20 May 2022

Mobile Radio Network Services Market Investigation

Motorola's Response to the CMA's Working Papers on Profitability and the Cost of Capital

20 May 2022

1. Introduction and Summary

(1) Motorola welcomes the opportunity to comment on the approach and the results set out in the CMA's Working Papers on "Profitability Modelling and Results" and on "Cost of Capital" (both published on 6 May 2022).

(2) It makes no sense for the CMA to attempt to measure Airwave's profitability over a so-called 'extension period', not least because this ignores that there never was such a period for which the Airwave service was procured, as explained in more detail elsewhere.[1] The CMA's notion of a well-functioning market is detached from reality and does not make any economic sense. The CMA continues to ignore or misunderstand the fact that competition in the provision of services such as those provided by Airwave needs to be understood as competition for the market. Motorola will further expand on this critical point in its response to the 'Scope for competition and Market Definition Working Paper'.

(3) Starting from this misguided position, the CMA compounds the error by using an estimation of the opening value of Airwave's assets that is either based on net realisable value – the 'scrap value' of Airwave's network after switch-off – which is clearly inappropriate[2], or based on a fair value assessment undertaken for reasons entirely unrelated to trying to establish replacement costs. In fact, this assessment was commissioned to identify the need for any adjustment to the net book value of Airwave's assets to be carried forward on the balance sheet. Unsurprisingly, the result does not remotely reflect the replacement value of Airwave's network that would have to be used if – in spite of Motorola's explanation as to why such an approach is completely irrational – one were to entertain the notion of service provision over an invented 'extension period' that was never contracted for, and undertake a truncated IRR analysis for this invented period. As the CMA is aware, Motorola has commissioned work from Analysys Mason to assist the CMA by providing an indication of the level of revenues that would be required if one were to take the CMA's view of what might have constituted the competitive procurement of services over the so-called 'extension period' seriously. However, the CMA summarily and without any good reasons dismisses this work.

(4) In addition to these fundamental flaws, the CMA's analysis suffers from further problems, including the use of net realisable value (NRV) as an alternative opening asset value and the removal of costs that must be included in any proper assessment of the level of prices that would have emerged from the competitive procurement of Airwave-like services for a well-defined period, notwithstanding the fact that such procurement never could have (or should have) taken place.

(5) Finally, the CMA insists on using a WACC comparator that entirely ignores the risks that would in reality have to be factored into any open-ended commitment to provide services over an ageing network in an environment where upgrade investments are complex and time-consuming. In seeking to establish a WACC figure, the CMA selectively relies on work undertaken by Goldman Sachs that was commissioned by Motorola in order to obtain an opinion on the fair value, from a finance perspective, of the consideration paid for Airwave. The CMA completely ignores, and fails even to mention, WACC calculations prepared by

[1] See Motorola's Submission, Reimagining the Well-Functioning Market: the CMA's construction and review of a market that never existed, 20 May 2022.

[2] This is because of the high degree of asset specificity: Airwave's assets have little use outside of their deployment in the Airwave network and therefore their scrap value will always be a fraction of the value that can be obtained from continued use as long as the assets are capable of supporting the provision of services, which is just another way of saying that Airwave's investments are largely sunk.

Deloitte that are more reflective of the risks associated with the operation of Airwave beyond 2019. Given that these calculations form part of the very same document on which the CMA tries to rely for establishing the opening value of assets for its IRR calculations, this points towards a highly selective use of evidence, which the CMA does not even seek to justify.

(6) The remainder of this document addresses these points in more detail.

(7) Motorola maintains that the only valid approach to assessing the profitability of Airwave is to look at returns over the entire contract period where terms and conditions have been amended and adjusted within the contract. The CMA had initially stated that it would look at this period:[3]

> "*We propose to assess the profitability of Airwave over the period from 2000 to 2026, as Motorola suggested. However, we also propose to divide that period into two separate time periods: 2000 to 2019 (the 'PFI Period') and 2020 to 2026 (referred to as the 'Extension Period' in the rest of this working paper) as well as considering the profitability of the 2000 to 2026 period as a whole.*"

(8) The CMA has not explained why it has failed to publish its findings on the 'lifetime' IRR. This is especially egregious since this reflects the period over which Airwave and the Home Office have agreed to purchase, and supply, the relevant services.

