].

[26] PFs, Appendix E, para E.61(b).

[27] PFs, Appendix E, para E.60.

3. The PFs' econometric analysis and merger simulation are based on an incomplete methodology and yield implausible results

3.1 The PFs set out a two-stage analysis that assesses consumer willingness to pay for better network quality and potential effects of the Transaction on consumer welfare, similar to the approach adopted by the Parties in their own quality-focused merger simulation analysis. These two stages include (i) an econometric estimation of consumer demand to quantify consumer preferences and drivers of tariff choice, and (ii) a merger simulation exercise building on the demand model to quantify the effects of the Transaction on prices and consumer welfare.

3.2 The PFs' demand estimation exercise:

(a) seeks to estimate consumer preferences for tariffs and operators. It relies on data on observed consumer tariff choices and uses econometric estimation to assess the extent to which consumers' choices of tariffs are driven by the prices of tariffs, tariff characteristics, network quality attributes, and socioeconomic factors proxied by an income metric and the consumer's age;

(b) serves a similar purpose as the Parties' own estimation of consumer demand underlying the quality-focused merger simulation. The main difference between the demand estimation undertaken by the Parties and in the PFs is that the PFs' analysis does not rely on stated-preference data obtained through a survey, but rather on revealed-preference data on actual historical tariff purchases;

(c) draws on various data sources, including information on (i) the tariffs in use for a sample of subscribers (**"Ofcom provider data"**), (ii) the tariffs available in the market at the time a subscriber chose a tariff (**"Pure Pricing data"**), (iii) the network coverage of each operator in the region around each consumer (**"Ofcom network data"**), and (iv) the network speed of each operator in the region around each consumer (**"Opensignal speed data"**); and

(d) finds that network quality is valued by consumers to a limited extent only – with 5G quality attributes not valued at all.

3.3 The PFs' merger simulation analysis:

(a) simulates the Transaction to assess the extent to which each operator in the market may change their tariff prices, and the extent to which consumers react by changing their selected tariffs. This results in a new set of tariff prices and consumer choices, which in turn makes it possible to quantify how the Transaction impacts the welfare of individual consumers. Therefore, the overall approach is, again, similar to that undertaken by the Parties in the quality-focused merger simulation exercise;

(b) predicts that the Transaction will lead to consumer welfare losses of the order of £328 million a year. The PFs also predict that low-income subscribers will be particularly adversely affected by the Transaction in terms of consumer welfare; and

(c) includes several robustness checks based on assumed alternative shapes of demand or margin measures, which predict that the Transaction leads to consumer welfare losses ranging from £362 million to £1,123 million a year.

3.4 The Parties have reviewed the PFs' analyses and consider that there are severe issues with both stages, such that its results cannot be relied upon. In particular:

(a) First, both the demand estimation and merger simulation are based exclusively on SIMO contracts, but the results are then generalised in order to draw conclusions for the entire market. Given the important differences between segments, these generalised conclusions cannot be considered reliable.

(b) Second, in constructing the SIMO sample used for the demand estimation and merger simulation, the CMA has included customers that are not on SIMO contracts, in particular those on split contracts, as well as some on handset, PAYG, or data only contracts. Correcting for this error materially reduces the modelled consumer harm from the merger simulation for VUK and 3UK.

(c) Third, the PFs' demand estimation is – by construction – unable to yield reliable estimates of consumers' valuations of network quality and tariff attributes, and is also subject to several methodological flaws and coding errors. It is therefore unsurprising that it yields implausible results.

(d) Fourth, the PFs' merger simulation exercise is an incomplete assessment of the effects of the Transaction because it does not consider REEs at all. Once REEs are considered, the results are directionally similar to those suggested by the Parties' quality-focused and capacity-focused merger simulations. This is despite the fact that the PFs' merger simulation relies on a demand estimation that systematically underestimates the value that consumers will attach to the quality benefits of the Transaction.

3.5 The Parties set out below their assessment of the PFs' analyses in more detail.

The PFs' models are narrowly focused on PAYM SIMO

3.6 The PFs' demand estimation and merger simulation analyses focus exclusively on the PAYM SIMO segment, but their results are generalised in order to draw conclusions for the entire market. This approach is incorrect for the following reasons:

(a) First, it assumes that subscribers have no alternative segments or tariff types to switch to in response to price or quality changes. This is an unduly restrictive assumption that imposes a limitation on the competitive constraints exerted on providers who offer PAYM SIMO tariffs.[28]

(b) Second, generalising the results beyond the SIMO segment is unreliable as each segment has distinct market dynamics. These include variations in pricing strategies and tariff features (in particular, contract length and data allowances), as illustrated in Table 3.1 below. For instance, the prices of SIMO contracts tend

[28] The CMA includes an 'outside good' option in its modelling, however this is insufficient to reflect the constraints that other segments such as Handset may pose on SIMO.

to be higher than PAYG, but lower than split-contracts. Unlimited data tariffs are also more commonly observed in the handset and split contract segments than in SIMO and PAYG. Such differences mean that results based only on SIMO contracts cannot be generalised across other types of tariffs without appropriate consideration.

Table 3.1: Comparison between segments of mean values for key tariff characteristics in the Provider Data

	Number of observations	**Price (£s)**	**Data allowance if is limited (GB)**	**If the tariff has an unlimited data allowance (0 or 1)**	**Contract length (months)**
SIMO	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Handset	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Split contracts	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
PAYG	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Notes: The number of observations corresponds to the number of subscribers being on a tariff for every month between January 2022 to June 2023. The Parties have undertaken some further cleaning steps on the non-SIMO tariffs to reflect more accurately their data allowance and price. We note that for Handset contracts, the price should also include the payment for the handset.
Source: Parties' data room analysis.

The PFs' econometric demand estimation

3.7 The PFs set out an econometric estimation of consumer demand for mobile services, and conclude based on this analysis that consumers do not attach any value or only very limited value to several network quality attributes. However, there are several fundamental problems with this analysis, such that it cannot support the PFs' conclusions:

(a) The PFs' econometric analysis incorrectly includes non-SIMO contracts in its sample.

(b) The revealed preferences approach adopted in the PFs is – by construction – unable to yield reliable estimates of consumers' valuation of the levels of network quality achieved by the JNP.

(c) The PFs' demand estimation is subject to several methodological flaws.

(d) The estimation yields implausible results.

3.8 These issues are discussed in more detail below.

The PFs' econometric analysis erroneously includes non-SIMO contracts in its sample

3.9 As described above, the PFs state that the econometric estimation is based on a sample of the Ofcom transaction data that relates specifically to PAYM SIMO customers. However, its dataset includes customers on split contracts and data-only contracts, as well as some customers on handset and PAYG tariffs. These customers make up [REDACTED] of the sample used for estimation.

3.10 It is unclear whether the inclusion of these contracts/tariffs is intentional or due to coding errors. However, these contracts should be excluded to improve the accuracy of the assessment in reflecting the SIMO segment for the following reasons:

(a) Split contracts are an alternative method of financing mobile devices, with airtime costs separated from device costs. While these contracts offer greater flexibility to customers, they typically involve slightly higher airtime costs than SIMO contracts for an equivalent data allowance, as they include the provision of a handset through an interest-free loan. Due to these pricing differences, split contracts cannot be equated with SIMO contracts and should therefore be excluded from the sample. The CMA itself recognised in its Phase 1 Decision that split contracts are part of handset deals, a view that is also supported by Ofcom's "Pricing Trends for Communication - December 2023".[29]

(b) The inclusion of split contracts in the sample is also inconsistent with the PFs' choice modelling approach, which is based on consumers choosing between different alternative options. Customers with split contracts cannot choose a different split contract deal in the market, as these contracts are not included in the Pure Pricing data.

(c) The CMA's sample also includes customers on data-only contracts as well as some customers on Handset and PAYG tariffs.

3.11 The Parties have conducted analyses to assess the impact of removing these contracts from the CMA's original sample.[30] Removing these non-SIMO contracts from the population before the sample is taken directly affects the willingness to pay ('**WTP**') estimates – particularly for tariff attributes – as well as the overall impact of the Transaction on consumer welfare. Specifically:

(a) WTP for data allowance increases significantly. The implied median WTP for an extra 10 GB of data increases and becomes positive ([REDACTED], compared to -[REDACTED] in the CMA's model). This change is consistent with the likely effect of incorrectly including split contracts in the sample: as split contracts typically involve slightly higher airtime costs than SIMO contracts

[29] Paragraph 135 of the CMA's Phase 1 decision states *"By contrast, PAYM handset tariffs (either in a combined or split contract) accounted for 37% or all mobile subscriptions in Q2 2023"*.

[30] In particular, the Parties have removed the relevant non-SIMO tariffs from the Ofcom provider data set, and then re-drawn the sample of 10,000 customers using the CMA's sampling method. This results in a revised data set used for the demand estimation and merger simulation exercises.

for an equivalent data allowance, customers on split contracts will appear to have chosen a more expensive SIMO tariff when a SIMO tariff with the same characteristics (in particular data allowance) would have been available. This leads the model to incorrectly predict that consumers place no value on an additional 10GB of data allowance.

(b) While WTP for additional data improves, WTP for network quality attributes remains largely unchanged.

(c) Adjusting the sample to correct for this error also leads to material changes in the merger simulation results. Smaller negative welfare effects are predicted in the scenario without considering REEs, and larger positive welfare effects result in scenarios accounting for REEs (see paragraph 3.29 et seq. below for detail).

The revealed preferences demand estimation approach is by construction unable to render reliable estimates of consumer quality valuation

3.12 The PFs' demand estimation is – by construction – unable to obtain reliable estimates of consumer valuation of network quality for several reasons.

3.13 First, the PFs' econometric model measures the importance that consumers attach to *local* levels of network quality only, failing to capture the importance that consumers attach to *nationwide* levels of network quality.

3.14 There are two sets of explanatory variables in the econometric model that may capture the effect of network quality on tariff choices:

(a) measures of outdoor coverage and 4G and 5G upload and download speeds in the Travel to Work Area ("**TTWA**")[31] that a consumer lives in; and

(b) brand fixed effects, i.e., variables that measure consumers' propensity to choose tariffs offered by a given brand.

3.15 The coverage and speed variables only measure the valuation that a consumer attaches to network quality in the local area that they live in. Any consideration of a brand's *nationwide* network quality can only be captured by the brand fixed effects included in the PFs' model. However, these fixed effects also capture other brand-specific factors that influence tariff choices, for example a brand's marketing effort, brand image, or the quality of the customer service offered. This means that in the PFs' model, the network quality associated with a specific brand at a national level cannot be assessed separately from other brand-specific attributes.

3.16 As a consequence, the model specification fails to adequately capture consumers' willingness to pay for network quality. It is likely that network quality levels outside a consumer's specific TTWA – for example, across the entire network or elsewhere in the country – are also important for that consumer's tariff choice, as many consumers

[31] TTWAs are geographic areas created by the Office of National Statistics to approximate local labour markets. There are 228 TTWAs in the UK. See https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/traveltoworkareaanalysisingreatbritain/2016.

wish to use their mobile phones outside of home, work, and the commute, such as when visiting friends and family, going on holiday or leisure trips, and travelling for business reasons.[32] Brands routinely market themselves based on their national network performance – for example, BTEE describes itself as *"The UK's Best Mobile Network"*.[33] Given that network performance at the national level is relevant for consumer choice and the PFs' demand estimation model only takes network quality into account at a narrow local level, the results will systematically understate consumers' valuation of network attributes.

3.17 Second, the PFs only consider outdoor coverage and average speeds – a subset of the relevant network quality measures that can be expected to drive a consumer to choose a specific provider or tariff. There is a wide range of other relevant network quality attributes[34] that are expected to improve substantially as a result of the Transaction but which are not considered in the PFs' model. Notably, the model does not include any indicator to capture the reliability of a network connection, which is likely to be highly valued by consumers but is not captured by average speed measures.[35] This is the reason why the Parties' quality-focused analysis considers minimum speed levels, which reflect the extent to which consumers are able to achieve good connections at peak times or in complicated locations (e.g., at the cell edge or indoors).

3.18 The PFs should have considered (and statistically tested) whether such factors are empirically relevant given the available data. However, the analysis presented in the PFs simply disregards these factors.

3.19 Third, the revealed preference approach adopted in the PFs can only assess consumers' views on the levels of network quality already available in the market at the time of data collection. As Table 3.2 below shows, the median 5G coverage in a consumer's TTWA is only [REDACTED]%. This implies that [REDACTED] of the consumers in the PFs' analysis have less than [REDACTED]% 5G coverage in their local TTWA. Even this figure is likely an overestimate of the actual penetration of 5G amongst consumers in the PFs' data sample, as not all consumers will have a 5G-compatible handset or service plan. Given that many consumers have had limited exposure to 5G technology, it is unsurprising that the PFs' estimation attributes a limited relevance to 5G for consumer choice. It would be wrong to conclude that consumers will remain indifferent to 5G; rather, this finding reflects that the PFs' estimation strategy is incapable of reliably predicting consumers' future valuation of 5G as the technology is rolled out.

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[32] As discussed in section 5 of **PF Annex 1**, the nature of mobile services is such that customers need to be able to use their mobile devices where they are, rather than at just one fixed location such as their home or their workplace. As such, having a good network only in some places is not sufficient to attract and retain customers if they experience poor coverage and high congestion when they are in other locations.

[33] See e.g., https://newsroom.ee.co.uk/ee-named-uks-best-mobile-network-for-ten-years-in-a-row/.

[34] See [REDACTED] of RFI [REDACTED].

[35] See, for example, [REDACTED].

Table 3.2: Summary of quality metrics in PFs' data sample

Metric	4G Coverage	5G Coverage	4G Download speed	5G Download speed	4G Upload speed	5G Upload speed
Minimum	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
25th percentile	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Median	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
75th percentile	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Maximum	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Average	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Source: Parties' data room analysis.

