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CMA CLOUD SERVICES MARKET INVESTIGATION

Google Cloud's response to certain questions raised by the Inquiry Group in our Hearing and Microsoft's response to the CMA's Licensing Working Paper

I. Introduction and Executive Summary

1. The purpose of this paper is twofold: (a) to follow-up on certain questions raised by the Inquiry Group at our hearing relating to the effects of Microsoft's licensing practices; and (b) to address Microsoft's response, dated 10 July 2024, to the CMA's Licensing Working Paper (**Microsoft's Response**), which was published subsequent to our hearing.

2. As set out in the CMA's licensing working paper dated 6 June 2024 (the **Licensing WP**), Microsoft charges higher prices – [✂] – when customers deploy must-have Microsoft software on the cloud infrastructure of its closest rivals (AWS, Alibaba and GCP) instead of Azure. The question is whether this practice gives rise to an adverse effect on competition (**AEC**).

3. The Licensing WP assesses this issue in a detailed, comprehensive and conventional manner that is consistent with the established legal framework for assessing an AEC. It considers Microsoft's ability and incentive to charge higher prices [✂] when its services are used with rival cloud infrastructure; the extent of Microsoft's market power in the relevant product areas; and a range of evidence concerning rivals' diminished ability to compete effectively. This is a common sense and clear approach.

4. In contrast, Microsoft's Response to this assessment is narrow and formalistic, and inconsistent with the established legal framework for assessing an AEC. Microsoft does not engage with the CMA's findings on market power and does not deny the higher prices [✂] that it imposes on customers using rival cloud infrastructure. It raises a series of objections to the CMA's analysis on the effects on competition. These arguments fail to convince. Microsoft urges the CMA to adopt an artificial analytical framework that focuses on rivals' ability to absorb the costs that Microsoft imposes, effectively denying that anything short of total market exit actually materialising could give rise to an AEC. Microsoft's Response disregards the unambiguous evidence of foreclosure effects and the detrimental impact of its conduct on customers.[1] It also makes sweeping statements about IP rights, but ultimately this all amounts to nothing more than hyperbole and relies on mischaracterisations of the CMA's analysis, claiming (incorrectly) that the CMA's position denies companies the right to monetise their IP.

5. [✂].[2]

6. In this response, Google Cloud addresses the main arguments advanced by Microsoft, and explains why the CMA's approach to assessing Microsoft's conduct is correct and demonstrates a clear AEC:

    a. First - the central thrust of Microsoft's Response to the Licensing WP is that its conduct is not having a *sufficiently* adverse effect on competition to warrant an AEC finding. By focusing solely on what it calls 'partial foreclosure' from raising rivals' costs (**RRC**), Microsoft seeks to unduly narrow the CMA's ability to assess whether features in the market are leading to an AEC. The question the CMA must answer in a market investigation is not limited to whether conduct is raising (or will raise) rivals' costs, but rather whether any feature of the market gives rise to an AEC. This is an intentionally broad test. (**Section II**)

    b. Second - Microsoft has misapplied its 'RRC test' in its assessment of partial foreclosure.

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1 The CMA's market investigations regime is rooted in considerations of customer welfare. The Enterprise Act specifically envisages that the CMA will take remedial action in relation to harm caused to customers as a result of an AEC. See Enterprise Act 2002, Sections 134(4)-(8).

2 [✂].

. The correct comparison for an RRC analysis is between the input product and the downstream costs of supply of the relevant end product, *not* a particular competitor's overall revenues or available cash reserves.

. By claiming that the relevant question is whether rivals can offset the increased costs that Microsoft imposes on them, Microsoft erroneously conflates the RRC and As-Efficient Competitor tests.

. [✂] (**Section III**)

c. Third - the 'real-world' evidence Microsoft has put forward to support its claim that its conduct is not foreclosing competition can be easily rebutted and fails to displace the CMA's emerging view that licensing costs do impact customers' choice of cloud infrastructure provider. (**Section IV**)

d. Fourth - neither the Licensing WP nor Google Cloud's submissions call into question Microsoft's right or ability to monetise its intellectual property rights (**IPR**). Removing the price [✂] differences when customers deploy Microsoft software on Azure compared to AWS, Alibaba and GCP would address the AEC and would *not* impede Microsoft's ability to make a return. In any event, Microsoft disregards the compensation it has already received and continues to receive for the IPR in question. More generally, the existence of IPR does not remove practices from the scope of competition law. (**Section V**)

e. Fifth - [✂] "*would achieve as comprehensive a solution as is reasonable and practicable to the adverse effect on competition and any detrimental effects on customers so far as resulting from the adverse effect on competition*."[3] (**Section VI**)

7. A more detailed response to each of Microsoft's main arguments is provided in the remainder of this paper. A non-exhaustive list of material factual and legal errors and inaccuracies contained in Microsoft's Response are documented in **Annex 1** to this paper.