(9) The CMA's almost exclusive focus on the so-called extension period in the current working paper, combined with the CMA's selective approach to establishing the opening value of assets and the relevant comparator, leaves the impression that, rather than undertaking a thorough and unbiased assessment of Airwave's profitability, the CMA is merely seeking to support the Home Office – at the end of the contract and in spite of all of the precisely agreed terms – in respect of what the Home Office now prefers to pay for the final use of Airwave as a fallback solution while ESN is being readied.

2. The CMA's focus on profitability over a so-called 'extension period' and its notion of a well-functioning market are incorrect

(10) The CMA's insistence on splitting the provision of the Airwave service into a 'PFI period' (2000 – 2019) and a so-called extension period (2020 – 2026) appears to be based on the view that:

- the PFI contract envisaged that service provision would end in 2019; and that
- the continued operation of Airwave is the result of negotiations for an extension period that have taken place at some point prior to the envisaged end date.

(11) The CMA states that it is "*primarily interested in recent and current competitive conditions in the market*" and that focusing on the extension period is aimed at providing "*a good indicator of potential market power and potential to negotiate supernormal prices <u>at the time that the extension was agreed.</u>*"[4] Although the CMA is unclear about the form of these negotiations or their timing, noting simply that "*the specific date on which various terms were negotiated is not relevant: our main concern is to identify the time period over which the results of those negotiations can be observed in profitability*"[5], a critical assumption on which the analysis stands - and fails - is that, at some point, the terms for an extension period have been

[3] Paragraph 22, Profitability Methodology Approach Working Paper.
[4] Profitability Working Paper, paragraph 21; emphasis added.
[5] Profitability Working Paper, paragraph 22.

negotiated. It would be in these negotiations that Motorola has presumably exploited its unilateral market power to set supernormal prices.

(12) What the CMA apparently continues to misunderstand, ignores, or is unwilling to accept, is that there were never any negotiations over an extension period. This notion of an extension period is entirely the CMA's construct. What the Home Office negotiated and obtained in 2016 was simply the unilateral right to require the provision of Airwave services beyond 2019 if this should be required because of the replacement solution – ESN – being delayed. There was never, in 2016, any negotiation of or agreement to any specific extension period beyond 2019.

(13) **The Home Office did not, at any time, ask Airwave or Motorola or, for that matter, any other prospective supplier, to quote for the provision of LMR services from 2020 to 2026.** Indeed, it is unclear why the Home Office would have done so given that it had just procured an alternative solution that would completely replace the Airwave network as and when the replacement became available, which was initially intended to happen in 2019.

(14) Thus, the Home Office essentially obtained insurance against potential delays in the deployment of ESN. There was no commitment to use Airwave beyond a national shutdown target date that was initially set to be the end of 2019. As the replacement solution was further and further delayed, this required the Home Office to push out the national shutdown target date further and further. However, the fact that we know now that Airwave will be required to provide mission-critical communication services for the emergency services until 2026 must not be misconstrued as there having been negotiations for an extension period of 2020 - 2026 at any point in time. As a matter of contractual fact there was never intended to be, nor was there certainty as to the National Shut Down Date until the Home Office issued its National Shut Down Notice in December 2021. The National Shut Down Date was, at that moment, set at 31 December 2026 and the contractual obligation for Airwave to target switch-off of the Airwave Network nationally on that date crystallised. Prior to that point no such contractual obligation or certainty existed.

(15) All that can be observed, for the purposes of making a profitability assessment, is that Airwave provided a contracted service over a period that was uncertain at the time the parties agreed the national shutdown procedure in 2016 and remained uncertain until the National Shut Down Notice was issued in December 2021. The closest that the parties came to contracting a more certain outcome was when, in April 2018, the Home Office asked for [✂], in response to which Airwave offered discounts on its charges – a fact which the CMA has, without explanation, completely ignored. The CMA has also ignored the probability weighted IRRs that are central to a rational economic analysis of risk-adjusted profitability assessments. The fact that Motorola privately anticipated that Airwave would be required for longer than anticipated by the Home Office is irrelevant for competition analysis. The inconvenient truth for the CMA is that Airwave has made lower returns than anticipated, overall, and it is extraordinarily poor competition policy to create artificial temporal constructs to try to show excess profits of a sub-period in which Airwave could only provide the services because it had made substantial investments into its network, which would have had to be replicated by any other supplier providing the services instead. The CMA's evident desire to find excess profits cannot be allowed to be a substitute for good decision-making.