3.20 More importantly, the historical levels of network quality observed in the data are far below those expected once the JNP is implemented. These improved network quality levels are summarised in Table 3.3 below. On both coverage and speeds, MergeCo will deliver a step change in quality to reach levels that are unlike anything currently observed in the market. Therefore, the revealed-preference approach adopted in the PFs is unable to capture consumers' valuation of such levels of quality. Estimating these valuations is only possible under a stated preference approach, which the Parties adopted for the demand estimation underlying the quality-adjusted merger simulation.

Table 3.3: Comparison of current standalone KPIs and MergeCo KPIs in 2030

KPI	**Current value** **Standalone networks**		**2030** **MergeCo**
4G geographic coverage (%)	3UK	80.5	[REDACTED]
	VUK	83.3	
5G C-band population coverage (%)	3UK	61.0	[REDACTED]
	VUK	43.0	
Average maximum speed (Mbps)	Weighted average	[REDACTED]	[REDACTED]

*Source: Current 4G geographic coverage and 5G C-band population coverage are sourced from Ofcom Connected Nations report (September 2023), as 4G geographic coverage, and 5G high-confidence (of which 3GHz) for each MNO. Current Average maximum speed is the weighted average of the Parties' speeds. [**REDACTED**].*

Other methodological issues with the PFs' econometric analysis

3.21 Beyond the inadequate treatment of network quality, the PFs' econometric analysis exhibits other key issues:

(a) The PFs' estimation does not address the endogeneity of prices.

(b) The PFs' estimation fails to consider several important drivers of consumer choice.

3.22 First, the main tariff attribute included in the PFs' model – namely, the price of a tariff – is assumed to be an exogenous variable: the PFs assume that the price of a tariff influences its level of demand, but that the demand for a tariff does not influence its price. The PFs have not appropriately considered potential endogeneity, i.e. the possibility that high demand for a product increases the price that the operator will charge for it. This issue of endogeneity in price is well-known in the context of the econometric estimation of demand based on revealed preferences data, and is likely to result in biased estimates of price sensitivity, a key driver of the merger simulation results.[36] The PFs should have addressed potential endogeneity:

(a) The PFs argue that endogeneity is unlikely because the analysis uses rich information on product and network characteristics such that *"it is unlikely* […] *that customers' decisions were driven to a significant extent by product and network characteristics that are not observed"*.[37] This is incorrect: the CMA's demand estimation fails to consider several important network[38] and product[39] characteristics that affect consumer choice.

(b) The economic literature has developed well-established methods to address endogeneity, dating back to the work of Berry, Levinsohn and Pakes[40] (**"BLP"**).[41] The PFs also themselves reference academic studies on the telecommunications industry that argue that endogeneity is a serious issue and use the BLP methodology to address it.[42]

3.23 Second, the PFs' analysis fails to properly consider several relevant tariff features that may affect tariff choices. This may result in omitted variable bias, where the estimates of other variables that are included in the model may be capturing the effects of the variables that were not included. In order to construct the final dataset for the analysis, the CMA (i) drew a sample of 10,000 observations (roughly 0.5% of the total) from the Ofcom provider data, (ii) combined those observations with information from its other sources, (iii) cleaned the data, and (iv) constructed several new variables. This process suffers from several inadequacies which are likely to distort and bias the results of the

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36 H. Working (1926). What Do Statistical Demand Curves Show? Quarterly Journal of Economics 41, 212-235.

37 PFs, paragraph D.38.

38 See above, paragraph 3.17.

39 See below, paragraph 3.23.

40 Berry, S., Levinsohn, J., & Pakes, A. (1995). Automobile prices in market equilibrium. Econometrica: Journal of the Econometric Society, 841-890.

41 PFs, paragraph F.22

42 PFs, paragraph D.43. In contrast, the Parties' demand estimation exercise is based on experimental data where prices are exogenous by construction, and do not suffer from this type of bias.

analysis, which means that no reliable conclusions can be drawn from it. These inadequacies relate to the following:

(a) **The treatment of "extras":** while the model includes a variable indicating whether a tariff includes "extras" (e.g. an Amazon voucher, a Spotify subscription), this variable does not differentiate between the types, the values, or the number of extras offered with a tariff. By bundling all extras together into a single explanatory variable, the modelling eliminates a key driver of price variation, and assumes that all extras have the same value. This is inaccurate and can lead to biased results.[43] In addition, the improper treatment of extras may lead to a mis-estimation of utility and price sensitivity in cases where extras are close to cash equivalents – for example, in the case of a voucher or a free Netflix subscription, the extra acts as a discount to the overall price of the services, and should therefore be accounted for in the customers' utility.

(b) **Improper accounting of roaming allowances:** while the PFs' analysis includes roaming allowances within the extras variable, it fails to account for the size of the roaming allowance and number of destination countries, which are often key drivers of tariff prices. Moreover, the analysis does not consider whether the roaming allowance is offered alongside any extras, which is again likely to lead to omitted variable bias.

(c) **Identifying whether a tariff includes unlimited data:** while the PFs' analysis constructs a variable that indicates whether it offers unlimited data, the construction of this variable suffers from an apparent coding error. Although the data may describe a tariff as including "unlimited data", this information is not reflected in the coding of the relevant variable. Instead, the coding relies exclusively on information from a separate 'data allowance' field which may contain incomplete or missing information.

3.24 Due to the limited time available to review the PFs' analysis, the Parties have been unable to conduct a full analysis of the impact of correcting for each of the processing errors on the results of the modelling. However, the fact that the PFs' dataset includes tariffs that should not be included in the analysis (as discussed above) and relies on miscoded explanatory variables means that the estimated influences of all explanatory variables – and not only those directly affected by miscoding – is likely to be compromised.

The PFs' demand estimation yields implausible results

3.25 The PFs' demand estimation exercise yields a number of implausible results. This is not surprising given the methodological issues described above. The Parties consider

[43] For example, consider the case of two contracts: contract A, which includes two extras, a Spotify subscription and 500 international calling minutes, and contract B, which only includes 500 international minutes. While these contracts represent distinct options and are likely priced differently, this variation is not captured in the PFs' modelling, and there is no other variable in the dataset that could explain the price difference between the two.

that the very nature of these implausible findings is evidence that the PFs' model cannot capture the full extent to which consumers may value network quality attributes.

3.26 Table 3.4 below sets out a summary of consumers' estimated willingness to pay for various tariff attributes based on the PFs' model. The model was designed to allow for the willingness to pay for an attribute to vary by consumer age. Several of its results are highly implausible. Taken at face value, they would imply that:

(a) Consumers (of any age) have a negative willingness to pay for better 5G coverage, other things equal. The implication of this finding would be that consumers would be prepared to pay higher prices if MNOs shut down their 5G networks.

(b) Consumers under the age of 30 have a negative willingness to pay for higher 4G download speeds, while older individuals have a positive willingness to pay. The implication is that younger customers would be willing to pay more if MNOs slowed down their 4G speeds.

(c) Conversely, older consumers of age 50 or above have a negative monetary valuation of a higher 4G upload speed. This implausible result suggests that providers could decrease upload speeds and older consumers would be willing to pay more for their tariffs as a result.

(d) The median consumer has close to zero monetary valuation of an additional 10GB of data allowance and consumers older than 50 would pay to have their data allowances reduced. This finding is fundamentally at odds with the fact that operators charge higher prices for tariffs with larger data packages, other things equal.

Table 3.4: Summary of willingness to pay from PFs' estimated demand model

Age	5G coverage (per 10pp increase)	4G Download speed (per Mbps)	4G Upload speed (per Mbps)	Data allowance (if limited) (per GB)
20	-£0.05	-£0.21	£0.56	£0.07
30	-£0.08	-£0.04	£0.24	£0.04
40	-£0.09	£0.09	£0.02	£0.02
50	-£0.10	£0.18	-£0.16	£0.00
60	-£0.11	£0.26	-£0.30	-£0.02
70	-£0.12	£0.32	-£0.42	-£0.03
80	-£0.13	£0.38	-£0.53	-£0.04
90	-£0.14	£0.43	-£0.62	-£0.05

Notes: Figures assume the median income from the PFs' data sample. Red and green shading indicates if the value is below or above zero, respectively.
Source: Parties' data room analysis.

3.27 The above implications are not consistent with any realistic view of consumers or MNOs in the UK mobile market.

Merger simulations

3.28 The PFs' merger simulation exercise is based on the results of the demand estimation. The simulation predicts that the Parties and their competitors would increase prices, resulting in a reduction in consumer welfare. The PFs also set out several robustness checks that consider alternative assumed forms of demand to assess the impact on consumer welfare.

3.29 However, neither the PFs' main analysis nor any of the robustness checks consider the REEs brought about by the Transaction. Hence, the analysis is incomplete and inherently overstates any alleged consumer harm. This clearly leads to inaccurate results, given that:

(a) the PFs themselves concede that at least some of the network quality improvements put forward by the Parties are likely to materialise, will be timely, and may benefit consumers; this includes in particular the improvements in coverage and download speeds achieved as a consequence of MOCN and the sharing between the Parties of 1800 MHz spectrum in the first year after the Transaction ("Day 1");[44] and

(b) as is shown in **PF Annex 1** and **PF Annex 3**, the PFs are wrong to disregard the capacity efficiencies – i.e., the incentive for MergeCo to reduce prices as a result of having lower incremental costs of adding capacity than the standalone Parties – and to downplay a large proportion of the quality efficiencies.

3.30 As explained in the following subsections, once REEs are properly accounted for, the CMA's own merger simulation model produces results that are very similar to those of the Parties' capacity-focused and quality-focused merger simulation models:

(a) Even in the unrealistic scenario without any efficiencies (the only one considered in the PFs), the predicted welfare losses are very moderate.

(b) **Taking only cost efficiencies into account** already yields a neutral outcome, i.e., the cost efficiencies alone are sufficient to prevent any welfare losses.

(c) **Taking only the quality efficiencies achieved at Day 1 into account** results in a prediction of substantial consumer welfare gains, i.e., the Transaction is revealed as pro-competitive.

(d) **The results of incorporating both cost and Day-1 quality efficiencies** results in a prediction of an even larger increase in consumer welfare, further confirming that the Transaction will be pro-competitive.

(e) The pro-competitive effect of the Transaction benefits consumers of all income levels, i.e., low-income customers will also be better off after the transaction.

3.31 The results presented below focus on the changes in consumer welfare resulting from the Transaction, as consumer welfare captures all the benefits to consumers from the REEs resulting from the Transaction, namely quality improvements (e.g. increased download speeds, coverage improvements) and the impact of MergeCo's significantly

[44] PFs, paragraphs 14.74 and 14.75.

higher capacity (allowing customers to benefit from a lower price per GB, as explained further in PF Annex 3).

Scenario without efficiencies results in very moderate welfare losses

3.32 The Parties have replicated the PFs' baseline merger simulation findings, which rely on the unrealistic assumption that the Transaction will not generate any REEs. Detailed results are shown in Table 3.5 below.

3.33 The results are very similar to those of the Parties' merger simulation analyses for a no-efficiencies scenario. The model predicts that consumer welfare would reduce; however, the Parties have also replicated the PFs' baseline merger simulation using a dataset which correctly excludes non-SIMO tariffs. This correction results in a considerably lower predicted welfare reduction compared to the PFs' model (-£207m vs -£329m).

Table 3.5: Results from PFs' baseline merger simulation

	No efficiencies	
Predicted changes with respect to a scenario without MergeCo	**CMA sample**	**Corrected sample**
Change in average welfare across all consumers		
In percentage terms	-1.5%	-1.3%
In million £ per annum	-£329	-£207

Source: Parties' data room analysis.

3.34 As noted above, the PFs also set out several robustness checks for its estimate of consumer harm based on alternative assumed forms of demand. These robustness checks suggest that market-wide consumer welfare losses could reach up to £1,123 million per year. However:

(a) The Parties note that the latter result is based on an outlier – most of the PFs' robustness checks predict consumer welfare losses of less than £400 million per year, i.e., render results that are similar to those of the baseline estimation.

(b) Moreover, this extreme result is driven by the margins assumed for this exercise, specifically the use of Contribution Margin A. The Parties have set out at Section 2 above why Contribution Margin A should not be relied upon, and why other margin estimates are more appropriate and better reflect actual conditions in the market.

Scenario with capacity efficiencies yields a welfare-enhancing result

3.35 As set out in **PF Annex 3** section 5, the PFs are wrong to disregard the capacity efficiencies, i.e. the substantial reduction in the incremental cost of adding capacity brought about by the Transaction. These capacity efficiencies will provide incentives for MergeCo to reduce prices, which need to be balanced against any upward pricing pressure caused by the elimination of rivalry between the Parties.

3.36 The Parties have therefore applied the CMA's model to a scenario where the capacity efficiencies are taken into account. The results are set out in Table 3.6 below.

Table 3.6: Results from PFs' merger simulation incorporating cost efficiencies

Predicted changes with respect to a scenario without MergeCo	Cost efficiencies	
	CMA sample	Corrected sample
Change in average welfare across all consumers		
In percentage terms	0.4%	1.7%
In million £ per annum	£92	£265
Proportion of customers experiencing welfare improvement	81.0%	95.2%

Source: Parties' data room analysis.

3.37 As a result, the CMA's model (without correcting for sample issues) predicts that consumer welfare increases by 0.4% on average, amounting to a market-wide consumer welfare gain of around £92m per year. This represents an increase in consumer welfare of £421m compared to a scenario absent any REEs.

3.38 Using a dataset which correctly excludes non-SIMO tariffs, the CMA's model accounting for cost efficiencies predicts that consumer welfare increases by 1.7% on average, equivalent to a market-wide consumer welfare gain of £265m.

Scenario with Day 1 quality efficiencies shows Transaction is pro-competitive

3.39 The PFs accept that at least some Day 1 quality efficiencies will materialise.[45] The Parties have previously demonstrated that a substantial proportion of the quality benefits of the Transaction will materialise on or close to Day 1, including an increase in download speeds during Year 1 of [REDACTED] on average and an average increase of 4G geographical coverage of [REDACTED] for VUK and 3UK customers.[46] [47]

3.40 Despite the flaws of the PFs' demand estimation model described above, this analysis still finds that consumers attach substantial value to improvements in download speeds:

(a) A 5Mbps increase of 4G download speeds is valued at £0.86 per customer per month on average.[48]

(b) A 1pp increase in 4G coverage is valued at [REDACTED] per customer per month on average.[49]

(c) While the PFs find that an increase in 5G download speeds is not valued at all, the PFs concede themselves that this result is not reliable.