II. Microsoft fails to engage meaningfully with the CMA's theory of harm and unduly narrows the assessment of an AEC

. The AEC test is broad and allows the CMA to take account of multiple sources of harm

8. The test for an AEC is defined in statute as whether "*any feature, or combination of features, of a relevant market prevents, restricts or distorts competition in connection with the supply or acquisition of any goods or services in the United Kingdom or a part of the United Kingdom*."[4] A 'feature' includes the conduct of market participants,[5] such as exclusionary practices.[6]

9. 'Theories of harm' provide a "*hypothesis of how harmful competitive effects might arise in a market and adversely affect customers*."[7] This hypothesis can then be tested against the evidence to determine "*whether or not there is a prevention, restriction or distortion of competition and, if so, identify what features are causing it*."[8] Ultimately, the CMA has latitude to form a 'rounded judgement' based on the evidence before it.[9]

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3 Enterprise Act 2002, Section 134(6).
4 *Ibid.*, Section. 134(2).
5 *Ibid.*, Section 131(2).
6 Competition Commission, Guidelines for market investigations (CC3 as revised) (**CMA Guidelines**), para. 160.
7 *Ibid.*, para. 163.
8 *Ibid.*, para. 164.
9 *Ibid.*, para. 319.

10. An AEC assessment is intentionally broad in concept, and differs from the assessment required under Chapter 2 of the Competition Act, where the question is whether particular conduct – in and of itself – abuses a dominant position; a quasi-criminal offence that almost always entails financial penalties. By contrast, competitive harm under the AEC framework can arise from multiple sources (whether in isolation or in combination). It does not rely on a finding that an individual practice is 'abusive' within the meaning of the Competition Act.[10] And it does not entail a rebuke and sanction, or a finding of having infringed applicable law.

11. Sources that can give rise to an AEC include not only vertical relationships, but also barriers to entry and expansion and unilateral market power, which need not be in the market concerned.[11] These sources of harm are not mutually exclusive.[12] The CMA's decisional practice confirms that the assessment can and should take into account harm arising from any combination of features that could impact aspects of competition,[13] such as - in the case of the cloud infrastructure market:

    . Microsoft's significant market power both on the cloud infrastructure market and in the upstream software markets;

    . its discriminatory treatment of AWS, Alibaba and GCP relative to Azure on [✂] pricing [✂] grounds and the follow-on impact that has on prices and choice for end customers;[14]

    . its refusal to grant access to certain must-have inputs (e.g. through restrictions on the interoperability between Active Directory and third-party cloud IAM providers); and

    . its series of additional restrictions, including Microsoft's refusal to supply crucial security updates; making Extended Security Updates (**ESUs**) available to GCP customers for only three years (whereas for Azure customers they apply for four years); [✂].

12. Insofar as the CMA is considering competitive harm resulting from vertical relationships, the 'hypothesis' may be that a practice "*restrict[s] access to essential inputs or raise[s] rivals' costs, or limit[s] rivals' ability to acquire sufficient customers to benefit from economies of scale, learning effects and/or network effects*" (emphasis added).[15] If the hypothesis is correct, then "*downstream competitors may be unable to compete effectively*."[16] For this type of hypothesis to be confirmed, it is not necessary that a rival has been "*forced to exit from the market*"; it is sufficient that rivals are "*materially disadvantaged and consequently compete less effectively.*"[17]

13. In assessing whether a 'vertical' practice gives rise to an AEC, established guidance explains that it is relevant to take account of a "*variety of evidence*" such as: "*economic modelling*" to test effects on competition; the "*conduct and strategic interactions of relevant market participants*"; "*comparing relevant industry characteristics and firm behaviour over time"*; *and "drawing inferences from any observed natural experiment.*"[18]

14. The CMA's Guidelines also specify key pieces of evidence to assess whether a firm has the incentive and ability to engage in foreclosure (e.g. raising the price of inputs to rivals): (i) "*significant market power in one or more markets along the supply chain*"; (ii) the integrated firm's "*ability to refuse to supply or to*

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10 *See* e.g. *Ibid*., para. 240.

11 *Ibid.*, paras. 170 and 179.

12 *Ibid.*, para. 172.

13 *See*, for a recent example, Funerals Market Investigation, Final Report, paras. 8.9 and 8.18, referring to features that could restrict competition individually and/or in combination.

14 The Enterprise Act explicitly states that a detrimental effect on customers can take the form of "*higher prices, lower quality or less choice of goods or services in any market in the United Kingdom (whether or not the market or markets to which the feature or features concerned relate)*." *See* Enterprise Act 2002, Section 134(5)(a).

15 CMA Guidelines, para. 268.

16 *Ibid*., para. 270.

17 *Ibid*., para. 269.

18 *Ibid*., para. 75.

increase the price of an essential input, or limit access to an asset, facility or platform"; (iii) the "*competitiveness of upstream and downstream markets*"; (iv) the "*size of any cost asymmetry*" on the downstream market; and (iv) "*counter-measures by rivals*."

15. The Licensing WP takes an entirely conventional approach, closely following the relevant principles for identifying and testing for an AEC as set out in the Enterprise Act and the CMA's Guidelines. It sets out a coherent theory of harm: namely that Microsoft has market power in certain software products; Microsoft imposes higher prices [✂] for those software products when customers choose rival cloud infrastructure; rivals have no effective countermeasures; and this materially disadvantages rivals, meaning they compete less effectively.

16. Also in line with the CMA's Guidelines and established decisional practice, the Licensing WP sets out empirical evidence that enables the theory of harm to be tested, such as the proportion of cloud infrastructure customers using Microsoft software licences and on which cloud infrastructure they use them; whether Microsoft software accounts for a significant share of cloud expenditure for some customers; the size of price [✂] differences that Microsoft imposes; the strength of Microsoft's market position; and so on.

17. The theory of harm – and the categories of evidence designed to test it – is simple and intuitive, whilst also being robust. Nothing in the paper is novel or unconventional. There is a suspected barrier to using Microsoft's rivals in cloud infrastructure as a result of Microsoft's licensing practices. The above framework tests whether this suspicion is correct and the evidence shows clearly that it is.