(16) The reason why negotiations for a notional extension period are crucial for the CMA's analysis to make any economic sense is that, as the CMA acknowledges, providing the Airwave service, or any alternative solution, involves a massive sunk cost in specific assets. As the CMA notes, "*the features of LMR networks – in particular, the very large, sunk costs associated with the development of such networks – are such that there is likely to be a single supplier and one or*

a small number of purchasers (who may group together). In this context, we would not expect to see LMR networks being developed speculatively but rather we would expect to see the main purchaser(s) effectively commissioning a supplier to develop and operate a network and, in return, the purchaser would provide a high-level of security to the supplier in terms of demand / remuneration for the services provided. Indeed, this was the case with the Airwave network where PITO signed a long-term agreement with Airwave for the provision of services, under which revenues were largely guaranteed."[6] This is, of course, the notion of competition for the market, to which the CMA has paid lip service in various places, but which it has never taken seriously, as it should have done, in its analysis.

(17) To re-emphasise: Airwave has, since 2019, operated as a **fallback solution for a replacement network that was procured in 2015 but has been delayed**. Had this replacement network become available at any point in time, Airwave would have been shut down after transition to the new solution had been completed. There was never any commitment to taking Airwave's services for a pre-defined extension period, but instead there was a sequence of re-stated national shutdown target dates before the Home Office issued its National Shut Down Notice in December 2021 setting in train the contracted process culminating in the planned shutdown of the Airwave service in December 2026. Any procurement of, or negotiation over, the provision of services for an extension period to 2026 before 2020 would have been tantamount to an admission that the procurement of ESN had failed to achieve what it was intended to achieve, namely a replacement solution for Airwave after 2019. It is inconceivable that the Home Office could have accepted, at this point, to commit to paying for two networks over a substantial time period.

(18) It is therefore irrational to analyse the profitability of a separate 'extension period' that was never negotiated or agreed. It is fanciful to speculate about a well-functioning market that might have existed if the Home Office had invited quotes for a well-defined extension period, but did not and could not exist as a result of the Home Office aiming to have the Airwave service as a fall-back solution. The continued operation of the Airwave network was a Home Office insurance policy against the delay in the deployment of its ESN programme which the Home Office happened to need to call upon. This was never contracted in 2016 or at any other time.

(19) If one nevertheless wanted to look at the terms that might hypothetically have been agreed for a defined extension period (even though that never happened), any notion of competition in a well-functioning market must reflect the way in which LMR services need to be provided.

(20) The CMA makes reference to the Byatt report, emphasising the role played by the assumption of free entry from potential suppliers.[7] It is therefore important to consider how the threat of

[6] Paragraph A-37.

[7] At paragraph A-36, the CMA quotes from the Byatt report:

"*In measuring the continuing costs of supply the relevant prices are those that would be paid for resources purchased now in the normal course of business in competitive markets. Such competitive market conditions may result from the actual existence of competing producers or, more generally, from the threat of competition from potential producers entering the market. Even where competitive markets do not exist, it is necessary to estimate the effects that competition would have in order to measure the value of the resources used.*

The assumption of free entry into a market defines the level of profit required to cover the cost of capital, since no-one will enter unless they expect to recover this cost. ***The assumption of free entry also defines the value of existing assets to a business as equal to the amount a competitor would be prepared to pay for them in a competitive market***." (Emphasis added by the CMA) free entry from prospective providers would have played out if negotiations for an extension period had taken place at some point in time.

- First, in order for there to be any scope for prospective entry, there would have had to be a commitment to take the services over a sufficiently long period of time, giving the prospective supplier the "*high-level of security … in terms of demand / remuneration for the services provided*" that the CMA acknowledges is needed.
- Second, the remuneration required by the alternative supplier would have had to be sufficient to permit recovery of the investments required to provide the services needed. These investments are considerable and are set out in detail in the work undertaken by Analysys Mason (and we are ignoring that making such investments would have required a considerable amount of time).
- Third, this level of remuneration defines the constraint on the terms that the Home Office could obtain from Airwave in a competitive, well-functioning market with the threat of free entry.
- Fourth, investment required by such an alternative provider also defines the *economic* value of Airwave's network assets at the start of such an extension period, of course making appropriate adjustments for the fact that unlike a completely new network the Airwave network required ongoing maintenance capex. The amount a competitor in a free-entry scenario would be prepared to pay for Airwave's network is equal to the investment in an alternative network net of the additional cost that have to be incurred as a result of the Airwave network being old rather than new.