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45 PFs, paragraph 14.192.

46 Note that, in 2025, 3UK and VUK standalone would have [REDACTED] geographic 4G coverage, while MergeCo in the equivalent time period would have [REDACTED] geographic 4G coverage.

47 [REDACTED].

48 PFs, paragraph D.51.

49 The Parties have calculated this figure using CMA's demand estimation results, along with the median income and age from the data room.

3.41 The Parties have therefore run the CMA's merger simulation model for a scenario in which:

(a) Day 1 4G geographic coverage improvements are realised on MergeCo's network, which benefits the customers of MergeCo and the MVNOs hosted by it;[50]

(b) the Day 1 download speed increases are realised on MergeCo's network (so that the increased speed is enjoyed by consumers that purchase tariffs offered by 3UK, VUK, or the MVNOs hosted by 3UK and VUK);[51] and

(c) the speed increase and coverage improvement are valued by consumers as quantified by the CMA's demand estimation.

3.42 The results are set out in Table 3.7 below.

Table 3.7: Results from PFs' merger simulation incorporating Day 1 quality improvements

Predicted changes with respect to a scenario without MergeCo	**Quality improvements**	
	CMA sample	**Corrected sample**
Change in average welfare across all consumers		
In percentage terms	2.3%	4.4%
In million £ per annum	£510	£672
Proportion of customers experiencing welfare improvement	74%	99%

Notes: Figures assume a [REDACTED] average increase for 4G download speeds, and an increase in 4G geographic coverage.
Source: Parties' data room analysis.

3.43 As a result, the PFs' model predicts that consumer welfare increases by 2.3% on average, amounting to a market-wide consumer welfare gain of around £510m per year. Therefore, even if only the quality benefits that the PFs themselves recognise are accounted for, the PFs' own merger simulation model confirms that the Transaction will be substantially pro-competitive and benefit consumers.

3.44 Using a dataset which correctly excludes non-SIMO tariffs, the CMA's model accounting for such quality improvements predicts that consumer welfare increases by 4.4% on average, equivalent to a market-wide consumer welfare gain of £672m per year.

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[50] This has been incorporated into the PFs' model by assuming that in each 100m x 100m coverage area, the maximum 4G coverage of 3UK and VUK would apply. This is then aggregated across TTWAs using the CMA's approach. The Parties have not considered a coverage improvement for 5G given the concerns regarding the reliability of the PFs' valuation estimate for 5G.

[51] This has been incorporated into the PFs' model by taking the mid-point of the observed pre-merger 4G download speed values for VUK and 3UK from the OpenSignal data in a given TTWA. That mid-point value is then assumed to increase [REDACTED] post-Transaction. The Parties have not considered a download speed improvement for 5G given the concerns regarding the reliability of the PFs' valuation estimates for 5G quality attributes.

3.45 It is important to note that these results are likely to be conservative, as they ignore all of the other quality improvements – other than Day-1 increases of download speeds and coverage improvements – that the Transaction will bring about and that can be expected to further improve consumer welfare. These include substantially wider C-Band 5G coverage, an increase in network reliability (as captured by P10 speeds), a further increase in network coverage, and reductions in network latency. However, given the limitations of the PFs' model, it is not directly possible to quantify the effect of these benefits as:

(a) The PFs' demand estimation model does not include any variable to capture network reliability or latency; and

(b) It is impossible to measure the effects of 5G using the PFs' revealed preference methodology.

3.46 The results also do not capture the improvement in VMO2's network quality following the Transaction, via the upgraded Beacon 4.1 agreement, nor that, given the importance of quality as a competitive parameter, VMO2 and BTEE will have incentives to invest in improving their own network quality in response to MergeCo's improved network.[52] These effects will have a further pro-competitive impact.

Scenario with both capacity and Day 1 quality efficiencies

3.47 Having considered the effects on consumer welfare from capacity efficiencies and Day 1 quality improvements in isolation, the Parties have also jointly incorporated both the capacity efficiencies and quality improvements as set out above into the PFs' model. The results of this are set out in Table 3.8 below.

Table 3.8: Results from PFs' merger simulation incorporating capacity efficiencies and quality improvements

Predicted changes with respect to a scenario without MergeCo	Capacity efficiencies and quality improvements	
	CMA sample	Corrected sample
Change in average welfare across all consumers		
In percentage terms	4.4%	7.8%
In million £ per annum	£966	£1,203
Proportion of customers experiencing welfare improvement	88%	100%

Notes: Figures assume a [REDACTED]% average increase for 4G download speeds, and an increase in 4G geographic coverage.
Source: Parties' data room analysis.

3.48 As expected, including both capacity and quality efficiencies leads to a prediction of even larger consumer welfare gains, **in excess of £966 million per year**. Using a dataset which correctly excludes non-SIMO tariffs, the CMA's model accounting for both efficiencies predicts an even larger increase in consumer welfare of £1,203 million, benefitting effectively 100% of customers – including those with lower

[52] See [REDACTED].

incomes. This further confirms that the Transaction will be substantially pro-competitive, even when only the Day 1 benefits are taken into account.

Low-income customers will also benefit from the Transaction

3.49 The PFs are particularly concerned with the potential effects of the Transaction on customers with low incomes. Based on the PFs' merger simulation model, they conclude that low-income customers will be disproportionately affected, as they will tend to suffer larger percentage welfare losses than the average consumer.

3.50 These concerns are unsupported, for the following reasons.

3.51 First, as pointed out above, the CMA's own merger simulation model shows that, once quality efficiencies alone are taken into account, the Transaction is pro-competitive and beneficial for consumers. This is also true for low-income consumers in particular:

(a) The Parties have assessed the welfare effects predicted by the CMA's model for the scenarios with REEs separately for customers of different income levels. The results are shown in Table 3.9 below.

(b) As can be seen, the CMA's model predicts welfare increases for customers of all income levels. In fact, the relative welfare gain (in percentage terms) compared to the counterfactual is highest for consumers with an income below £1,500 per month.

(c) Using a dataset which correctly excludes non-SIMO tariffs, the CMA's model accounting for quality efficiencies predicts even larger welfare increases for customers of all income levels, including those on the lowest incomes. It continues to be the case that consumers with lower incomes benefit the most in relative welfare terms.

Table 3.9: Welfare effects of PFs' merger simulation incorporating quality improvements by income group

	CMA sample		Corrected sample	
Predicted changes with respect to a scenario without MergeCo	**Quality improvements**	**Cost efficiencies and quality improvements**	**Quality improvements**	**Cost efficiencies and quality improvements**
Change in average welfare (%)				
Income below £1,500 per month	2.9%	5.9%	6.2%	11.1%
Income between £1,500 and £2,500 per month	2.4%	4.7%	4.6%	8.4%
Income above £2,500 per month	2.0%	3.4%	3.5%	6.0%
Average across all consumers	2.3%	4.4%	4.4%	7.8%
Change in average welfare (£ per year)				
Income below £1,500 per month	£2.81	£5.64	£3.67	£6.52
Income between £1,500 and £2,500 per month	£5.63	£10.89	£7.42	£13.48
Income above £2,500 per month	£9.72	£16.95	£12.86	£22.20
Average across all consumers	£5.69	£10.79	£7.51	£13.44

Notes: Figures assume a [REDACTED] average increase for 4G download speeds, and an increase in 4G geographic coverage.

3.52 Second, even if the merger simulation results for the (unrealistic) scenario without any efficiencies could be relied upon (*quod non*), they would not warrant the PFs' particular concern about low-income customers. This is because the result that such customers would be disproportionately affected by the Transaction is to a large extent driven by assumptions imposed on the model, rather than any market-specific factors reflected in the data:

(a) As the PFs themselves state, one of the key drivers of the result is that *"in the estimated model lower income consumers are more price sensitive so are both more likely to switch to less desirable products post-Merger and dislike higher prices more"*.[53]

(b) However, low-income consumers being more price-sensitive is not an output of the model – i.e., it is not a result estimated based on the available data. Rather, it is an input - one of the assumed characteristics of the demand model used.[54]

(c) While the assumption that low-income customers are more price sensitive may be plausible, a merger simulation model that relied on that assumption would inherently find a similar result – low-income customers being more affected by merger-induced price increases than high-income customers – for any horizontal merger in any market. It therefore seems misleading for the PFs to give such prominence to this finding in the context of the Transaction.

4. The CMA's critique of the Parties' capacity-based merger simulation

4.1 The PFs agree that the capacity-focused merger simulation model can in principle be appropriately used as a tool for assessing the long-run impact of the Transaction, and that its key features are suitable for making such an assessment.[55] These key features are as follows:

(a) Changes in congestion levels affect consumers' demand for mobile services. Consumers are assumed to reduce demand in reaction to an increase in congestion.

(b) Operators' investments in capacity affect consumers' demand through their impact on congestion.

4.2 However, the PFs express reservations regarding the robustness of the capacity-focused merger simulation in relation to:

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[53] PFs, paragraph D.96(a).

[54] In particular, the demand model used by the PFs' defines that a consumer's utility is affected by the ratio of the tariff price to the consumer's income. This mechanically means that – for a given price – a low-income consumer will have lower utility than a higher-income consumer. This means that a given price increase will have a larger effect on the consumer's utility function, which may prompt the consumer to be more reactive to price changes than higher-income consumers.

[55] PFs, Appendix F, paragraph F.61.

(a) the validity of certain inputs used to calibrate the model or characterise the pre-Transaction base case;

(b) the way in which the model captures how changes in congestion levels experienced by consumers affect their demand responses to price changes; and

(c) the choice of functional form used for the model's demand and investment cost functions.

4.3 Building on the explanations provided in the [REDACTED] and in the [REDACTED] to RFI [REDACTED], the Parties provide further clarity below on each of these points and address the concerns expressed in the PFs in full.

4.4 To address these concerns, the Parties have produced new versions of the model which implement the PFs' proposed alternative modelling and calibration approaches. These show that the conclusions of the capacity-focused merger simulation model are unchanged based on all of these approaches, i.e.:

(a) when using subscriber base margins instead of acquisition margins;

(b) when using a non-linear demand function (as also used by the CMA) instead of a linear demand function – including when calibrated using subscriber base margins; and

(c) when increasing the convexity of the investment cost function.

4.5 These results confirm that the CMA should accept the model as providing a robust way of quantifying the capacity efficiency, and that the long-term capacity increasing effects of the Transaction are material and create benefits which are passed on to consumers. The Parties estimate that the additional capacity resulting from the Transaction will have a major positive impact on the market, worth at least an additional £290m per annum. [56]

4.6 Across all of these alternative specifications, the Parties have demonstrated that the long term effect of the JNP will offset any SLC. As shown in Table 4.1 below:

(a) any upwards pricing pressure will be offset;

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[56] This is based on the difference in the predicted welfare effects of the capacity-focused merger simulation model between i) a scenario absent any efficiencies, and ii) a scenario accounting for capacity efficiencies. The underlying calculations are provided in **PF Annex 6**.

When using a logit demand function calibrated using subscriber margins, the predicted welfare effect absent efficiencies is -£115m per year, and the predicted welfare effect accounting for capacity efficiencies is £176m per year, i.e. the value of the capacity efficiencies is equal to £176m + £115m = £290m.

When using the base case of the model (i.e. the Singh-Vives demand function with acquisition margins), the predicted welfare effect absent efficiencies is -£301m per year, and the predicted welfare effect accounting for capacity efficiencies is £62m per year, i.e. the value of the capacity efficiencies is equal to £62m + £301m = £363m.

(b) MergeCo's capacity will increase substantially; and

(c) the Transaction is welfare-neutral.

Table 4.1: Capacity-focused merger simulation model – Summary of alternative specifications

Scenario		Change in market-wide congestion-adjusted prices (%)	MergeCo's capacity uplift (%)	Change in consumer welfare (%)
Baseline		*-0.3%*	*64%*	*0.7%*
Sensitivities	Using subscriber margins	0.3%	62%	-0.4%
	Using a homogeneous logit demand function	-1.2%	67%	7.7%
	Using a homogeneous logit demand function and subscriber margins	-1.2%	67%	7.7%
	Increasing the convexity of the investment cost function	[-0.2% ; 0.1%]	[48% ; 58%]	[-0.1% ; 0.4%]

Source: Frontier Economics.

The inputs used to calibrate and characterise the base case of the capacity-focused merger simulation model are based on valid and robust assumptions

4.7 The PFs question the validity of certain inputs used to calibrate and characterise the pre-Transaction base case of the model:

(a) On the use of acquisition margins instead of subscriber base margins, the PFs submit that "*the margins best suited to calibrate the base case for an analysis of the long-run impact of the Merger should reflect the profitability earned on subscribers over their expected tenure with the firm - not just the profits gained from the first contract*".[57]

(b) On the choice of proxy for investment levels, the PFs point out that the pre-Transaction investment levels used in the model are based on MNOs' average investments made between 2017-2022,[58] which may not be reflective of those in the counterfactual.

The appropriate margin to use in the context of the capacity-focused merger simulation model

4.8 An operator's subscriber base is made up of three groups of customers: recently acquired, recently retained and existing customers. The Parties' contribution margins vary across these groups as there are different competitive dynamics and costs related

[57] PFs, Appendix F, paragraph F.65.

[58] [REDACTED].

to them joining/staying on the network.[59] The Parties consider acquisition margins to be the most appropriate margin measure to use in the context of the capacity-focused merger simulation model.[60]

4.9 The primary aim of the (variable) margin in the capacity-focused merger simulation model is – contrary to the PFs' interpretation – not to capture the profitability of customers over their average tenure, but to calibrate consumers' price elasticities.[61] In practice, all else equal, the larger (smaller) the margin, the lower (higher) the implied switching away from MergeCo in the event of a given price increase.