. Microsoft's Response does not challenge several important aspects of the CMA's analysis

18. Much of the CMA's analysis is uncontested by Microsoft.

19. First, Microsoft does not meaningfully seek to engage with the CMA's emerging view that Microsoft has significant market power in respect of Windows Server, Windows 10/11, SQL Server, Microsoft Office and 365, and Visual Studio. Nor does it challenge the view that the market power of each of these products is mutually reinforcing. Microsoft's only response is that the analysis in the Licensing WP would:

> "*far from suffice to establish either a finding of dominance in a Competition Act 1998 context or one of significant market power in the context, say, of a detailed and focused market study (cf. the CMA's Digital Advertising market study) let alone an MIR on the question, or in the SMS Regime context against a balance of probabilities standard.*"[19]

20. This is no answer to the CMA's emerging view of Microsoft's significant market power. The AEC test does not require a finding of dominance. Microsoft draws an unsubstantiated distinction between what it deems "*detailed and focused*" markets work, and the present market investigation; this is despite the extensive evidence-gathering and analysis that has been carried out in the market investigation to date. And it appears to consider the standard for finding market power in a market investigation is higher than the standard for finding dominance in a Competition Act case. This is erroneous and unexplained. In any

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19 Microsoft's Response, para. 12.8. We note that Microsoft additionally claims that this is its first opportunity to respond to these allegations of market power. However, the European Commission determined some 20 years ago that Microsoft had a dominant position in respect of two of the products considered by the CMA (namely, Windows Server and Windows PC Operating System); European cloud providers (Aruba, OVHcloud and the Danish Cloud Community in 2021 and CISPE in 2022) have submitted complaints to the European Commission on the basis that Microsoft is leveraging its dominance in server operating systems and other enterprise software to favour its own cloud infrastructure services; the CMA found that Microsoft has a 70-80% share of the market for desktop operating systems in its Phase 1 decision relating to Microsoft's acquisition of Activision (a figure that is also cited in Ofcom's final report following its market study into cloud services); and the Commission recently sent Microsoft a Statement of Objections alleging abusive tying of Microsoft Teams to Office/365 on the basis that Microsoft is dominant in respect of the latter products. Microsoft must have considered these issues previously and has no good explanation for failing to engage with the CMA's analysis on grounds of novelty.

event, Microsoft puts forward no evidence to challenge the CMA's emerging view that it has market power.

21. Second, Microsoft does not deny that it imposes significant price [✂] differences when customers deploy Microsoft software on AWS, Alibaba and GCP – the cloud providers that Microsoft acknowledges compete most closely with Azure. Microsoft reasons that there is *no* discrimination from imposing high fees for deploying Microsoft software with AWS, and GCP (and presumably Alibaba) but imposing no charge when customers deploy that software with smaller cloud service providers, since 'larger' and 'smaller' cloud providers are not 'equivalent':

> "*[It is] lawful to give those rights away for free to smaller challenged competitors – as Microsoft has done for non-Listed Providers – while continuing to license for a fee to larger and more profitable firms. Discrimination is not simply applying dissimilar conditions to equivalent transactions but also seeking to apply equivalent conditions to dissimilar transactions (or counter-parties)*."[20]

22. There are two distinct issues with this. First, on any view, Azure belongs to the category that Microsoft describes as "*larger and more profitable firms.*" Therefore, by imposing price and non-price differentials when users deploy Microsoft software on AWS, Alibaba and GCP instead of Azure, Microsoft's own logic confirms that it *is* engaging in discrimination. Second, and separately, the CMA has rightly found that GCP is closer in size in important respects to other cloud providers, such as Oracle, IBM, and OVHcloud. So, Microsoft's position that GCP should be treated similarly to AWS and Alibaba and dissimilarly to all other providers is flawed.

23. Third, Microsoft does not deny the CMA's analysis with respect to 'lower-spending' customers. The Licensing WP posits that Microsoft's licensing practices "*may weaken its rivals' ability to acquire sufficient customers to benefit from scale advantages.*"[21]

24. Microsoft's Response misquotes this hypothesis as saying that the licensing practices "*may weaken its rivals' ability to acquire **[bigger-spending]** customers to benefit from scale advantages*"[22] (emphasis added). It argues that Microsoft's practices are "*unlikely to move the needle on Amazon and Google winning big-ticket business*."[23] But it does not contest that the CMA's theory of harm applies to lower-spending customers.[24]

25. This is important as acquiring lower-spending customers is still relevant to achieving scale. Microsoft fails to explain why a cloud service provider is better able to achieve economies of scale from one larger customer compared to, for example, four smaller customers.

26. Fourth, Microsoft makes no attempt to engage with or rebut concerns raised regarding non-price factors. While Microsoft is correct to note that the Licensing WP is focused on price factors, Microsoft has not sought to respond (at least not publicly) to the technical challenges with Active Directory discussed in the Technical Barriers Working Paper (the **Technical Barriers WP**).[25] Microsoft has also not taken the opportunity to respond to Google Cloud's and other cloud providers' submissions (referred to in the

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20 Microsoft's Response, para. 2.7.

21 Licensing WP, para. 1.13.

22 Microsoft's Response, Section 1(d).

23 *Ibid*., page 2.

24 [✂].

25 CMA Technical Barriers Working Paper, para. 6.46.

Licensing WP) regarding [✂] [26] instead simply referring to a paper it submitted to the CMA on [✂] prior to the publication of the Working Papers.