(21) **As the Analysys Mason work indicates, the revenues that any prospective supplier in a market with free entry would have required to provide the services supplied by Airwave over the extension period are in fact comparable to those earned by Airwave**. This already demonstrates that a competitive, well-functioning market for the provision of services over the so-called extension period – if it could ever have existed – would have produced outcomes that are indistinguishable from those we observe in reality.

(22) The CMA has not used the Analysys Mason work in this correct manner, i.e. to look at the IRR of a new entrant supplier who would be providing a comparable service using a network that is new and does therefore not require ongoing maintenance capex at the prices charged by Airwave. Instead, the CMA dismisses Analysys Mason's work because "*[r]eplacing … actual / forecast cash flows predicated on the existing worn and aged asset base with hypothetical cash flows which might be incurred if the asset base were different results in IRR estimates that do not correspond with the returns actually being earned by the business*."[8] This is a fallacious argument to which we return in the next section.

3. The CMA's calculation of the opening asset value is deeply flawed

(23) As Motorola has pointed out in its response to the CMA's first working paper on profitability[9], and as is obvious from the large range of IRR estimates the CMA manages to generate, the results of any truncated IRR analysis are extremely sensitive to the assumption made about the opening value of assets.

(24) In its first working paper, the CMA used net book value (calculated as the difference between cumulative capex and cumulative depreciation over the period from 2000 to 2019), which

[8] Paragraph A-33.
[9] Motorola's Response to the CMA's Working Paper on Profitability, 10 January 2022.

amounted to £240m. As Motorola has stated, the correct approach would be to value assets at their replacement costs using a modern equivalent asset approach.

(25) The CMA rejects the use of MEA valuation and instead considers that "*the Airwave Network's assets should be valued at their net realisable value (NRV) as opposed to their replacement cost or their value-in-use*."[10] This is in contrast to the recommendations in the Oxera paper, on which the CMA otherwise relies, which states the following:

> "*As Edwards et al. show, asset values should be based on either the cost of replacing the asset (specifically on a 'modern equivalent asset', or MEA, basis), the present value (PV) of future earnings, or the value derived from selling it (its net realisable value, or NRV). In particular, assets should be valued on the lower of the replacement cost or economic value, where its economic value is determined by the higher of its PV of its future earnings or its NRV. This valuation principle is also known as the value-to-the-owner principle. For the assessment of excessively high profits, assets should be valued on an MEA basis.*"[11]

(26) The Oxera paper does not provide any further discussion of the highlighted recommendation, which is of course not needed as the economic logic is obvious: because in the case of suspected excessive profitability, future earnings will always exceed NRV and might include economic rents, and therefore replacement costs will provide an appropriate ceiling on asset values. There is also a close link to the statement from the Byatt report highlighted by the CMA: with free entry, future earnings would be capped by the revenues that a new entrant would have to generate in order to recover its up-front investment in the necessary assets, which is precisely defined by replacement costs.

(27) The CMA's main reason for rejecting the work commissioned from Analysys Mason in order to establish replacement costs of the Airwave network on an MEA basis appears to be that the resulting network would be new and not require maintenance capex, unlike Motorola's ageing network the needs significant investment to be capable of providing the service until the end of 2026. In doing so, the CMA:

- mistakenly assumes that the Analysys Mason report was aimed at establishing the fair value of Airwave's network.[12] This is clearly not the case, and nowhere has such a claim been made;
- claims, without any justification, that the analysis of the profitability of service provision over a replacement does not provide much insight as it involves hypothetical cash flows that might result in IRR estimates that are different from the returns actually earned by the business.[13]

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[10] Paragraph 78

[11] Oxera, Assessing Profitability in Competition Policy Analysis, OFT Economic Discussion Paper No 6, July 2003, paragraph 1.15; emphasis added.

[12] See paragraph A-33 (a), where the CMA states that "*as the Deloitte report sets out, and Motorola's own evidence supports, the existing Airwave Network suffers from physical, technological and economic obsolescence. The fair value of such aged assets is significantly lower than the replacement cost of similar new assets given their limited lifespan*".