4.10 Therefore, the margin that the Parties earn on the customers that they are currently acquiring in the market provides the best proxy for this margin, as this is the measure available that most closely reflects the levels of switching by VUK's/3UK's contestable customers (i.e. those customers who would switch in the event of a price increase).

4.11 On the other hand, using margins earned for the full subscriber base would capture many customers who are not contestable, and as a result this approach would incorrectly assume that customers are *less* price elastic (i.e. less likely to respond to an increase in price) than in reality.

4.12 Therefore, using subscriber base margins would overstate the extent of any upwards pricing pressure post-Transaction. Nonetheless, as explained in the Parties' previous submissions, even when using subscriber base margins the conclusions of the capacity-focused merger simulation model remain unchanged (see Table 4.2 below):[62]

(a) the increase in investment/capacity delivered by the Transaction efficiencies and upgraded Beacon arrangements – and the resulting impact on competition and congestion – are sufficient to offset any upwards pricing pressure from the Transaction, with market-wide congestion-adjusted prices changing by only 0.3%;

(b) VMO2's and BTEE's nominal and congestion-adjusted prices decrease in response to the reduction in MergeCo's quality-adjusted prices and, for VMO2, also as a result of its increase in capacity from Beacon 4.1;

(c) MergeCo's capacity increases substantially, by 62%; and

(d) the Transaction is welfare-neutral.

[59] This applies to post-paid subscribers only, as explained in [REDACTED].

[60] [REDACTED].

[61] [REDACTED].

[62] [REDACTED].

Table 4.2 Capacity-focused merger simulation model – modelling results using acquisition margins and subscriber margins (with efficiencies)

	Base case *Acquisition margins*	**Sensitivity** *Subscriber margins*
Average change in congestion-adjusted prices (%)		
Market-wide	-0.3	0.3
MergeCo	0.8	2.0
VMO2	-1.0	-0.7
BTEE	-0.8	-0.5
Average change in nominal prices (%)		
Market-wide	0.6	1.3
MergeCo	3.2	4.5
VMO2	-0.7	-0.3
BTEE	-0.8	-0.5
Average change in investment in capacity (%)		
Market-wide	9.4	8.7
MergeCo	17.8	16.2
VMO2	4.5	4.4
BTEE	-0.4	0.0
Change in consumer welfare (%)	0.7%	-0.4%
MergeCo's total capacity uplift (%)	64%	62%

Source: Frontier Economics, [REDACTED].

The choice of proxy for pre-Transaction investment levels

4.13 As explained in detail in [REDACTED] of RFI [REDACTED], the choice of proxy for pre-Transaction investment levels does not have an impact on the predicted post-Transaction outcomes of the capacity-focused merger simulation model, such as the relative changes in price and investment.

4.14 Whether the model uses MNOs' historical investment levels[63] or – as the PFs suggest – future investment levels[64] to characterise the firms' investment levels in the pre-Transaction base case of the model has no impact on the model's post-Transaction predictions (see [REDACTED] of RFI [REDACTED]).

How changes in congestion affect demand and the effect on firms' pricing incentives

4.15 The PFs express concern that the model's approach to modelling demand, congestion and capacity results in equilibrium prices falling as investment in congestion reduction increases, and that "*While we do not rule out that firms may optimally choose to cut*

[63] The capacity-focused merger simulation model uses [REDACTED] to proxy for pre-Transaction investments in capacity. To account for the cyclical nature of capex, the Parties use [REDACTED]. See [REDACTED].

[64] PFs, Appendix F, paragraph F.67.

price when making quality-improving capacity investments, we do not think it desirable to rule out that it may be optimal for firms to instead increase prices in this situation".[65]

4.16 In addition, the PFs note that this modelling approach "*does not appear to be shared by other academic papers that have sought to model demand, price, congestion, and capacity in the mobile industry*". The PFs cite two academic papers to substantiate this claim.[66]

4.17 First, the model does not preclude the possibility that it may be optimal for firms to increase prices in response to a reduction in congestion on their networks. On the contrary, it considers both the potential incentive to increase and to lower prices after an increase in capacity/reduction in congestion. This directly follows from assuming that congestion leads to a rotation, rather than a shift, in the demand curve. This has the following impact on pricing incentives:[67]

(a) the firm can increase its profits by increasing its price to capture some of consumers' increased valuations of the product;[68] and

(b) the firm is able to attract more demand by lowering its price, given that, although congestion would also increase, it would be lower than before the investment.

4.18 The model does not favour one effect over the other. Instead, the model endogenously solves for the firm's optimal profit-maximising pricing behaviour, and trades off these two countervailing effects on prices.[69]

4.19 In the scenarios that the Parties have considered, the optimal behaviour of firms is to lower prices after increasing their capacity/reducing congestion on their network. However, the incentive to do so is very modest – as shown in Table 4.3 below. This is because, as explained above, the incentive to reduce prices is partly offset by the incentive to increase prices to capture consumers' increased valuations.

Table 4.3 Effect of a unilateral increase in investment of 10% on VUK's and 3UK's nominal prices (pre-Transaction)

Scenario	Change in nominal price of firm increasing capacity
3UK increases capacity by 10%	-0.072%

[65] PFs, Appendix F, paragraph F.62.

[66] PFs, Appendix F, footnote 515. Lhost, J., Pinto, B., & Sibley, D. (2015). Effects of spectrum holdings on equilibrium in the wireless industry. *Review of Network Economics*, *14*(2), 111-155. Elliott, J., Houngbonon, G.,Ivaldi, M., & Scott, P. (2024). Market Structure, Investment, and Technical Efficiencies in Mobile Telecommunications. Forthcoming Journal of Political Economy.

[67] [REDACTED].

[68] Note that this price increase is not the result of any loss of competition between the firms, but arises because consumers value the product more.

[69] Note that the demonstration provided at [REDACTED]considers the firms' best price response in the specific scenario where two symmetrical firms compete, and both increase capacity. However, there is no general proof that in any scenario, one effect dominates the other.

VUK increases capacity by 10%	-0.050%

Source: Frontier Economics.

4.20 Second, in relation to the two academic papers cited by the PFs to support its claim that other academic papers may have taken a different approach, it should be noted that:

(a) The most recent paper cited in the PFs (Elliott et al. (2024)) does not in fact take a different approach to modelling the effect of an increase in investment/reduction in congestion on demand.

(i) The Parties described the standard approaches to modelling congestion found in the literature in the [REDACTED]. These are the capacity-sharing model (used by the Parties in the capacity-focused merger simulation model) and the M/M/1 queuing system (used by Elliot et al).[70]

(ii) Both approaches assume that the congestion experienced by consumers is decreasing and convex with respect to capacity. Intuitively, if the network has relatively low levels of congestion, increasing capacity will have a relatively low impact on the congestion experienced by consumers on the network. This leads to a rotation (rather than a shift) in the inverse demand curve in reaction to an increase in capacity investment.

(b) In the Lhost et al. paper cited by the PFs, the authors adopt an unconventional approach to modelling congestion. Lhost et al. do not adopt either of the approaches to model congestion described above and the effect of increasing capacity to reduce congestion is constant.[71] In other words, regardless of whether consumers experience high or low levels of congestion, increasing capacity increases their utility by a constant proportion. This approach is detached from the existing economic literature and therefore the Parties consider that it is not an appropriate basis for modelling how congestion affects demand.

The choice of functional form used for the model's demand and investment cost functions

4.21 The PFs state that the Parties have not convincingly demonstrated that the functional forms chosen for the demand and investment cost functions should be favoured over other alternative functional forms. We address the demand and investment cost functions in turn.

[70] [REDACTED].

[71] Lhost et al. model 'service quality' as the difference between firm's processing capacity and the quantity. It therefore imposes a linear relationship between service quality and capacity.

The use of a linear demand function is standard practice and in line with EC precedent

4.22 The PFs itself notes that it is not clear what impact the chosen functional form of the demand system for the capacity-focused merger simulation model – namely, the Singh-Vives (linear) utility function – has on the model's predictions.[72]

4.23 First, the CMA's own modelling shows that there is a priori no reason to believe that opting for a linear demand function as opposed to a non-linear function (which is the approach taken by the CMA) would meaningfully bias the results. The results of the CMA's sensitivity analysis where it assumes linear demand actually predict larger welfare losses (despite also predicting lower price increases) and this could therefore be viewed as a more conservative approach.[73]

4.24 Second, the Singh-Vives demand function used in the model is not, contrary to the view expressed in the PFs, "*overly restrictive and untested*".[74] As explained in detail in [REDACTED] [REDACTED] of RFI [REDACTED], the use of linear demand functions in merger simulation analysis is well recognised in the literature and by competition authorities themselves:

(a) This demand function is commonly used in the literature for the purpose of analysing price and quantity competition in oligopolistic markets,[75] including when dealing with investment/innovation effects.[76]

(b) The use of a linear demand function aligns with the standard European Commission practice when running merger simulation analysis.[77] The European Commission has used a linear demand function in all recent telecoms mergers where it has undertaken a merger simulation analysis.[78] In none of these cases has the EC attempted a sensitivity analysis based on a non-linear demand function. Similarly, the Federal Trade Commission notes that "*[o]ne possible functional form is the linear demand system. One major advantage to the linear*

[72] PFs, Appendix F, paragraph F.70.

[73] PFs, Appendix D, Table D.10.

[74] PFs, Appendix F, paragraph F.83.

[75] Singh, N. and Vives, X. (1984). Price and Quantity Competition in a Differentiated Duopoly. The RAND Journal of Economics, 15, pp. 546–554.

[76] Bourreau, M., Jullien, B., and Lefouili, Y. (2024). Mergers and Demand-Enhancing Innovation. TSE Working Paper, n. 18-907, March 2018, revised April 2024. Vives, X. (2008) 'Innovation and Competitive Pressure,' The Journal of Industrial Economics, 56, pp. 419-469.

[77] Buettner, Thomas and Federico, Giulio and Lorincz, Szabolcs (2016). The Use of Quantitative Economic Techniques in EU Merger Control. Antitrust Magazine, Vol. 31, No. 1 (December 2016): pp. 68-75, p. 72.

[78] These are: Case M.8792 - T-Mobile NL/Tele2 NL, Annex A, paragraph 37; Case M.7758 – HUTCHISON 3G ITALY / WIND / JV, Annex A, paragraph 10; Case M.7612 HUTCHISON 3G UK / TELEFONICA UK, Annex A, paragraph 35; Case M.6992 - HUTCHISON 3G UK / TELEFONICA IRELAND, paragraph 588; Case M.7018 - TELEFÓNICA DEUTSCHLAND/ E-PLUS, Annex A, pages 140-141.

demand system is that it makes computation of the merger's competitive effects relatively easy".[79]

4.25 Furthermore, the Parties have previously explained that:[80]

(a) The Singh-Vives demand function used in the model: (i) allows the model to account for congestion costs in an intuitive and tractable way; and (ii) is particularly well-suited for analysing competition in differentiated product markets, where it is important to reflect the degree of product substitutability between operators.

(b) Other (non-linear) functional forms would not appropriately capture the realities of the UK mobile market due to their simplifying assumptions with respect to the degree of substitutability between products, and/or fall beyond the scope of the model (such as the multinomial logit model which, contrary to the Parties' linear demand system, requires econometric estimation in order to be properly calibrated to reflect pre-Transaction outcomes in terms of prices, market shares, margins and diversion ratios).

4.26 Third, the Parties have explored non-linear functional forms for the demand function to provide further confidence in the results of the capacity-focused merger simulation model.

4.27 As explained in [REDACTED] of RFI [REDACTED], the Parties have attempted to calibrate a log-linear demand model.[81] However, no solution to the post-Transaction equilibrium exists. This remains the case even when used in conjunction with less and more convex investment cost functions.[82]

4.28 The Parties have been able to calibrate a homogeneous logit model. This is a demand model which the CMA also uses in its merger simulation analysis. In particular:

(a) The CMA uses a homogeneous logit demand function to test the sensitivity of its merger simulation base results "*to alternative assumptions regarding demand responsiveness (ie the shape of the demand curve)*".[83] The CMA's base merger simulation uses a multinominal logit demand model, which allows for heterogeneity in consumer preferences and for firms to sell multiple (rather than one unique) product.

[79] https://www.ftc.gov/sites/default/files/documents/reports/demand-system-estimation-and-its-application-horizontal-merger-analysis/wp246_0.pdf (accessed 4 October 2024).

[80] See response to [REDACTED] of RFI [REDACTED].

[81] See response to [REDACTED] of RFI [REDACTED].

[82] The Parties have tested $\kappa \in \{1,2,\dots,10\}$.

[83] PFs, Appendix D, para. D.103.

(b) Compared to its base merger simulation results, the results of the CMA's sensitivity analysis based on a homogeneous logit model produce slightly higher price increases and a larger reduction in consumer welfare.[84]

4.29 The Parties have calibrated a homogeneous logit demand function within the capacity-focused merger simulation model in the following way:[85]

(a) The utility of the outside good is assumed to be zero and the share of the outside good is assumed to be 5%, in line with the CMA's approach.[86]

(b) Consumers' utility is defined as $W_i = v_i - \theta_i p_i - l_i + \varepsilon_i$; where:

(i) $\theta_i$is a price sensitivity parameter[87] and p_i is the price of firm i;

(ii) l_i is the congestion cost;[88] and

(iii) v_i is the good's standalone utility level (independent of price and congestion), and ε_i is an (IID) error term which is assumed to follow a Type-1 Generalised Extreme Value distribution.

4.30 Using this approach, the calibrated prices, margins and market shares are equal to pre-Transaction observed outcomes.[89] In relation to the calibrated diversion ratios between the Parties:

(a) The calibrated diversion ratio from VUK to 3UK is equal to 15.4%, i.e. in line with the [REDACTED].[90]

(b) The calibrated diversion ratio from 3UK to VUK is equal to 20.9%, i.e. slightly higher than the range of diversion ratios based on the [REDACTED] and the CMA's own modelling, which are between 17%-18%.[91]

4.31 The results of the capacity-focused merger simulation model using a logit demand function are as follows (see Table 4.4 below):

(a) Absent any efficiencies, the logit model predicts slightly higher nominal price changes for MergeCo (6.6% for 3UK and 4.9% for VUK) compared to the Parties' base case model using a linear Singh-Vives demand function (4.6% for 3UK and 3.4% for VUK). The results of the logit model are broadly in line with

[84] PFs, Appendix D, Table D.10.