27. Taking the above concessions and material omissions into account, it is not in dispute that Microsoft has significant market power, and it does not appear to be in dispute that Microsoft has the incentive and ability to charge higher prices [✂] on rival cloud infrastructure. The only remaining question is whether the conduct has sufficient effects on the market to qualify as an AEC. Microsoft levels several criticisms of the CMA's analysis in this regard. As we set out below, these criticisms are fundamentally flawed.

. The CMA rightly adopts a broader analytical framework for its analysis of partial foreclosure than just an RRC analysis

28. Google Cloud considers that the CMA has adopted the correct analytical framework for assessing partial foreclosure in the Licensing WP, consistent with the CMA's Guidelines.

29. The CMA rightly does not confine its assessment of harm resulting from Microsoft's vertical relationships with its downstream cloud infrastructure rivals to an RRC analysis, but instead considers whether Microsoft's licensing practices are contributing to partial foreclosure of the cloud infrastructure market by either:

    a. making software licences more expensive when used with rival cloud infrastructure compared to Microsoft's Azure service which may serve to raise rivals' costs of supplying cloud infrastructure services, or

    b. making a significant proportion of customer demand less contestable to rivals, thereby weakening its rivals' ability to acquire sufficient customers to benefit from scale advantages in supplying cloud infrastructure services.[27]

30. These should be viewed as related but distinct tests. The CMA does not need to demonstrate that Microsoft's conduct is raising rivals' costs in order to conclude that its licensing practices are leading to partial foreclosure, let alone an AEC. The CMA can – additionally or alternatively – consider whether Microsoft's licensing practices make a significant proportion of customer demand less contestable to rivals. The CMA is also right to acknowledge the relevance of non-price factors, noting that competitive harm is more likely where there is a [✂] of Microsoft software when used on rival infrastructure as compared to when it is used on Azure.[28]

31. Microsoft's Response seeks to confine the AEC assessment to a contrived version of the RRC analysis[29] as the "*most appropriate framework*"[30] for the CMA to assess its licensing practices, displacing the broader (and entirely proper) "*partial foreclosure*" test.[31] Going even further, Microsoft suggests that its practices 'pass' its proposed version of the 'RRC test' if it is theoretically possible for rivals to earn sufficient margin to cover the higher costs that Microsoft imposes on them so that they remain on the market – even if their ability to compete is substantially reduced.

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26 Licensing WP, para. 2.34. For example, Microsoft withholds critical security updates and only allows non-Azure customers to purchase ESUs for up to three years, whereas Azure customers receive ESUs for free for four years.

27 *Ibid*., para. 1.13.

28 *Ibid*., para. 1.14(c). Despite both Ofcom and the CMA having received a number of submissions complaining about Microsoft limiting available features when its products are used on rival cloud providers' infrastructure (Licensing WP, paras. 1.5 and 6.6.), as noted above, Microsoft makes no attempt to rebut these complaints (or those set out in the Technical Barriers Working Paper regarding the lack of interoperability with Active Directory), instead choosing to refer back to a submission it made prior to the publication of the CMA's Working Papers.

29 Microsoft's Response, para. 2.13.

30 *Ibid*., para. 2.13.

31 *Ibid*., para. 2.13.

32. As explained below, Microsoft's proposed analytical framework is fundamentally flawed. Microsoft's purported justification for urging such a narrow test on the CMA is to ensure "*disciplined quality control over the narrative debate, not least as the issues are not the centre of gravity of this MIR but are factually complex and a drain on bandwidth.*"[32] This explanation is unprincipled and untethered from the applicable statutory framework. Dismissing the CMA's analysis to-date as a 'drain on bandwidth' is incoherent, particularly since Microsoft is urging the CMA to fundamentally re-order its assessment, which would entail more work; not less. It is in any event irrelevant. What matters is getting the correct answer; not the 'bandwidth' it takes to get there.

III. A correct application of the (stricter) As-Efficient Competitor test supports an AEC finding. [✂] a correctly applied RRC analysis would result in the same conclusion

33. Microsoft has sought to rely on a narrow formulation of the RRC analysis by claiming that a practice only falls foul of the test if efficient rivals lack the margins to compete profitably, notwithstanding the additional (and potentially very substantial) costs and quality differences that a player with market power may have imposed on them.[33] In doing so, Microsoft cherry picks different elements from the RRC and As-Efficient Competitor analytical frameworks to best suit its arguments,[34] whilst failing to recognise that the RRC and As-Efficient Competitor frameworks differ in an important respect:

    a. an **RRC analysis** focuses on rivals' costs and does not require an analysis of the 'defendant' party's downstream costs and prices relative to each other, whereas

    b. the **As-Efficient Competitor test** considers the 'defendant' party's downstream costs and prices to analyse whether an as-efficient competitor can match discounts offered by a firm with market power.