[13] See paragraph A-33 (b), where the CMA states that "*[r]eplacing these actual / forecast cash flows predicated on the existing worn and aged asset base with hypothetical cash flows which might be incurred if the asset base were different results in IRR estimates that do not correspond with the returns actually being earned by the business. We consider that this would make the analysis less insightful.*"

(28) As noted above, the results of the Analysys Mason work can of course be used to establish the level of revenues that a new entrant competing for service provision over a well-defined extension period would require in order to recover its investment. This is the analysis that Motorola has presented rather than, as the CMA mistakenly claims, suggesting that it "*would be reasonable to use the 'new' replacement cost of the network in our analysis together with existing opex figures and then exclude future capex flows*".[14]

(29) Alternatively, one could adjust MEA value by subtracting the net present value of the differences in capital expenditure and operating costs between the modern replacement network and the actual Airwave network, as a prospective entrant would be indifferent between making the upfront investment and acquiring an ageing network that requires ongoing maintenance capex and might have different operating costs. Of course, if these differences were discounted at the IRR, plugging the resulting number into the model of Airwave's costs would produce exactly the same result.

(30) Instead, the CMA relies on a fair value calculation prepared by Deloitte in 2016 in the context of the acquisition of Airwave by Motorola. The purpose of the Deloitte report was to provide an estimation of the fair value of certain intangible assets acquired and liability assumed from Airwave Solutions Ltd. for financial reporting purposes. In relation to fixed assets, the Deloitte analysis covered only the base station network and switch assets. All other fixed assets (accounting for around [✂]% of assets by net book value) were carried at NBV. For these two asset classes, Deloitte:

- estimated the replacement value of assets if they were bought new at the point in time at which the valuation was undertaken (replacement cost new, RCN)[15]
- adjusted this value for physical deterioration and functional and economic obsolescence of the actual network assets deployed.

This resulted in a fair value (FV) of around half of NBV (£[✂]m compared with a NBV of £[✂]m). The CMA then carries this value forward to 2019 by adding the capex incurred over the four years (2016 – 2019) and the depreciation of the existing asset base (linear over 10 years) to arrive at an estimate of opening asset values.

(31) The approach of applying a correction for technical deterioration and obsolescence to RCN – i.e., using depreciated replacement cost (DRC) - may be appropriate for an adjustment of net book values for accounting purposes, but it does not make much sense from an economic perspective if one wanted to establish the replacement value of assets in a forward-looking manner. Even the UK government's own guidance on asset valuation, the Government Financial Reporting Manual, which gives directions on preparing government annual reports and accounts (here), states that:

> "*DRC should only be used as a last resort. It should be used only where there is no useful or relevant evidence of recent market transactions due to the specialised nature of the asset … Where DRC is being used to value specialised property (regardless of whether or not the property is historic or listed), it will rarely be appropriate to cost a modern reproduction of the asset (i.e. using an identical replacement or modified reconstruction approach). The value of the property should normally be based on the*

[14] Paragraph A-50 (f).

[15] The CMA notes that the Deloitte figures for RCN are similar to those arrived at by AM.

cost of a modern equivalent asset that has the same service potential as the existing asset and then adjusted to take account of obsolescence."

(32) The Deloitte analysis effectively answers the question as to what the net book value of the actual network assets would be if they had been purchased at current prices rather than the prices at which they were actually acquired. It calculates depreciated replacement values rather than replacement values on an MEA basis. There is therefore no justification for using this as an estimate of replacement value in a truncated IRR analysis.

(33) Having been undertaken within a fair value accounting context, the Deloitte approach by its nature did not consider what would actually be needed to construct a replacement network. It does, for example, not consider internal (staff) costs associated with the deployment but only looks at the costs paid to 3rd parties for equipment. In Motorola's experience, capitalised labour accounts for around [✂]% of total Airwave capex. Some cost estimates appearing very low, e.g. (£[✂]k per tower whereas in Motorola's view an estimate of upwards of £[✂]k would be closer to a fair price in the UK). Some cost items may be missing, for example backhaul, and the sampling approach (on which there are few details) may ignore that there is typically a long tail of very high-cost sites (e.g., sites that require construction of access road etc.). For at least these reasons, the figure obtained by Deloitte cannot be taken as a valid indication of the costs that another provider would have had to incur.

(34) At the same time, the CMA is ready to dismiss estimates prepared by [✂] (then [✂]at Motorola) that puts the replacement cost at a much higher level because it "*is unclear what the basis of this estimate was or for what purpose these estimates were prepared*."[16] Of course, the CMA could have sought further clarification on the basis for this estimate, but at the very least there is no objective basis just to take the Deloitte figure at face value given that there were widely diverging estimates of replacement value considered at the time. The CMA also ignores the fact that Airwave did not write down assets to the fair value estimate provided by Deloitte.