[85] The Parties provide further detail on the logit model calibration in **PF Annex 6**.

[86] PFs, Appendix D, para. D.36 and D.41.

[87] This is in line with the approach taken in Elliot et al. (2024), equation 1.

[88] As defined in the base case model – see [REDACTED].

[89] The Parties use the same input data as described in the [REDACTED].

[90] The Parties use [REDACTED] to calibrate diversion ratios in the capacity-focused merger simulation model. See [REDACTED].

[91] PFs, Appendix D, para. D.63.

the CMA's own econometric merger simulation, which predicts price increases of 7.0% for 3UK and 3.8% for VUK in the absence of any efficiencies.

(b) Accounting for efficiencies – which is the only relevant scenario in which to assess the likely effects of the Transaction, the logit model predicts larger price reductions than the Parties' base case model and a larger welfare improvement. This is because in this model, prices are more sensitive to changes in investment and this provides a stronger incentive (compared to the Singh-Vives model) to lower prices as MergeCo, and VMO2 (as a result of Beacon 4.1) increase their capacity.

4.32 As such, the conclusions of the capacity-focused merger simulation model remain unchanged when using this alternative functional form to model demand:

(a) the increase in investment/capacity delivered by the Transaction efficiencies and upgraded Beacon arrangements – and the resulting impact on competition and congestion – are sufficient to offset any upwards pricing pressure from the Transaction, with market-wide congestion-adjusted prices decreasing by 1.2%; and

(b) VMO2's and BTEE's nominal and congestion-adjusted prices decrease in response to the reduction in MergeCo's quality-adjusted prices and, for VMO2, also as a result of its increase in capacity from Beacon 4.1.

4.33 For completeness, the Parties have also undertaken a sensitivity analysis using the logit model calibrated based on subscriber margins (instead of acquisition margins). This scenario – which adopts the key modelling features that the CMA considers to be equally valid in the PFs, if not preferable – produces results which are very similar to the scenario using logit demand calibrated with acquisition margins,[92] and corroborates the results of the base case.

Table 4.4 Capacity-focused merger simulation model – Modelling results using Singh-Vives ("SV") demand function and a homogeneous logit demand ("Logit") function

	Without efficiencies		With efficiencies		
	SV	Logit	SV	Logit	Logit With subscriber margins
Average change in congestion-adjusted prices (%)					
Market-wide	1.7	2.0	-0.3	-1.2	-1.2
MergeCo	3.4	4.2	0.8	0.4	1.4
VMO2	0.9	0.9	-1.0	-2.2	-2.8

[92] In both Logit scenarios, the predicted effect of the Transaction on consumer welfare and MergeCo's capacity are of the same magnitude. Using subscriber margins (compared to when using acquisition margins), MergeCo's prices increase slightly more, while rivals are incentivised to reduce their prices by more.

BTEE	0.9	1.0	-0.8	-2.0	-2.8
Average change in nominal prices (%)					
Market-wide	1.9	2.1	0.6	-0.2	-0.3
MergeCo	3.9	4.9	3.2	2.7	3.7
VMO2	0.9	0.8	-0.7	-1.8	-2.5
BTEE	0.9	0.9	-0.8	-2.0	-2.8
Average change in investment in capacity (%)					
Market-wide	-1.4	-1.4	9.4	9.6	9.6
MergeCo	-4.5	-6.0	17.8	19.8	19.8
VMO2	1.3	2.3	4.5	4.0	4.0
BTEE	1.2	2.7	-0.4	-2.5	-2.5
Change in congestion costs (%)					
Market-wide	-0.6	-0.2	-16.0	-16.8	-16.8
MergeCo	-4.5	-5.9	-37.9	-36.9	-36.9
VMO2	1.3	2.3	-6.5	-7.0	-7.0
BTEE	1.2	2.7	-0.4	-2.5	-2.5
Change in quantity (%)					
Market-wide	-1.5	-0.9	1.4	1.1	1.1
MergeCo	-8.8	-11.6	1.6	5.1	5.1
VMO2	2.7	4.7	3.0	2.0	2.0
BTEE	2.5	5.5	-0.8	-5.0	-5.0
Change in consumer welfare (%)	-3.5%	-5.0%	0.7%	7.7%	7.7%
MergeCo's total capacity uplift (%)	N.A.	N.A.	64%	67%	67%

Source: Frontier Economics. See ***PF Annex 6****.*

Note: Except for the "Logit with subscriber margins" scenario, all other scenarios use acquisition margins.

The degree of convexity for the investment cost function used by the Parties is conservative

4.34 The PFs consider "*a higher degree of curvature of the investment cost function to be equally as plausible as the level chosen by the Parties in their 'Base Case'*" and that "*[c]onceptually, higher levels of convexity are consistent with a reality in which the investment costs associated with managing congestion only becoming prohibitively expensive close to the maximum of the data processing capacity*".[93]

4.35 In response to these concerns, the Parties consider that:

(a) In the context of the capacity-focused merger simulation model, the investment cost function should appropriately capture changes in incremental capacity costs associated with increasing MergeCo's capacity through the implementation of the JBP. These imply upgrading existing sites (but not adding new sites).

(b) Although there is limited empirical evidence available that the Parties can use to approximate the shape of the investment cost function, the available evidence is

[93] PFs, Appendix F, paragraph F.76.

not consistent with incremental costs increasing as capacity is built up and/or becoming prohibitively expensive. On that basis, the approach taken by the Parties to assume some degree of convexity is conservative.

(c) The Parties have previously demonstrated that the conclusions of the capacity-focused merger simulation model are unaffected when increasing the convexity of the investment cost function.[94] The Parties further demonstrate below that the results of the model are robust even when increasing the degree of convexity to even more extreme levels.

4.36 The available empirical evidence is not consistent with the Parties'/MergeCo's incremental costs increasing as they build up capacity.

(a) For MergeCo, the average incremental cost incurred in upgrading a site during integration is *lower* when upgrading from a low- to a mid-config site compared to when upgrading from a mid- to a high-config site. Although a high-config upgrade is much more costly than a mid-config upgrade, it also adds substantially more capacity, and is therefore cheaper on a per unit of capacity basis. This is inconsistent with incremental costs increasing as capacity is built up; and on that basis the approach of assuming *some* degree of convexity in the investment cost function can be considered conservative.[95]

(b) The Parties have also explored whether MergeCo's rollout plans could provide an indication of the shape of its investment cost function, but this analysis appears to be inconclusive. The JNP and [REDACTED] provide respectively MergeCo's investment expenditure forecasts between Year 1 and Year 10 of the JNP, alongside the percentage of congested sites/subscribers. However, it is difficult to use this data to make any meaningful inference on the relationship between investment expenditure and capacity/congestion levels due the ongoing rapid growth in data demand. Because data traffic on the network increases over the course of the JNP, [REDACTED] (as demonstrated in [REDACTED], the [REDACTED]).[96]

4.37 Recognising that the empirical evidence to support the Parties' approach to calibrating the investment cost function is limited, the Parties have also undertaken additional sensitivity analyses which demonstrate that:

(a) increasing the degree of convexity of the investment cost function (even by just one unit) implies that the Parties' costs of decongesting their networks would rapidly increase; and

[94] [REDACTED].

[95] See response to [REDACTED] of RFI [REDACTED]. However, assuming convexity is required by the model to ensure that the optimisation problem faced by firms is well-behaved, enhancing the likelihood that the profit function will satisfy second-order conditions.

[96] [REDACTED].

(b) even when further increasing the degree of convexity to extreme levels (which do not appear plausible), the conclusions of the capacity-focused merger simulation model remain unchanged.

4.38 To illustrate the impact of increasing convexity (i.e. increasing the kappa parameter) on the results of the model, Table 4.5 below shows for different levels of kappa, how much more it would cost the sum of the standalone Parties to increase capacity by a further 10 percentage points after an initial 10 percentage point increase compared to pre-Transaction capacity levels.

(a) The Parties' base case model uses a degree of convexity where kappa = 3. This implies that, if the Parties increased their pre-Transaction capacity levels by 10%, it would be 20% more expensive to increase capacity by a further 10 percentage points (compared to the initial 10 percentage point increase).

(b) When assuming kappa = 4, it would be 31% more expensive to increase capacity by a further 10 percentage points. This represents an even more substantial rate of increase in incremental capacity costs.

(c) When assuming kappa = 9, the cost of increasing capacity by a further 10 percentage points would more than double.

Table 4.5 Capacity-focused merger simulation model – how changes in convexity affect incremental costs

Degree of convexity	Incremental cost increase
k = 3	20%
k = 4	31%
k = 5	44%
k = 6	57%
k = 7	72%
k = 8	89%
k = 9	106%

*Source: Frontier Economics. See **PF Annex 6**.*

4.39 To show the robustness of the capacity-focused merger simulation model even to extreme levels of convexity in the investment cost function, the Parties have undertaken a sensitivity analysis assuming kappa = 4 up to kappa = 9. For each sensitivity, the main results of the model are unchanged, namely:

(a) market-wide congestion-adjusted prices do not increase;

(b) MergeCo's capacity increases substantially; and

(c) the consumer welfare impact of the Transaction is neutral.

Table 4.6 Capacity-focused merger simulation – modelling results assuming higher degree of convexity in the investment cost function

kappa	3 (baseline)	4	5	6	7	8	9

Change in market-wide congestion-adjusted prices (%)	-0.3	-0.2	-0.1	0.0	0.0	0.0	0.1
MergeCo's capacity uplift	64%	58%	55%	52%	50%	49%	48%
Change in consumer welfare (%)	0.7	0.4	0.3	0.1	0.0	0.0	-0.1

*Source: Frontier Economics. See **PF Annex 6**.*

5. The PFs' erroneous critique of the Parties' quality-focused merger simulation

5.1 The Parties' quality-focused merger simulation model quantifies the effects of the Transaction on prices and consumer welfare in the consumer segment of the UK retail mobile telecommunications market incorporating the impact of REEs of two types: (i) cost efficiencies due to the reduction in incremental cost of serving additional customers due to the integration of VUK's and 3UK's networks, and (ii) the improvements in network quality expected for the MergeCo network in terms of coverage, download speeds, latency, and access to 5G use cases. The model predicts a substantial increase in consumer welfare following the Transaction; the Transaction is thus found to be pro-competitive. The model also shows that the Transaction will benefit price-sensitive consumers.[97]

5.2 In the PFs' assessment, due to "significant, wide-ranging" methodological concerns "no weight" can be placed on the quality-focused merger simulation model or its predictions.[98] The alleged concerns relate to (i) the consumer survey used to generate data on consumer preferences for the most relevant attributes of mobile tariffs, (ii) the econometric demand estimation and calibration to estimate the value that consumers attach to the various tariff attributes, and (iii) the merger simulation based on the results of the demand estimation.

5.3 As is explained in the following subsections, the PFs' concerns are unfounded and the results of the quality-focused merger simulation analysis are reliable. The PFs' position that no weight can be placed on the results of the quality-focused merger simulation is untenable.

(i) Consumer survey

5.4 The PFs raise the following concerns with the consumer survey:[99]

(a) The consumer survey is based on an online panel. The PFs allege that the Parties have not provided information on the recruitment methodologies of the panels, such that the CMA has not been able to assess their representativeness of the customer population and the extent to which bias may have been introduced, for example, if panellists were recruited through telecoms channels.

[97] [REDACTED].

[98] PFs, paragraph 8.317, paragraph 14.219, and Appendix F.

[99] PFs, paragraph F.8-F.15.

(b) The PFs raise a concern that respondents may not have properly understood the questionnaire, because:

(i) cognitive demands on respondents were high, with the amount of information provided exceeding the amounts assessed by consumers in real-life settings;

(ii) some of the tariff attributes may have been difficult for respondents to understand; and

(iii) the survey questionnaire was not submitted to cognitive testing.

(c) The PFs claim that there is a risk that network quality attributes were overemphasised in the choice experiment design.

(d) The PFs allege that, since all respondents were asked to complete five choice experiments, the quality of the responses provided might have increased (due to "learning effects") or decreased (due to fatigue) as interviewees went through them.

5.5 Each of these concerns is unfounded.

5.6 Concerning the use of an online panel for sample recruitment:

(a) The Parties commissioned GfK, a world leading market research firm, to conduct their customer survey. GfK used Cint, a software platform that provides access to multiple online panels for hosting surveys and sourcing samples. The Cint platform is widely used by GfK's commercial clients for market research.

(b) Contrary to the PFs' allegation, the Parties have provided the CMA with detailed information on the recruitment methodologies used by the online panels, including a diverse list of recruitment origins. There is no reasonable basis to expect a material bias related to recruitment based on Cint's online panels, given that they rely on a number of different recruitment methods, including:[100]

(i) online recruitment through the panel owner's portal which includes: (1) brand communities and (2) digital media and publisher sources;

(ii) email recruitment through a panel owner's newsletter;

(iii) specific invitations sent to a panel owner's database;

(iv) email recruitment using a permission-based database;

(v) social networks;

(vi) loyalty web sites;

(vii) affiliate traffic;

(viii) telephone-based recruitment; and

[100] [REDACTED] CMA's comments on [REDACTED].

(ix) face-to-face (F2F) based recruitment.

This also precludes the alleged risk of substantial sample bias due to recruitment via telecoms channels.

(c) The online panels are, by construction, not representative of the UK population. However, this in nowhere limits their usefulness:

(i) Compass Lexecon weighted the sample of the baseline estimation to be representative of the UK population by age, gender and region. The estimation results are robust to the use of alternative weighting schemes (including the use of no weights at all).[101]

(ii) In any event, it is not clear that alternative sampling methods would have yielded more representative results. Under any sampling method, participation in surveys is voluntary, so that respondents have the possibility of non-response; this may introduce self-selection bias. Therefore, it is not clear whether any bias in an online panel is greater than in any other type of survey, including the CMA customer surveys, which have also been weighted to make them representative.[102]

(d) However, to address the PFs' concerns with online panels, the Parties have repeated the choice experiment based on a sample recruited using the CMA's preferred method,[103] a postal survey sent to a random selection of UK addresses.[104] A demand estimation based on the data collected by means of the postal survey confirms the result of the analysis based on the online panel that consumers value network quality highly:

(i) For the avoidance of doubt, the Parties consider that the results based on the online panel should be favoured, as the postal consumer survey had a very low response rate – only 54 responses out of 10,000 postal invites.