34. An RRC analysis is concerned with partial foreclosure[35] - not total foreclosure. It considers the extent to which higher wholesale charges (i.e. Microsoft's SPLA charges) imposed on rivals (i.e. AWS, Alibaba and GCP) foreclose, fully or partially, these rivals from a critical input, with the effect that it causes them to raise the retail prices they impose on their end customers for the downstream product (i.e. Windows Server VMs) and/or reduce their output. An RRC analysis therefore has specific regard to the materiality of those wholesale charges relative to the overall cost of supplying the downstream product to end customers. By contrast, the As-Efficient Competitor test considers whether an equally efficient competitor can profitably match the pricing practices of a dominant undertaking, and may therefore take into account whether Microsoft's SPLA input costs could be profitably absorbed. Microsoft's contention that an RRC analysis "*boils down to whether Amazon or Google can afford to match Microsoft on cash discounts*"[36] is therefore incorrect. It also ignores [✂] Microsoft imposes on customers that want to use its software in either an AWS, Alibaba or GCP environment. Insisting that a practice passes the 'RRC test' if rivals can profitably absorb the increase in input costs is – in effect – importing components from the As-Efficient Competitor test to create a test that is incoherent and cannot help with the task of assessing whether there is an AEC.

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32 *Ibid*., para. 1.3(g).

33 See, for example, Microsoft's Response, para. 1.3(c) ("*Amazon and Google appear from all accounts likely to have ample margin (cash) to play with and compete profitably [...] Amazon and Google surely have sufficient war chests of* available *margin to compete today*"); and 1.3(g) ("*Amazon and Google have ample margins (cash) to fund discounts that benefit customers*").

34 The As-Efficient Competitor test is well-known from EU and UK competition cases, focusing on whether the pricing practices of a dominant operator make it "*very difficult or practically impossible for that operator to offer its goods or services in the market at a profit*" (Court of Appeal, Royal Mail v Ofcom (2021) EWCA Civ 669, per Males LJ at 73).

35 A point Microsoft acknowledges at para. 1.3(d) of Microsoft's Response: this is a "*partial foreclosure case, pure and simple.*"

36 Microsoft's Response, para. 1.3(c).

35. In this Section we explain:

    a. how analysing Microsoft's conduct against the As-Efficient Competitor test – which is more favourable to Microsoft than a properly conceived RRC analysis, as it takes into account an as-efficient competitor's ability to absorb the SPLA input costs by reducing its profit margin[37] – supports a finding that Microsoft's conduct gives rise to an AEC;

    b. why Microsoft's application of the 'RRC test' is in any event flawed and understates the impact of its conduct on rivals; and

    c. even if only focusing on price factors, [✂] SPLA costs are a material proportion of overall costs, indicates that a correctly applied RRC analysis would result in an AEC finding.

. **[✂]**

36. [✂][38]

37. [✂][39]

38. [✂][40]

. **Microsoft's application of the 'RRC test' is flawed and understates the impact of its conduct on rivals**

39. Microsoft has conducted a distorted version of an RRC analysis. Microsoft compared the Windows Server licensing cost (i.e. Google Cloud's SPLA input costs[41]) with its estimate of GCP's overall cloud revenues to ask: do Google Cloud's SPLA input costs as a proportion of GCP's total downstream revenues suggest that

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37 For clarity, it is not necessary to show that an as-efficient competitor would be foreclosed from the market in order to conclude that competition is being restricted or distorted. See the CMA Guidelines, para. 269 which make clear that an AEC may arise from partial foreclosure falling short of total foreclosure. In practice too, the CMA has previously found, in the context of its market investigation into Private Motor Insurance, that irrespective of whether a downstream competitor passes through higher input costs (i.e. whether the downstream competitor absorbs the input costs or not), those higher input costs can lead to an AEC. At para. 8.43, the CMA noted that "*irrespective of the rate of pass-through, the PCW with the wide MFN could continue to increase commission fees until the price of the policy was too high from the point of view of the PCW*" (as Microsoft did in 2018 when it increased the price of Windows Server under its SPLA with Google Cloud by 69%). As to the assessment of pass-on more specifically, the CMA noted that despite finding it "*difficult to determine what the outcomes [...] were of this feature against the benchmark of a well-functioning market [...] the detriment [the CMA] identified was likely to be significant*," ultimately in the form of higher prices for end customers. See, in particular, paras. 8.42-43 and 8.121-123 of the CMA's Final Report, Private Motor Insurance market investigation (24 September 2014). This position is also supported by case law: e.g. *Microsoft v Commission* (Case T-201/04), ECLI:EU:T:2007:289 para. 563 ("*Nor is it necessary to demonstrate that all competition on the market would be eliminated. What matters, for the purpose of establishing an infringement of Article 82 EC, is that the refusal at issue is liable to, or is likely to, eliminate all effective competition on the market. It must be made clear that the fact that the competitors of the dominant undertaking retain a marginal presence in certain niches on the market cannot suffice to substantiate the existence of such competition*"). It has also been recently reaffirmed by the European Commission's draft guidelines on the application of Article 102 TFEU at footnote 325, "*the fact that a hypothetical as-efficient competitor would be able to compensate the loss of the rebates is not necessarily a relevant factor showing that the rebates scheme is incapable of producing exclusionary effects. This is because the conduct's capability to have exclusionary effects needs to be assessed in relation to the existing actual or potential competitors of the dominant firm, rather than in relation to hypothetical competitors*."

38 [✂].

39 [✂].

40 [✂].

41 Google Cloud's SPLA is an agreement between Microsoft and Google Cloud that enables Google Cloud to sell VMs running a Windows Server operating system environment for use on GCP infrastructure. Typically, customers can and do purchase underlying infrastructure (i.e. access to core hardware resources) and licences for server operating systems separately. [✂].

Google Cloud can offset these higher input costs?