(35) The CMA appears to justify its use of the 'fair value' figure derived from the Deloitte work, as well as the much lower estimate of the value of Airwave's assets at the end of their useful economic life of £18m, by referring to recoverable amount estimates in a well-functioning market. Although it references the Byatt report, the CMA does therefore not at all consider "*the amount a competitor would be prepared to pay for them in a competitive market*". Instead the CMA majors on its view that "*in a well-functioning market, we would expect customers to enjoy material protection with respect to the pricing of LMR services in the event of requiring an extension of services beyond the period originally envisaged. For example, we might expect the contract to provide effectively for the transfer of the network assets at the end of the contract period. That would allow for the re-tendering of the provision of services using that already built and paid for network. Specifically, we would expect pricing during such an extension period to be constrained at a level at which the supplier was, broadly, only able to recover the incremental investment in the network required to extend its life, its (efficient) operating expenses, and a reasonable return on its capital, taking into account the risks assumed by the supplier over the extension period.*"

(36) These speculations of course pre-judge the outcome of any further analysis of profitability in that they are based on what the CMA (apparently accepting the Home Office's view at face value) thinks prices for services after 2020 should have been. In any case, they relate to contractual provisions that could have, but were not, included in the original PFI contract. That

[16] Paragraph A-30.

contract could have, but did not, include provisions related to the continuation of supply after the initial period.[17] To the extent that the absence of such a provision is the result of a market that is not working well – a notion which Motorola rejects, given the amount of time spent on negotiating the initial contract – it would have been the market in which competition for the Airwave contract took place. This is the market which the CMA explicitly does not want to investigate.

(37) Arguably, the Home Office was not interested in a continued provision of Airwave services beyond 2019 other than as an insurance policy against ESN delays. ESN had been commissioned with the explicit intention that it should replace Airwave. Put differently, a continuation of the Airwave service for an extended period of time was never foreseen and never intended.

(38) The next argument put forward by the CMA – namely that in a well-functioning market the assets should be completely paid for by the end of the initial period and therefore should be valued at zero[18] - ignores that Airwave's assets were not fully written down by the end of 2019 and that the cost had therefore not been fully recovered. In the first profitability working paper, the CMA itself established that the accumulated depreciation fell short of the accumulated capex at the end of 2019 by £240m. That the Linklaters model assumed that assets would be fully paid for by the end of the modelled period is not relevant – whatever the expectation was, this did not happen in practice.

(39) This leaves the last point made by the CMA, namely that the contracts contain provisions that stipulate a handover of assets at fair value at the end of the original contract period.

(40) Indeed, there are provisions in the contracts that stipulate the option for a transfer of assets on termination of the contract at an agreed fair market value, though without being specific about the assets that would be covered and the method to be applied to establish fair value (with the PSRCP agreement referring to dispute resolution in the event that a fair value cannot be agreed). A major factor – which has caused disputes in the past – is that the transfer provisions triggered by termination of a contract must not undermine Airwave's ability to provide services to the remaining customers. This implies that transferable assets would only be those that are specific to the customer who is terminating the relationship. Therefore, Motorola questions the relevance of these provisions for the procurement of (incremental) extensions to the provision of the network service (leaving aside that the Home Office, at no point, indicated any intention to terminate the contract or request a transfer of assets).

4. The CMA's adjustment of costs is unjustified

(41) The CMA makes several adjustments to revenues and costs to arrive at the cash flows on which it bases its profitability analysis.

(42) As agreed by Motorola, the revenues and costs associated with the provision of services that do not form part of the core Airwave service are removed (namely the revenues and costs associated with Pronto, CCCRS and the Ambulance Bundle 2). The CMA also removes revenues and costs associated with interworking, which arguably should not be excluded as being able to support the transition to ESN is part of the core Airwave service going forward. However,

[17] For the sake of completeness, pricing could only have been the result of a contractual provision and not, as the CMA erroneously claims in footnote 73, be the result of "*competition among several potential LMR network suppliers which were already operating in the market, ie who had already incurred the sunk costs of constructing a network.*" The operation of several LMR networks at the same time would not make any economic sense.

[18] Paragraphs A-41 and A-42.

Motorola accepts the exclusion of this service, noting that the provision of interworking is [✂].