(ii) The resulting small sample size made some changes to the econometric demand estimation necessary:

(A) The observations in the sample could not be weighted.

(B) Respondents to the questionnaires based on the upfront and tooltip design had to be pooled.

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[101] [REDACTED].

[102] PFs, paragraph 8.20.

[103] PFs, paragraph 8.19.

[104] The postal invites contained a link to the online interview and survey. Respondents were offered a compensation of £5.00 for participation. The design of the online interview and survey were the same as in the survey conducted via the online panel. The postal survey ran between 22 May 2024 and 4 June 2024.

(C) Estimation of a mixed logit model was not feasible, as this requires a larger sample size to identify the parameters for the standard deviations of the valuations of attributes. Therefore, the Parties resorted to a conditional logit model, which is less realistic but in line with the CMA's own estimation.[105]

(iii) The results are shown in Table 5.1 below. Even with the reduced sample size, the estimation yields substantial and, in the case of the attributes "No Signal" and "Access to High-Speed 5G", even statistically significant estimated consumer valuations of network quality. The merger simulation results based on these estimates, reported in Table 5.2, predict a substantial increase of consumer welfare. Therefore, the results based on the postal consumer survey are qualitatively similar to those from the online consumer survey.

Table 5.1: Estimated consumer valuations for online and postal survey (conditional logit)

	Online survey	Postal survey
No Signal	-0.39***	-1.20*
	(0.10)	(0.62)
Minimum Speed (Mbps)	0.50***	0.47
	(0.09)	(0.60)
Minimum Speed beyond 10 Mbps	-0.42***	-0.38
	(0.10)	(0.63)
Reliable Fast-Paced Gaming	1.70***	2.47
	(0.61)	(4.03)
Access to High-Speed 5G	0.12***	0.19*
	(0.02)	(0.11)
Price (monthly, £)	-0.04***	-0.05***
	(0.00)	(0.01)
Data allowance (GB)	0.05***	0.06**
	(0.00)	(0.03)
Unlimited data allowance	14.55***	14.45**
	(0.91)	(5.71)
Contract length (months)	-0.06*	-0.24
	(0.03)	(0.20)
Number of exercises	10,572	200

[105] Although both models are conditional logit specifications, the conditional logit model used by the Parties in the postal survey does not include any form of heterogeneity, while the CMA analysis includes some heterogeneity related to location and age.

*Notes: Stars indicate level of statistical significance. * p<10%, ** p<5%, *** p<1%.*
Source: Compass Lexecon analysis based on online and postal survey data.

Table 5.2: Merger simulation results for online and postal survey (conditional logit) - Scenario 3: cost and quality efficiencies

	Online survey	Postal survey
Change in consumer welfare (£ pcpm)		
Average across all consumers	£2.1	£2.9
Change in consumer welfare (%)		
Average across all customers	8.8%	7.9%
Change in average quality-adjusted price (%)		
Market-wide	-13.7%	-19.2%
MergeCo	-23.7%	-31.2%
MergeCo's competitors	-8.2%	-10.8%
Change in average headline price (%)		
Market-wide	1.5%	3.0%
MergeCo	11.6%	15.3%
MergeCo's competitors	-3.7%	-4.6%

Notes: [1] Changes computed with respect to the no-Transaction situation in 2030. [2] Average post-Transaction prices computed weighting equilibrium tariff prices by their post-Transaction market share.
Source: Compass Lexecon analysis based on online and postal survey data, data on current tariff offerings ("Pure Pricing Data"), [REDACTED], and Parties' estimates (see [REDACTED]).

5.7 As the Parties have submitted previously,[106] there is no reason why the survey questionnaire would have placed excessive cognitive demands on respondents or been difficult to understand.

(a) Compass Lexecon explored the possibility of cognitive overload during a pilot internal test with the support of GfK prior to rolling out the survey. When testing the proposed survey methodology, Compass Lexecon sought qualitative feedback from the 490 respondents of the pilot survey. None of the respondents raised major issues in connection with the understanding of the attributes of the experiment.[107,108]

[106] [REDACTED].

[107] [REDACTED].

[108] The CMA guidelines on surveys state at paragraph 2.55 "Where time allows, the soundness of any research design and questionnaire should be tested before the 'live' survey begins by conducting, monitoring and evaluating cognitive interviews and/**or** a survey pilot." [emphasis added]. As such, the combination of the pilot exercise conducted on the consumer survey combined with the qualitative feedback recovered from the respondents after they took it unquestionably complies with the guidelines requirements.

(b) The results of the estimation using the responses of the pilot confirmed that respondents understood the alleged complex concepts and were able to digest the amount of information provided to them. Had interviewees been unable to understand the network quality attributes tested, or overwhelmed by the information provided, this would have led them to provide random responses. However, the demand estimation revealed that (other things equal) interviewees did not respond randomly, but systematically preferred low prices over high prices, large data allowances over small data allowances, high coverage over low coverage, fast networks speeds over slow network speeds, etc. This is consistent with the results of third-party surveys and with the results of the CMA's own surveys.

(c) The results of the demand estimation based on the survey data collected also confirm that there was no confusion amongst respondents. The demand estimation results in the quality-focused merger simulation model, including the numerous robustness checks conducted around them, indicate that respondents made choices during the experiments that were not random, confused, or erratic, around these attributes: respondents clearly showed a preference for tariffs with better attributes.[109]

(d) In any event, even if the amount of information presented in the choice experiments in the survey had led some respondents to conduct the choice experiments erratically (*quod non*), any resulting bias would tend to cause an underestimation of valuations of network quality attributes. Such respondents would not systematically choose tariffs with better network quality, which in turn would lead the model to interpret the network quality attributes as less relevant. Therefore, if any such bias existed, it would lead to an underestimation of the expected consumer welfare increase resulting from the Transaction, rendering the quality-focused merger simulation model results conservative.

(e) The PFs seek to bolster the argument of "cognitive overload" with the claim that *"the number of attributes provided to respondents, and the extent of information on these, exceeds what consumers would be presented with in real-life settings, for example, on price comparison websites"*.[110] This claim is incorrect:

(i) Consistent with the fact that consumers place significant value on network quality, and network quality is an important part of operators' marketing strategies, comparison websites such as uswitch.com regularly display information on various network quality attributes for each tariff, as seen in Figure 5.1. Further, price comparator websites will frequently show additional details of each tariff that the survey abstracted from, such as the availability of free roaming. As a result, any cognitive overload associated with evaluating a mobile tariff in real life would seem to be as large, if not larger, as in the survey.

[109] [REDACTED].

[110] PFs, paragraph F.9.

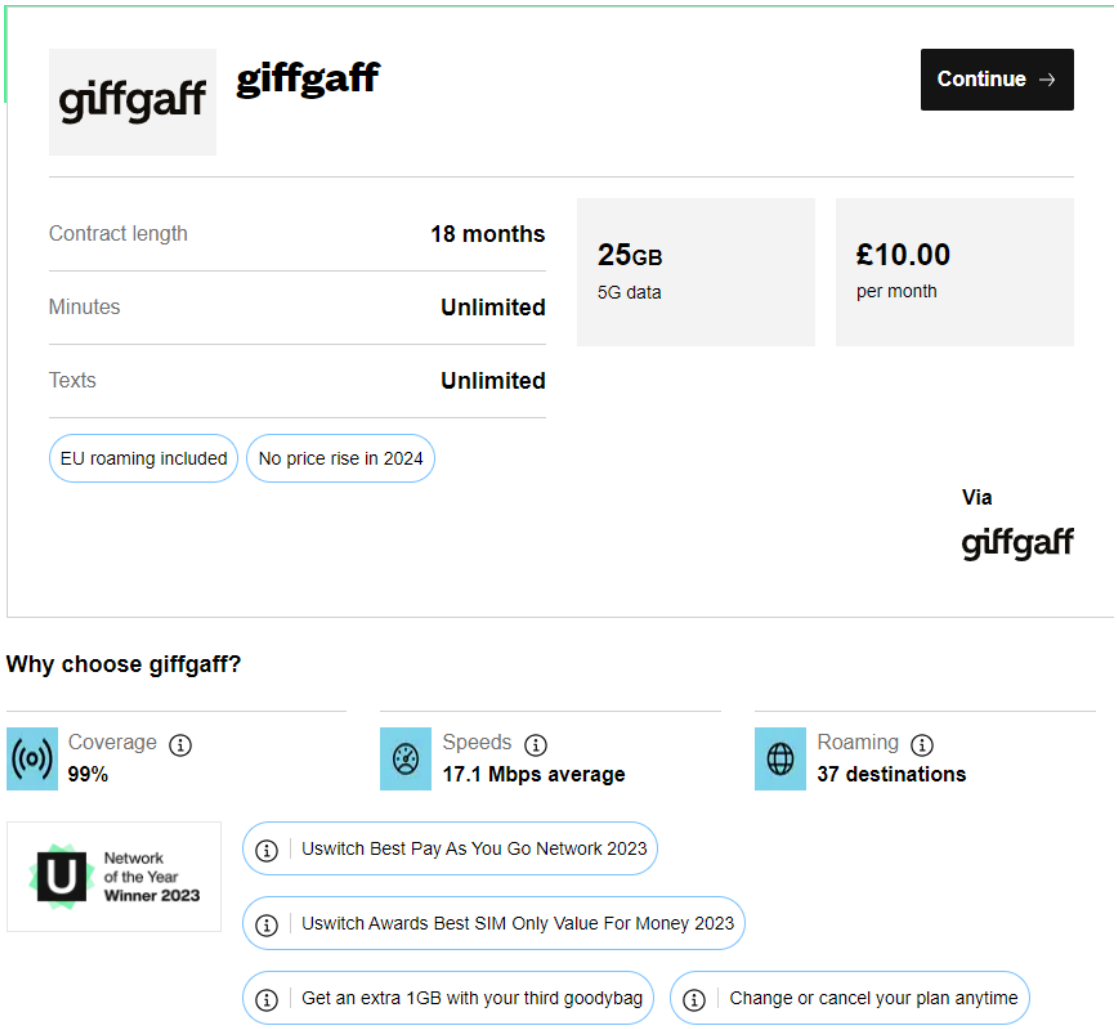
(ii) Nevertheless, even if it were unrealistically complex for interviewees to assess each option in the choice experiments of the survey (*quod non*), the choice experiments present fewer tariffs than consumers have at their disposal in real life: consumers need to consider many options, not just four as in the choice experiments. Although consumers may simplify the process of choosing from a multitude of alternatives by focusing on smaller shortlists, they still need to consider several operators and many tariff characteristics. Any potential cognitive burden because of the four network quality attributes should be more than offset by the simplification of having to choose among only four tariffs instead of dozens of them.[111]

(iii) The time taken by survey respondents to complete the choice experiments suggests the cognitive burden associated with the survey is low, and likely much lower than the burden associated with making a purchase decision in real life. Respondents took less than four minutes on average to consume the upfront information and complete the five survey choice experiments, taking on average 1 minute and 38 seconds to consume the information leading the experiments, and an average of 2 minutes and 9 seconds to conduct the choice experiments themselves, implying an average time taken to be informed and make a choice in a single choice experiment of 2 minutes and 4 seconds.[112]

[111] If a consumer pre-selects three operators and considers three data allowance and two tenure options for each, this will lead to a comparison between 18 options.

[112] Computed as 124 seconds = (98 seconds) + (129 seconds)/(5 choice experiments).

Figure 5.1: Example of tariff information displayed on uswitch.com



Source: uswitch.com, retrieved on 15 August 2024.

5.8 The PFs are wrong to suspect that the experimental design might have overemphasised network quality.

(a) The PFs are incorrect to allege that the experimental design gave aspects of network *"far more prominence than a customer would normally see on, for example, a price comparison site"*.[113] As Figure 5.1 above shows, price comparison websites such as uswitch.com prominently report network quality attributes, including coverage and speeds. This is consistent with the substantial body of evidence available to the CMA that network quality is a key driver of consumer choice of mobile tariffs (see section 2 of **PF Annex 1**).

(b) To address potential concerns about priming the salience of quality attributes in the design of the choice experiments, respondents were randomly assigned to one of two versions of the choice experiment. One version presented descriptions

[113] PFs, paragraph F.12.

of the attributes before confronting interviewees with the choice experiments, and the other presented the detailed attribute descriptions only when respondents hovered over the attributes stated in the experiments part of the survey. Estimation results were presented for both designs and the baseline sample used in the merger simulation exercise relied on the results of the tooltip design (which are more conservative, i.e., yield lower valuations).[114]

(c) While the PFs are correct in stating that information provided when clicking on the information buttons was generally more comprehensive for network quality attributes than other attributes (for example, data allowances), this is a natural consequence of the fact that data allowances are self-explanatory while network quality attributes require explanation to be clear. Shortening the descriptions of the network quality attributes would only have created difficulties for respondents in understanding the meaning of the attributes. Moreover, if there was any effect of the length of descriptions on the survey responses, it is not clear that the lengthier descriptions would have led respondents to attach more weight to the associated attributes. It is just as likely that respondents would have given up on reading overly lengthy descriptions fully, potentially making them downplay the relevance of network quality attributes relative to more straightforward attributes with shorter and more familiar descriptions.

5.9 The PFs express concern that the quality of responses to the five quality experiments might be affected by the order in which they were attempted, as respondents may have improved their understanding of unfamiliar attributes but also become increasingly fatigued as they went along. These concerns are unfounded.