40. Microsoft's RRC framework is flawed in at least three important respects:

    a. First, Microsoft's denominator[42] in assessing the "*materiality*" of the licensing costs under SPLA is wrongly based on total cloud sales to Google Cloud's current customer base. [✂]. The denominator should instead be focused only on Google Cloud's supply of Windows Server licences and Windows infrastructure products[43].

    b. Second, Microsoft's denominator should be concerned with the materiality of the input cost compared to Google Cloud's overall *costs* of servicing those customers rather than Google Cloud's *revenues*.

    c. Third, as noted above, whether or not Google Cloud can match Microsoft's "*discounts*" or offset its input costs is not relevant to an assessment of whether Microsoft's pricing structure raises Google Cloud's costs with the effect of causing them to raise retail prices to its customers and/or reduce output.

41. The consequence of these flaws - and the resulting misapplication of its 'RRC test' - is that the impact of Microsoft's conduct on its rivals has inevitably been understated in Microsoft's analysis.

Microsoft's denominator incorrectly encompasses Google Cloud's full customer base

42. To assess the materiality of Google Cloud's SPLA input costs, Microsoft compares a numerator of Google Cloud's actual SPLA costs to a denominator of GCP's actual revenues from all cloud services and customers.

43. This method is not the correct starting point for an RRC analysis because [✂]. Microsoft's proposed metric inexplicably includes Google Cloud's revenues relating to customers that do not use Windows Server on GCP (including digital natives that are not affected by Windows Server licensing changes[44] as well as traditional enterprise customers with minimal Windows Server use or that use Azure for Windows Server workloads and GCP as a secondary cloud provider).

44. The CMA is right to note that Microsoft's submissions on this point suffer from endogeneity – but for the foreclosure, Google's input costs would be higher.[45] Microsoft's suggestion that unaffected services should be included in the denominator implies that in the extreme, if Microsoft's licensing restrictions had the effect of preventing almost any customer from running Windows Server workloads on GCP infrastructure, Google Cloud's SPLA input costs would approach zero and appear to validate Microsoft's materiality test (i.e. it would show that Google Cloud's SPLA input costs are non-existent as a proportion of any denominator). This shows the flaw in the test as conceived by Microsoft: the adverse effects of Microsoft's licensing practices are inevitably masked if the costs of providing services that are unaffected by Microsoft's licensing practices are included in the denominator.

45. In an attempt to further bolster the robustness of its methodology and findings, Microsoft goes on to argue that "*even if the analysis is re-run using only AWS or GCP revenues in which Windows Server or SQL Server are a part, the conclusions are the same, leaving ample margin to compete.*"[46] It is not clear what revenues Microsoft would propose to include in such analysis, but it is obvious that including all cloud infrastructure revenues from customers that run *some* Windows Server workloads on GCP would not be appropriate for determining whether GCP can compete for Windows Server workloads. [✂],[47] meaning

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42 As explained below, Microsoft's purported denominator is total cloud revenues from all cloud customers.

43 Infrastructure products include virtual machines and dedicated hosts running Windows Server.

44 [✂].

45 [✂].

46 Microsoft's Response, paras. 8.13 - 8.17.

47 [✂].

the analysis suffers from another version of the same endogeneity issue described above. [✂].[48]

46. Under either version of the analysis, the denominator is plainly wrong. The correct scope of products to be included within the denominator should be limited to those necessary to run Windows Server, namely Windows Server licences and the cloud infrastructure products required to run Windows Server.

Microsoft's denominator incorrectly measures revenue not costs

47. Microsoft argues that the correct denominator for assessing the materiality of Google Cloud's SPLA input costs is Google Cloud's total downstream cloud revenues. In doing so, Microsoft wrongly seeks to import favourable elements of the as-efficient competitor framework into its RRC assessment to best suit its position. In any event, its justification for doing so fails on its own terms.

48. First, comparing Google Cloud's input costs with its downstream revenues is not the appropriate formulation for the RRC analysis it purports to be conducting. An appropriate formulation would examine the SPLA costs as a share of overall costs rather than revenues. As we explain above (see Section III.A), if Microsoft does want to consider the extent to which an as-efficient rival can absorb costs required to match its Azure Hybrid Benefit under the As-Efficient Competitor test, it needs to compare its overall costs of supplying Windows Server VMs with its implied price for cloud infrastructure products required to run Windows Server.

49. Second, Microsoft's justification for using a revenue-based denominator as part of a test designed to assess increased costs is that software markets are characterised by low variable costs and high gross margins, which in turn allow providers to offer discounts and still cover variable costs.[49]

50. However, no one (not even Microsoft) contends that the relevant downstream market is 'software'.[50] Microsoft argues that the relevant denominator comprises all cloud services. [✂].

51. For these reasons, the materiality of the SPLA input costs are best evaluated as a share of overall costs of supplying the Windows Server workloads, not as a share of revenues.

Google Cloud's ability to match Microsoft's "discounts" or offset its input costs is not relevant for assessing whether Microsoft's conduct raises Google Cloud's costs

52. As explained above, the RRC framework examines the significance of the SPLA wholesale charges to the overall costs of supply of the relevant services. It seeks to evaluate whether Microsoft's discriminatory pricing is likely to materially raise rivals' costs with the effect that rivals will raise their retail prices to their customers and/or reduce their output. It is not an evaluation of whether rivals can profitably match Microsoft's terms of supply, which, as explained above, is one component of the conceptually distinct As-Efficient Competitor test, which takes into account downstream revenues. The ability or otherwise for a rival to offset input costs with discounts is not a relevant factor within the RRC framework.