(43) However, Motorola takes issue with the CMA's calculation of administrative costs associated with Ambulance Bundle 2 and interworking. As the CMA is aware, Ambulance Bundle 2 is mostly outsourced and therefore administrative costs associated with the provision of this service are minimal. Similarly, interworking is a service with minimal administrative costs. Therefore, taking out administrative costs based on an attribution on revenue grossly overstates the cost of these two services.

(44) In addition, the CMA disallows certain costs which it considers constitute a 'transfer of costs' from Motorola to Airwave, namely MSI engineer maintenance costs (£[✂]m per annum), management charges ($[✂]m per annum). The CMA also reverts adjustments made by Motorola to the figures from the statutory accounts for the years 2016 – 2020. Motorola considers that these changes are unjustified. They have been made for the reasons set out in the Transfer Charge Working Paper, which has been published before the deadline for Motorola's response to an RFI addressing specifically the facts behind these adjustments. Motorola strongly disagrees with these adjustments and will set out its reasons in more detail in its separate response to the Transfer Charge Working Paper.

(45) Most importantly, however, the CMA also appears to consider that it might be appropriate to include capital expenditure on a net basis, i.e., with equipment purchased from Motorola valued at the cost to Motorola rather than market prices and looking at scenarios with capex at this lower value. There is absolutely no justification for such an approach. Any alternative supplier who would have constrained Airwave's pricing in the hypothetical free entry scenario referenced in the Byatt report would have to acquire the necessary equipment and the support services at market prices and therefore the gross capex figures are the only ones that can meaningfully be considered. Motorola will provide further details in its separate response to the Transfer Charge Working Paper.

(46) The CMA makes further adjustments (e.g., to decommissioning costs) which have little impact on the results obtained. For the record, Motorola wishes to make it clear that where a specific adjustment has not been discussed explicitly, this does not indicate agreement with the approach taken by the CMA.

5. The CMA's approach to estimating WACC is highly selective and ignores project-specific risks

(47) The CMA dismisses the use of a hurdle rate reflecting project-specific risks as a relevant comparator for the 'extension period'. Though an uplift to the cost of capital might have been appropriate for the initial period[19], the CMA states that "*regardless of the appropriateness of such an uplift in the historic period, we do not accept that any such uplift should be applied to the extension period since all the initial uncertainties and risks associated with the Airwave project, which might have merited such an uplift, had long been resolved*."[20]

(48) The CMA then uses the standard CAPM approach to calculating WACC, relying on work undertaken by Goldman Sachs who had been asked by Motorola to provide an opinion on the fairness, from a financial point of view, of the consideration paid for Airwave. Specifically, the CMA relies on the selection of companies used by Goldman Sachs as 'Key Peers' for the

[19] The CMA states that "*We do not consider it necessary to come to a firm conclusion on the appropriateness of applying an uplift to the historic period WACC in the form of a hurdle rate as we are not focussing on this period for the purposes of our profitability analysis.*" (Paragraph 5 of the WACC paper)

[20] Ibid.

estimation of an appropriate equity beta for Airwave, swapping out Centrica for United Utilities and placing more weight on the utilities relative to the other companies in Goldman Sachs's key peers group. Otherwise, the CMA's analysis simply updates the other relevant figures in the WACC calculations. Based on these numbers, the CMA then calculates a range of WACC figures for the initial period and the 'extension period' (a calculation which Motorola has not been able to check or verify).[21]

(49) It is, in Motorola's view, astounding that the CMA should ignore evidence on WACC from the Deloitte work on which it chooses to rely so heavily for its estimation of the opening asset values. It is not even that the CMA dismisses this alternative estimate of WACC – there is not even an acknowledgment in the CMA's working paper that such an alternative calculation has been undertaken at the same time at which the Goldman Sachs opinion had been rendered. Motorola cannot see any explanation for this selective use of evidence, which points towards actual or at least apparent bias.

(50) There is, moreover, no objective justification for the CMA to ignore the work undertaken by Deloitte, which differs from the Goldman Sachs estimate in two main aspects:

- First, Deloitte use a set of 'guideline companies' in order to arrive at an estimate of the asset beta that is very different from the 'Key Peers' identified by Goldman Sachs. Specifically, Deloitte relies more on technology companies and less on regulated utilities as comparators.[22] One can, of course, argue about the selection of comparable companies, but Goldman Sachs's assessment that suggests Airwave is akin to a regulated utility (with 'regulated prices' and 'long term contracted revenues') is questionable at a point in time when there is no certainty over revenues beyond a three-year period from acquisition. The use of other comparators results in a substantially higher beta, which in turn leads to a higher cost of equity.