(a) The time taken by respondents to go through the choice experiments do not suggest that survey responses were distorted by learning nor fatigue. Respondents took an average of 129 seconds to go through all five choice experiments, which is sufficiently short to rule out any fatigue problems. Additionally, following the CMA's review of the pilot results of the survey and its methodology in February 2024, the survey design was adjusted to reflect the CMA's feedback in various ways, including a change of the order such that contextual questions on interviewees' demographics or mobile phone use were presented after the choice experiments, and the simplification of the instructions and the implementation of a version of the exercise where respondents were not presented with the detailed descriptions of the quality attributes upfront.[115] The changes implemented would have helped avoiding both fatigue and any potential

[114] [REDACTED].

[115] Following the CMA's review of the pilot results of the survey and its methodology in February 2024, the survey design was adjusted to reflect the CMA's feedback in various ways, including incorporating a version of the survey that moved the detailed information describing the attributes to tooltips that were optional to look at by respondents. The baseline results of the quality-focused merger simulation are based on this version of the survey design, since they are the most conservative, possibly due to them underemphasising the importance of network quality-related attributes as discussed in paragraphs 5.8(b) and 5.8(c).

predisposition of respondents in relation to the questions that could affect the survey responses.

(b) The Parties have already provided alternative results on samples restricted to only the first choice experiment, the last choice experiment or a randomly selected choice experiment completed by each respondent.[116] While relying on a single exercise per respondent necessarily limits the precision (efficiency) of the estimation (as fewer data are used), the conclusions in relation to (i) consumer valuation of the network quality attributes and (ii) the expected change in consumer welfare brought about by the Transaction remain qualitatively unchanged: the Transaction can be expected to have a strong pro-competitive effect, delivering a substantial increase in consumer welfare and a substantial reduction in quality-adjusted prices.

(c) The PFs selectively cite the increase in the valuation of a single attribute ('No Signal') when going from the full sample to a sample that only considers responses from the first choice experiment.[117] However, given that the sample size has been reduced to a fourth of the size of the baseline sample, it is not unexpected that the estimates of individual coefficients would not be the same. Additionally, the samples that only consider responses from the last choice experiment or a randomly chosen choice experiment also result in higher valuations than the baseline, which is inconsistent with the PFs' apparent concern that valuations systematically increase or decrease as respondents complete more choice experiments.

(d) Additionally, the Parties have run an additional robustness test based on a sample excluding the first choice exercise presented to each interviewee to further address the concern about alleged learning effects.[118] The results of this exercise are qualitatively similar to the baseline estimates, both regarding the estimated preferences, and, more importantly, regarding the estimated impact of the Transaction on consumer welfare. This exercise confirms that the results of the quality focused merger simulation results are robust to "learning".

[116] [REDACTED] RFI [REDACTED].

[117] PFs, Paragraph F.14.

[118] The exercise is designed to address the concern without severely limiting the amount of information used, therefore keeping three of the four experiments included in the baseline analysis.

Table 5.3: Merger simulation results excluding the first choice experiment - Scenario 3: cost and quality efficiencies

	Baseline	Excluding first choice experiment
Change in consumer welfare (£ pcpm)		
Average across all consumers	£2.0	£1.9
Change in consumer welfare (%)		
Average across all customers	5.4%	5.1%
Change in average quality-adjusted price (%)		
Market-wide	-15.4%	-14.3%
MergeCo	-31.6%	-32.5%
MergeCo's competitors	-5.3%	-2.9%
Change in average headline price (%)		
Market-wide	1.8%	2.5%
MergeCo	4.1%	3.6%
MergeCo's competitors	-0.6%	0.8%

Notes: [1] Changes computed with respect to the no-Transaction situation in 2030. [2] Average post-Transaction prices computed weighting equilibrium tariff prices by their post-Transaction market share.
Source: Compass Lexecon analysis based on survey data, data on current tariff offerings ("Pure Pricing Data"), [REDACTED], and Parties' estimates (see [REDACTED]).

5.10 For the reasons explained above and, contrary to the PFs, the Parties have fully adhered to the CMA's Survey Good Practice in all material aspects stressed by the CMA during the investigation process when designing the survey, testing the proposed design using a pilot survey, and adjusting the questionnaire and the choice exercise based on the feedback from the pilot results and the CMA before rolling out the final survey. In particular, having put the survey design to the CMA before starting the process, all concerns raised by the CMA in early stages of the investigation were considered and, to the extent possible, reasonably addressed. The Parties made changes to the questionnaire to ensure that respondents understood the survey, changed the survey structure to address the comments raised by the CMA at different points of the investigation, and used a pilot survey – one of the two alternatives contemplated in the CMA's Survey Good Practice – to test the research design and questionnaire before the live survey began. For this reason, the Parties reject the suggestion in the PFs (paragraph F.15) that the CMA's feedback on the survey design and the results of the pilot internal testing was not acted upon.

(ii) Demand estimation and calibration

5.11 The PFs raise the following concerns with the demand estimation and the calibration of the model underlying the quality-focused merger simulation: [119]

(a) The PFs consider that the combination of the survey design and the demand estimation methodology cannot capture consumer preferences well, because

[119] PFs, paragraph F.16-F.30.

both predicted margins and market shares differ from those actually observed in the market.

(b) The PFs allege that the chosen approach of first conducting a demand estimation and then calibrating it to observed market outcomes is "ad-hoc" and novel and its properties are unknown. In particular, the PFs claim that while a part of the estimator developed by BLP[120] enters the algorithm employed by the Parties, it is unclear how the output of the Parties' estimation relates to BLP estimation.

(c) The PFs point out that the Parties need to use eight observed operator-level market shares to calibrate 150 tariff-level market shares, which are unobserved. Therefore, the model's tariff-level market shares are only approximations of the true market shares at the tariff level; the PFs express concern that this may bias the calibrated demand model.

(d) The PFs argue that the presence of a scaling parameter in the calibration may alter the preferences elicited from the choice experiment, such that the result is *"an ad-hoc mixed logit classifier disconnected from economic theory and the preference data used to create it"*.

(e) Finally, the PFs argue that it is implausible that the diversion ratios predicted by the demand estimation differ from the results of the CMA's survey, the results of the CMA's demand estimation, and the switching ratios in GfK survey data.

5.12 The criticisms issued in the PFs are entirely baseless and reveal some ongoing fundamental misunderstandings of the approach employed by the Parties and the relevant economic literature.

5.13 The PFs criticise that the results of the quality-focused merger simulation prior to calibration are inconsistent with margins and market shares observed in market data. However, the comparison undertaken by the CMA is conceptually meaningless: the pre-calibration estimation results have been derived in an experimental setting in which the choice options are limited in attributes and different from those actually available in the market, with options including levels of attributes (price, quality KPIs, etc.) that are not currently observed in the market. In this context, it cannot be expected that the estimation results, absent a calibration, correspond to market observables. The purpose of the discrete choice experiment was to elicit preferences for a set of relevant tariff attributes, not to create a realistic simulation of the UK mobile market in a laboratory setting.

5.14 The PFs describe the quality-focused merger simulation analysis as an *"ad-hoc approach"* of *"estimate, then calibrate"* whose properties are unknown. This is incorrect:

[120] Berry, S., Levinsohn, J., & Pakes, A. (1995). Automobile prices in market equilibrium. *Econometrica: Journal of the Econometric Society*, 841-890.

(a) The use of calibration of an estimated demand model is entirely standard and well-established in the economic literature.[121]

(b) The PFs' reference to the BLP estimator misses the point, as BLP is an entirely different estimation technique applied to a completely different type of data (aggregate data on actual market transactions, rather than customer-level survey data). The Parties' demand estimation consists of several steps, one of which borrows one specific computational algorithm from BLP to efficiently compute the distribution of unobserved heterogeneity of consumer preferences. However, the remainder of the computational approach differs from BLP, and there is no reason to expect the outputs of the Parties' calibration to relate to a BLP demand estimation.[122]

(c) It is also important to note that the quality-focused merger simulation follows an approach that is conceptually similar to the CMA's own merger simulation model. Both analyses involve the estimation of consumer preferences, followed by a calibration of an economic model of the market to implied marginal costs. While the quality-focused merger simulation (unlike the CMA's approach) involves the calibration of additional parameters beyond marginal costs,[123] on a conceptual level there is no difference between calibrating one set of parameters or several sets. The PFs' criticism of the *"estimate, then calibrate"* strategy therefore applies equally to the CMA's own model.

5.15 The PFs correctly recognise that, even though the quality-focused merger simulation model matches observed market shares at the operator level, it may over- or understate the market shares of specific tariffs. This is a minor inaccuracy owing to lack of data availability at the tariff level, and there is no reason to expect this to introduce any bias

[121] A few relevant examples are Nevo, A. (2001). Measuring market power in the ready-to-eat cereal industry. *Econometrica*, 69(2), 307-342; Bourreau, M., Sun, Y., & Verboven, F. (2021). Market Entry, Fighting Brands, and Tacit Collusion: Evidence from the French Mobile Telecommunications Market. In American Economic Review (Vol. 111, Issue 11, pp. 3459–3499); Elliott, J., Houngbonon, G., Ivaldi, M., & Scott, P. (2024). Market Structure, Investment, and Technical Efficiencies in Mobile Telecommunications. Forthcoming *Journal of Political Economy*.

[122] The actual demand estimation in the quality-focused merger simulation model is based on an equally standard methodology as BLP, based on maximum likelihood estimation. The CMA employs the same maximum likelihood methodology for its demand estimation. The methodology is described in detail in Train, K. (2009*). Discrete Choice Methods with Simulations* (2nd ed.). Cambridge University.

[123] The calibration of additional parameters in the quality-focused merger simulation model is necessary due to the fact that the model relies on stated preference data; as noted at paragraph 5.13 above, there is no reason to expect that stated preference data extracted from choice experiments should match observable market data. In general, the choice of the parameters to be calibrated will be dictated by the chosen model and available data. For example, in dynamic models, fixed costs or discount factors may be calibrated or imposed based on additional external information in addition to marginal costs being calibrated.

into the key estimate of the analysis, namely the predicted effect of the Transaction on consumer welfare.[124]

5.16 The PFs' claim that the calibration creates a model that is *"disconnected from economic theory and the preference data used to create it"* is incorrect. The estimation stage produces estimates of consumer WTP for tariff attributes, and these estimates are unchanged once the model is calibrated, i.e. the calibration has no effect on the estimated WTPs. Similarly, as explained in the [REDACTED], the ordering of preferences is not distorted by the calibration, with all consumers ranking the choice options up to the attributes included in the survey exactly the same as before calibration.[125]

5.17 The PFs are wrong to conclude that the fact that the diversion ratios derived from the quality-focused merger simulation model differ from diversion ratios from other sources indicate *"severe misspecification and/or an unsuitable calibration method"*. The other sources considered by the CMA should be given less weight than the Parties' demand estimation:

(a) The diversion ratios derived from the CMA's surveys are based on relatively small sample sizes – just 192 VUK customers and 226 3UK customers.[126] As a consequence, the diversion ratios from the CMAs' surveys are subject to considerable uncertainty.

(b) As noted above,[127] the CMA's demand estimation exhibits serious methodological flaws and its results cannot be relied upon.

(c) As the PFs themselves recognise, switching ratios from survey data are not the same as diversion ratios. Diversion ratios measure customer switching in response to an isolated price increase by one firm in the market, where everything remains equal. Switching rates from survey data simply measure all switching in the market, where the observed behaviour may have been triggered by multiple simultaneous changes in the market environment. There is therefore no reason to expect that econometrically estimated diversion ratios should be in line with switching ratios from survey data.[128]

5.18 In contrast, the flexible demand model in the quality-focused merger simulation model incorporates several sources of consumer heterogeneity, allowing it to flexibly capture

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[124] The PFs wrongly allege that deviations of predicted from actual market shares at the tariff level would be "purely statistical" and not driven by observed tariff characteristics (PFs, paragraph F. 27). In reality, tariffs have some attributes included in the demand estimation, and the calibration procedure minimizes the change in market shares obtained from estimation. As a result, the calibrated market shares at the tariff level are bound to be correlated with observed market shares.

[125] [REDACTED].

[126] Customer list survey, p. 13.

[127] See paragraph 3.7 et seq.

[128] PFs, paragraph 8.215.

substitution patterns between tariffs, and consequently, to estimate diversion ratios relatively accurately.

(iii) Merger simulation

5.19 The PFs raise the following concerns with the merger simulation stage of the quality-focused merger simulation:[129]

(a) The model relies on the assumption that the incremental costs of capacity affect operators' pricing decisions, which the PFs considers invalid.

(b) The PFs criticise that network quality KPIs are set to match the JNP in 2030, when integration of the two networks will be largely complete, such that MergeCo's incentives to improve network quality are assumed, not tested by the model. Moreover, the PFs consider that the projections underpinning the JNP are just one of a myriad of possible outcomes.

(c) The quality-focused merger simulation model does not allow rivals to react by improving their network quality, when in reality, such a reaction is likely. The PFs maintain that, because of this, the results of the quality-focused merger simulation could not possibly describe a post-Transaction equilibrium; if the model had allowed rivals to react by improving network quality, they would have also raised their prices to monetize part of the value that consumers obtain from the improved service. On this basis, the PFs argue that in a model where competitors can react by changing both price and quality the overall effect on consumer welfare would be ambiguous.

(d) The PFs note that in a scenario without efficiencies, the quality-focused merger simulation predicts that rivals respond to a price increase from MergeCo by reducing their prices on average. The PFs consider this finding counterintuitive and argue that it cannot be explained by the presence of consumer heterogeneity, because the CMA's merger simulation also models consumer preferences as heterogeneous and finds that rivals meet a MergeCo price increase with a price increase of their own.

(e) The PFs note that the post-Transaction equilibrium of the quality-focused merger simulation is not unique, given that the Parties found a second post-Transaction equilibrium, which the PFs consider no less likely to occur than the one initially identified by the Parties. The PFs go on to argue that, on this basis, it cannot be ruled out that additional equilibria would be found with an even more expansive search.

5.20 These concerns are unfounded, as explained in detail below.

5.21 As explained in **PF Annex 3**, the PFs are wrong to consider that the incremental cost of capacity does not influence MNOs' pricing decisions.[130] It is therefore entirely appropriate to incorporate MergeCo's lower incremental cost into the quality-focused

[129] PFs, paragraph F.31-F.52.