53. Microsoft has attempted to reframe the concept of RRC by arguing that the input costs it charges to Google Cloud should be regarded as discounts it offers to its own customers, which Google Cloud could choose to match. This is a mischaracterisation of both the Azure Hybrid Benefit and the RRC framework within which Microsoft recognises its pricing structure should be examined.

54. First, Microsoft is not offering its Azure customers discounts. Microsoft is imposing penalties on existing software customers that choose to migrate their on-premises Windows Server workloads to the cloud by requiring such customers to (re)purchase new software licences. Microsoft is restricting customer choice by: (a) closing down possible routes for customers to (re)purchase Microsoft software for use on GCP (or AWS or Alibaba);[51] and (b) imposing significant additional wholesale charges on Google Cloud (and,

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48 [✂].

49 Microsoft's Response, para. 2.16.

50 [✂].

51 Including most recently as part of its 2022 licensing changes, in which Microsoft announced that from October

presumably, AWS and Alibaba) via its SPLA relative to the (retail) prices it charges customers licensing software for use on Azure. [✂].

55. Second, Microsoft suggests that a counter-strategy Google Cloud could engage in is to "*encourage customers to switch*" away from Windows Server when they migrate to the cloud. [✂].[52]

56. Third, even if a competitor could absorb those input costs, this would not preclude a finding that there had been a "*weakening of competition*" (see para. 34 above).

. [✂] SPLA costs are a material proportion of overall costs [✂] a correctly applied RRC analysis would result in an AEC finding

57. A correct application of Microsoft's "*materiality test*" under the RRC framework would compare the Windows Server licensing input cost Microsoft imposes on Google Cloud via the SPLA (the numerator) to the total costs Google Cloud incurs from supplying Windows Server infrastructure products[53] to customers (the denominator). This avoids the endogeneity problem that is inherent in Microsoft's analysis of Google Cloud's actual SPLA costs (discussed at paras. 42-46 above).

58. It is clear that the SPLA costs account for a large share of the total costs of supplying Windows infrastructure products. [✂].[54]

59. This can also be seen by measuring the Windows Server SPLA costs Microsoft charges to Google Cloud relative to the overall costs Google Cloud incurs in supplying those GCP customers that make most use of Windows Server infrastructure products.[55] [✂].[56]

60. [✂][57]

61. [✂][58] [59]

62. This evidence supports Google Cloud's submissions that Microsoft's discrimination is raising its rivals' costs to a significant degree, forcing up prices and reducing effective competition. This is a further indicator that if an RRC analysis were to be conducted correctly it would result in an AEC finding, consistent with [✂].

IV. Other evidence shows that Microsoft's conduct is already harming market participants

63. Microsoft's Response asserts that its RRC analysis is borne out by a lack of 'real-world' signs of actual or potential foreclosure. In support of this proposition, Microsoft relies on three further evidentiary points:

. AWS and Google Cloud charge a margin on products licensed under their SPLAs.[60]

. AWS continues to have a market leading position and Google Cloud is continuing to grow and

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2025 third-party managed service providers will no longer be able to sell software to customers for use on Listed Provider infrastructure.

52 [✂]. Please see Google Cloud's responses to Qs 4 & 5 of the CMA's RFI dated 25 July 2024 for additional detail.

53 The combined costs of the Windows Server licences and related compute services.

54 Annex 60.1 to Google Cloud's response to the CMA's RFI dated 7 November 2023.

55 [✂].

56 [✂].

57 [✂].

58 [✂].

59 See para. 11(d) above.

60 Microsoft's Response. paras. 8.18-8.19.

is profitable.[61]

- Windows Server and SQL Server VM vCore hour usage by UK customers on AWS and Google Cloud is still growing.[62]

64. Setting aside the compelling evidence set out in **Section III** that partial foreclosure can be demonstrated on the basis of either an RRC analysis or an As-Efficient Competitor test, Google Cloud notes that none of the three evidentiary points cited by Microsoft stand up to scrutiny either individually or collectively on their own terms.

- First, Microsoft bases its margin claims on Keystone analysis that uses Google Cloud list prices to suggest that we are charging a margin on Microsoft software.[63] [✂].[64] Moreover, as the CMA has indicated,[65] the fact that a company earns a margin of some kind is not dispositive of there being no AEC.

- Second:

  - Any assessment of growth should be assessed relative to growth of the overall market. Microsoft is right to note that Google Cloud is growing in absolute terms but, as the CMA has already found, the market is growing overall and while AWS's share of IaaS and PaaS has remained broadly stable at 30-40% from 2019 to 2022,[66] Microsoft's share has grown from 20-30% in 2019 to 30-40% in 2022 "*as it gains ground on AWS*."[67] Tellingly, in both 2021 and 2022, Microsoft acquired more than 60-70% of all new UK customers.[68] The CMA further found that Google Cloud was much smaller, "*growing at a slower rate*,"[69] and that "*it will be a long time before it catches up with AWS and Microsoft*."[70]

  - As to profitability, while Google Cloud has recently managed to turn a profit, this comes despite Microsoft's licensing practices, and is largely a result of [✂]. As we set out in **Section III**, Google Cloud's overall profitability does not preclude an AEC finding in respect of traditional enterprises.[71]

- Third:

  - The simple reality is that customers are using several times more Windows Server on Azure than GCP.[72]

  - and for similar reasons, Microsoft's claim that AWS's and Google Cloud's vCore hour usage of Windows Server and SQL Server is growing is misleading. The relevant

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61 *Ibid*., para. 1.3(b).