- Second, and more importantly, Deloitte explicitly takes account of the considerable revenue risk to which any investor in Airwave was exposed at the time. As Deloitte notes, a "*[c]ompany-specific risk premium of* [✂] *percent is considered in the analysis. As indicated earlier, only the projections through 12/31/2019 are certain and contracted in nature. There is still uncertainty regarding how long the cash flows are expected to be generated from the existing LMR network system acquired from Airwave. As such, we included the* [✂] *percent company-specific risk premium to reflect such uncertainty.*"[23]

(51) **Whilst the impact of the difference in the estimated beta is limited, the acknowledgment of the substantial revenue risk results in a much higher WACC estimate of** [✂]**% overall – not dissimilar to the target IRR agreed at the outset when the original Airwave contract was signed.**

(52) There is, in Motorola's view, no justification for the CMA's decision to choose to ignore the substantial revenue risk flowing from the Home Office's decision - the CMA simply ignores the

[21] Specifically, Motorola has been unable to replicate the CMA's calculations based on the assumptions summarised in Table 5 of the Working Paper on WACC and would appreciate clarification on the way in which the cost of equity has been derived, but notes that in relation to the period from 2020 to 2026 there appears to be an error in relation to the 'low' and 'high' scenarios, where the risk free rate in the low scenario is higher than in the high scenario.

[22] Deloitte the makes adjustments for the fact that the comparator companies are all large international firm by applying a small stock premium and a country risk premium to adjust for the difference in market risks of the U.K. relative to the U.S.

[23] [✂]

fact that the Home Office had multiple opportunities - not to commit to an extension period, but rather to require Airwave to provide *mission critical* services for an undefined period until ESN eventually became available. This uncertainty and the associated risk cannot simply be dismissed with reference to the notion that the technological challenges that would initially have justified a substantially higher hurdle rate had by then been resolved. To the contrary, Airwave has recently experienced, and will continue to experience, some of the most significant technological challenges experienced over its entire contract.

(53) The specific risks to which Airwave was exposed have changed, but they have not disappeared, even before one considers that there were, and continue to be, massive technological challenges associated with keeping an ageing network operational to the required standard in an environment where spares are increasingly unavailable and third-party inputs on which the network relies are reaching their end of life and are being withdrawn and replaced at a quickening pace due to shorter lifecycles, resulting in hardware and software obsolescence and needing support. A clear example for this is [✄] recent notification to Motorola that [✄]. This will present major, unprojected, risk and costs that cannot be passed on to the Home Office.

(54) In this context, it is instructive to note that the CMA in its Working Paper on Potential Remedies considers that there are two factors that raise challenges in relation to the use of a charge cap, namely uncertainty over the impact of obsolescence and reliability issues in relation to future capex requirements and uncertainty over how long the Airwave network may need to remain operational.[24] These are of course the very same risks that the CMA simply dismisses in its assessment of an appropriate rate of return. The CMA's analysis is irrational and Motorola is unable to understand which version of the CMA's view Motorola is supposed to take as reflecting the CMA's position.

6. Conclusions

(55) Overall, Motorola respectfully considers that the CMA has presented a highly selective and apparently biased analysis that purports to demonstrate extraordinary levels of profitability, suggesting in turn that the price charge for the continued provision of the Airwave service is excessive and well above the charges that the Home Office would face in a well-functioning competitive market.

(56) These results are driven by the CMA's:

- unexplained refusal now to assess (or publish its assessment of) Airwave profitability over the course of the entire contract, i.e., 2000 – 2026;
- focus on a fictional contract 'extension period' at the end of the Airwave contract, from 2020 to 2026, that was never the subject of any specific contract, bidding, competitive procurement or even negotiation when this was supposed to have taken place in 2016, not least because it was not known until some 5 years later, at the end of 2021, that National Shutdown will take place on 31 December 2026;
- failure to assess the implications of what the parties did in fact contract for in 2016, namely the Home's Office's unilateral right to require the mission-critical Airwave service for contract period that remained undefined for a full five years; and

[24] Paragraph 43 of the Potential Remedies Working Paper.

- adoption of an opening value for Airwave's assets in 2020 that simply does not survive rational assessment.