[130] **PF Annex 3**, paragraph 5.44 et seq.

merger simulation. In any event, the quality-based merger simulation model shows that even in a scenario without any cost efficiencies the quality efficiencies alone would be more than sufficient to offset any reduction in consumer welfare caused by the GUPPI effect, as the results in Table 5.4 below show. Even in this unrealistic scenario the Transaction is found to generate a substantial increase in consumer welfare.

Table 5.4: Merger simulation results under different efficiencies scenarios

	Cost and quality efficiencies	Quality efficiencies
Change in consumer welfare (£ pcpm)		
Average across all consumers	£2.0	£1.7
Change in consumer welfare (%)		
Average across all customers	5.4%	4.7%
Change in average quality-adjusted price (%)		
Market-wide	-15.4%	-13.9%
MergeCo	-31.6%	-28.9%
MergeCo's competitors	-5.3%	-5.7%
Change in average headline price (%)		
Market-wide	1.8%	2.4%
MergeCo	4.1%	6.7%
MergeCo's competitors	-0.6%	-0.8%

Notes: [1] Changes computed with respect to the no-Transaction situation in 2030. [2] Average post-Transaction prices computed weighting equilibrium tariff prices by their post-Transaction market share.
Source: Compass Lexecon analysis based on survey data, data on current tariff offerings ("Pure Pricing Data"), [REDACTED], and Parties' estimates (see [REDACTED]).

5.22 The PFs criticise that the quality-focused merger simulation model exogenously assumes MergeCo's network quality improvements, rather than estimating the post-merger quality changes as part of the simulation. This criticism is entirely unjustified:

(a) By exogenously imposing the efficiencies that would result from full implementation of the JNP, the Parties have performed precisely the exercise that the PFs themselves have recognised as informative – to estimate whether the full JNP would, if delivered, be sufficient to offset the adverse effects on competition in the retail market that the PFs have provisionally identified.[131]

(b) MergeCo's quality improvements are not "assumed", but have been robustly estimated by the Parties through their extensive network modelling.[132] As far as the future KPIs assumed for rivals are concerned, additional robustness checks

[131] PFs, paragraph 69.

[132] **PF Annex 3**, paragraph 5.76 et seq.

using alternative assumptions included in [REDACTED] demonstrate that the effects on the results are minor).[133]

(c) Imposing a quantum of efficiencies is entirely standard in simulation-based analyses of merger effects. For example, the UPP test as devised by its authors consists of a comparison between incentives to raise price with marginal cost savings that are externally estimated.[134] This is also the approach taken by the European Commission in its merger simulations in past mobile telecoms merger cases. For example, in T-Mobile NL / Tele2, the Commission accepted that the merger would lead to a reduction of the variable costs for one of the merging parties, and adopted that estimated cost saving as an input of its calibrated merger simulation analysis.[135] There is no reason why a similar approach cannot be taken to model the quality efficiencies of the Transaction.

(d) In any event, extending the model to let firms endogenously choose levels of quality would be difficult, as the CMA itself acknowledges.[136] In this context, an analysis of the impact of predicted (properly modelled) changes assumed to be exogenous is more informative than no analysis at all.[137]

5.23 The PFs allege that the results of the quality-focused merger simulation are unreliable because BTEE and VMO2 are assumed not to react by improving quality. However, as explained previously, this only means that the quality-focused merger simulation will tend to underestimate the pro-competitive effects of the Transaction.

(a) Under standard economic theory, while a quality improvement will induce firms to raise headline prices in order to monetise part of the value that consumers obtain from the improved service, the combined impact of the simultaneous quality and price increases on consumer welfare is unambiguously positive (see Figure 5.2). This is also confirmed by the main results of the quality-focused merger simulation: while MergeCo increases headline prices, customers are substantially better off when taking into account both price and quality.

[133] [REDACTED].

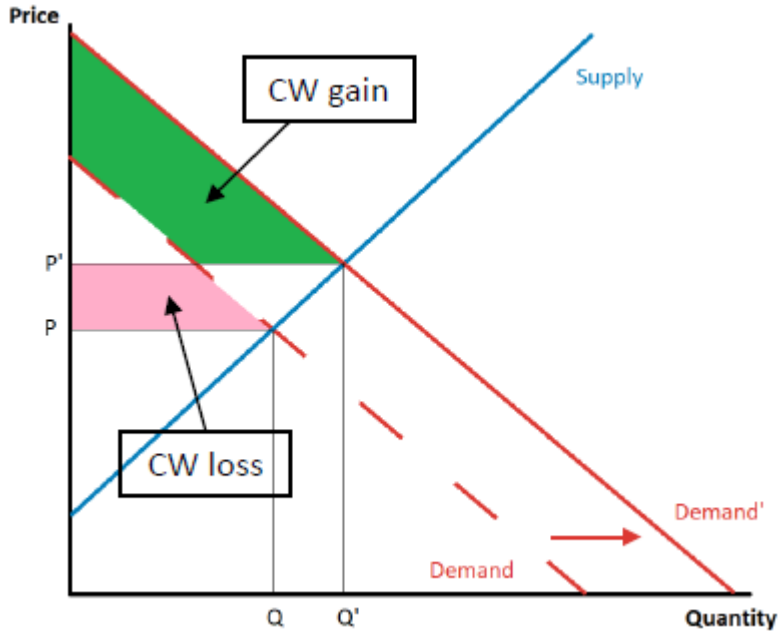
[134] See Farrell, J., & Shapiro, C. (2010). Antitrust evaluation of horizontal mergers: An economic alternative to market definition. *The BE Journal of Theoretical Economics*, 10(1).

[135] See paragraph 169 in Annex A of T-Mobile NL / Tele2 decision by European Commission.

[136] PFs paragraph D.73, footnote 408.

[137] See above, paragraph 3.39 et seq.

Figure 5.2: Effect of quantity efficiencies on consumer welfare



Source: [REDACTED].

(b) Therefore, The PFs are wrong to conclude that the quality-focused merger simulation is not informative of the overall effect of the Transaction on consumer welfare. It is clear that the fact that the model keeps BTEE's and VMO2's network quality constant implies that the results are conservative and understate the expected consumer welfare improvements.

(c) For further illustration, the Parties have undertaken additional simulations for scenarios in which it is assumed that BTEE and VMO2 react by improving their network qualities by a certain amount.[138] Table 5.5 below shows the results of these simulations. They confirm that the assumption that BTEE and VMO2 will leave their quality unchanged is conservative, in that it leads to a lower estimate of the increase in consumer welfare generated by the Transaction than the

[138] As any assumptions on the precise size of BTEE's and VMO2's quality responses are necessarily speculative, the Parties have so far refrained from modelling such scenarios. However, the exercise is useful to illustrate the direction of the bias when BTEE and VMO2 are assumed not to change their quality at all. In the illustrative scenario it is assumed that, in the situation with the Transaction, BTEE reaches the same network quality as MergeCo, while VMO2's network quality improvements are tied to MergeCo's improvements, but weighted by the current ratio between VMO2 and VUK network quality. Additional details on the exact levels of each attribute for BTEE and VMO2 used in the simulation are provided in Annex 7 to this submission, which contains the data and codes for all the new analyses reported in this section 5 of Annex 4.

alternative assumption that BTEE's and VMO2's network quality will catch up.[139]

Table 5.5: Merger simulation results with BTEE/VMO2 investment response - Scenario 3: cost and quality efficiencies

	Baseline	BTEE/VMO2 Investment response
Change in consumer welfare (£ pcpm)		
Average across all consumers	£2.0	£4.4
Change in consumer welfare (%)		
Average across all customers	5.4%	11.7%
Change in average quality-adjusted price (%)		
Market-wide	-15.4%	-30.2%
MergeCo	-31.6%	-39.1%
MergeCo's competitors	-5.3%	-26.2%
Change in average headline price (%)		
Market-wide	1.8%	-1.8%
MergeCo	4.1%	-3.3%
MergeCo's competitors	-0.6%	-1.5%

Notes: [1] Changes computed with respect to the no-Transaction situation in 2030. [2] Average post-Transaction prices computed weighting equilibrium tariff prices by their post-Transaction market share.
Source: Compass Lexecon analysis based on survey data, data on current tariff offerings ("Pure Pricing Data"), [REDACTED], and Parties' estimates (see [REDACTED]).

5.24 The PFs repeat the suggestion, first made in RFI [REDACTED], that the results of the quality-focused merger simulation are implausible – competitors are forecast to reduce prices on average in a scenario without efficiencies. The Parties addressed this criticism in [REDACTED] RFI [REDACTED] and the PFs do not properly engage with these submissions:

(a) As explained in the [REDACTED] RFI [REDACTED], the allegedly counterintuitive findings can be explained by the fact that the quality-focused merger simulation model incorporates the real-world assumption that consumers are heterogeneous. Under this assumption, MergeCo's rivals pursue differentiated reactions to a price increase from MergeCo: they may raise the prices of some of their tariffs in order to benefit from the reduced competitive constraint offered by MergeCo but reduce the prices of others, to remain

[139] For this illustrative scenario, the model predicts that MergeCo will reduce its average headline price, as will the other competitors. As BTEE and (to a lesser extent) VMO2 reach quality levels similar to MergeCo's, price competition intensifies, and quality premia get competed away. As quality levels are higher and price levels lower than in the results of the base model, consumer welfare gains are also larger. While the Parties have not modelled this, it is likely that in scenarios with weaker quality improvements for BTEE and VMO2 more moderate changes to price levels and consumer welfare would be predicted.

attractive for the most price-sensitive customers and achieve substantial market share gains.[140]

(b) The PFs note the Parties' explanation but dismiss it without further substantiation, noting that the CMA would not expect the average price across rivals to fall.[141] However, this expectation is not grounded in economic theory. In economic models with heterogeneous consumers, where some prices increase and others decrease, economic theory offers no reason to expect that one effect necessarily outweighs the other on average.

5.25 It should also be noted that the PFs also report results from the CMA's own merger simulation model that similarly predict price reductions by some competitors.[142] In dismissing the results of the quality-focused merger simulation as counterintuitive, the PFs apply a different standard that the Parties' model than to the CMA's own model does not meet.

5.26 The PFs criticise the fact that the quality-focused merger simulation model does not yield a unique equilibrium. This conclusion is untenable given that the two equilibria identified yield virtually identical conclusions.[143,] The increases in consumer welfare implied by the two equilibria differ by a mere £0.02 per consumer per month.[144] Moreover, the Parties note the following in relation to the issue of multiplicity of equilibria in merger simulation models:

(a) The potential existence of multiple equilibria is a well-known feature of models with consumer heterogeneity, but this does not preclude their use in competition policy and academia, as the PFs themselves note.[145] In addition, the CMA has put forward a model that has the same fundamental properties as the quality-focused merger simulation model and may therefore also produce multiple equilibria.

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[140] [REDACTED] RFI [REDACTED].

[141] PFs, paragraph F.47.

[142] PFs, Appendix D, footnote 415. However, the Parties note that they were unable to replicate these results.

[143] Additionally, the Parties disagree with the position expressed in the PFs that both equilibria are equally likely: using the observed equilibrium values as starting conditions is a reasonable selection criterion, as explained in the [REDACTED] RFI [REDACTED]. Moreover, when randomly searching for equilibria, the probability of arriving at the alternative equilibrium is low (11/100). Therefore, it is reasonable to rely on the baseline simulation, treating the alternative equilibrium only as a robustness test.

[144] [REDACTED] RFI [REDACTED]. While the most important statistic in the quality-focused merger simulation is the expected change in consumer welfare, other, less relevant statistics are also similar between the two equilibria. For example, the PFs point out that one equilibrium involves an average headline price decrease by competitors of -0.7%, compared to -0.3% in the baseline equilibrium. From an economic perspective, these changes are very small (less than 1% in absolute value).

[145] PFs, paragraph D.75.

(b) Like the Parties, the CMA has conducted a search for additional equilibria, based on an exercise of changing pre-merger tariff prices by up to £2.5 in either direction (increasing or decreasing).[146] The CMA has not provided the code it used to conduct this search, so the Parties are unable to assess the extent and thoroughness of the search (e.g. the number of initial conditions attempted or whether the search was conducted just on the baseline equilibrium or also the robustness simulation equilibria). However, to emulate the CMA's approach as closely as possible, the Parties have extended the search reported in the [REDACTED] RFI [REDACTED] to cover potential initial price deviations of up to £2.5.[147] The extended search has rendered no additional equilibria relative to those reported in the [REDACTED] RFI [REDACTED].[148] Therefore, with a maximum exploration range equal to the one used by the CMA in its own model to find alternative equilibria, the quality-focused merger simulation continues to show the same qualitative conclusions in all its variations (including potential alternative equilibria): the Transaction is expected to be strongly pro-competitive.

5.27 For the reasons detailed above, each one of the PFs' concerns on the quality-focused merger simulation is unfounded, which is why the CMA should give full weight to the Parties' analysis. It provides reliable and unequivocal evidence that the Transaction is strongly pro-competitive.

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[146] PFs, paragraph D.100.

[147] The implementation of the search in scope and technical details is identical to the one reported in the [REDACTED] of RFI [REDACTED] for the search with deviations of up to £2.

[148] This analysis puts the CMA simulation model and the quality-focused merger simulation on the same footing in relation to the ambiguities generated by multiplicity of equilibria. First, not finding additional equilibria as the CMA does in its exploration does not eliminate either the possibility of finding additional equilibria or the possibility that such additional equilibria may yield different conclusions from those reached in the baseline simulations; as such, the scope of uncertainty related to the potential existence of *additional* equilibria given the range of initial values explored is the same in both models. Second, all equilibria in both models yield a unique set of qualitative results (trivially in the case of the CMA's only found equilibrium), which means they involve the same degree of uncertainty in relation to *existing* equilibria. For these reasons, from a technical perspective, both the CMA simulation model and the quality-focused merger simulation entail the same degree of uncertainty in what pertains to the ambiguities associated with multiplicity of equilibria.