62 *Ibid*., para. 1.3(b) and Section 3.

63 Microsoft's Response, para. 8.19.

64 [✂].

65 [✂].

66 Competitive Landscape WP, para. 5.22(a).

67 *Ibid*., para. 5.22(b).

68 *Ibid*., para. 5.51.

69 [✂].

70 Competitive Landscape WP, paras. 5.15(b) and 5.21.

71 An AEC need not affect an entire market – it would be enough for only, say, traditional enterprises to be adversely affected. For example, following its energy market investigation the CMA found an AEC with respect to a particular customer group, domestic consumers. CMA, Energy market investigation, Final report, 24 June 2016, paras. 148-153.

72 [✂].

measure is not absolute growth but growth in share of supply. [✂].[73] [74]

. Fourth, as we have set out in prior submissions, Microsoft [✂] which give rise to AECs, and which neither the RRC nor As-Efficient Competitor tests are able to account for.

65. The purpose of this paper is not to repeat the 'real-world' evidence of partial foreclosure and competitive harm that we have already submitted to the CMA. However, we note that the arguments Microsoft has put forward by way of rebuttal do nothing to displace the CMA's emerging view that "*the cost or ease and/or ability to use Microsoft software licences are either a key or a plus selection factor for many customers, and some particularly consider the ability to make use of their existing investment in licences in their decision.*"[75]

V. Microsoft's intellectual property rights (IPR) do not exempt it from a finding of an adverse effect on competition

66. Microsoft's Response claims that Google Cloud's and others' submissions can be summarised as a claim that the AEC test is there "*to regulate and indeed eliminate an innovator's right to charge for valid intellectual property that it created.*"[76]

67. Microsoft mischaracterises our submissions and the CMA's position on the AEC test.[77] Neither our submissions nor the Licensing WP call into question Microsoft's right or ability to monetise its IPR. The fact that a company has certain IPR does not exempt it from complying with competition law (a point ignored by Microsoft other than to briefly suggest that even companies with market power should be able to monetise their IPR). It is the manner in which Microsoft is exercising its IPR - and in particular the price [✂] when customers deploy Microsoft software on Azure compared to AWS, Alibaba and GCP - that gives rise to an AEC, thereby denying customers benefits in terms of price, choice and quality that result from competition on the merits.

. Microsoft's right or ability to monetise its IPR is not being called into question. It is the manner in which Microsoft is exercising its IPR that gives rise to an AEC

68. Contrary to what is implied at para. 2.7 of Microsoft's Response, we do not dispute that Microsoft should receive compensation for the licensing of its software products. However:

. Microsoft has already received compensation from customers who paid Microsoft for **perpetual licences** (and may continue to receive compensation on an ongoing basis if they pay for Software Assurance). By refusing to let customers deploy previously acquired perpetual licences on rival Listed Providers' dedicated servers (without additional cost), Microsoft is effectively asking them to pay twice unless they migrate to Azure or a non-Listed Provider. Microsoft has presented no justification for this restriction.[78]

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73 [✂].

74 [✂].

75 Licensing WP, para. 5.34.

76 Microsoft's Response, para. 2.3.

77 See also Section V below.

78 Microsoft was historically hardware-agnostic - where and how customers deployed their software licences was not Microsoft's concern since it was not a hardware/infrastructure provider. Since launching Azure, Microsoft has steadily and systematically eroded the possibility for customers to use their perpetual licences on the cloud environment of their choosing. Microsoft has always restricted the use of previously purchased Windows Server licences on *shared* infrastructure in the cloud. However customers were able to use their existing perpetual Windows Server licences on *dedicated* infrastructure of the cloud provider of their choice. In October 2019,

. The discriminatory pricing structure that Microsoft sets for **subscription licences** (and the terms on which it licences its subscription products) is the central issue; specifically, whether the differential price [✂] terms for deploying Microsoft software on Azure and the cloud platforms of its closest rivals has an AEC. Again, this does not call into question Microsoft's ability to earn compensation from its software licences (which is not in dispute).

. Insofar as Microsoft seeks to defend its pricing practices as subsidising non-Listed Providers through the higher prices it charges to Listed Providers, that justification cannot be accepted as part of Microsoft's legitimate exercise of its IPR. First, as explained above, it does not explain the price [✂] differences when customers seek to deploy Microsoft software on Azure compared to AWS, Alibaba and GCP. Second, there is no apparent commercial rationale for Microsoft to use fees from one rival to subsidise others; redistribution of corporate welfare is not a cognisable justification.[79] Third, contrary to the impression given in Microsoft's Response, Microsoft *does* receive compensation for use of its software on non-Listed Providers' cloud infrastructure[80] – customers still pay on a "*pay for what you consume*" basis. The "*right*" it claims to be giving away for free is the right for customers to port their software licence to non-Listed Providers' cloud infrastructure. Even if Microsoft were to grant that same "*right*" for "*free*" (as other software providers do),[81] it would still continue to earn compensation from either (a) Software Assurance that customers are required to purchase when they BYOL perpetual licences to Azure or a non-Listed Provider (see **Figure 1** below) or (b) the subscription licence that is based on a customer's actual consumption of the software, as it does with non-Listed Providers (see **Figure 2** below)

Figure 1: [✂]

Figure 2: [✂]

. It is well established that the exercise of IPR can give rise to an AEC and that IPR holders are not exempt from compliance with competition law

69. Consistent with the above, it is well established that the manner in which a company exercises its IPR can give rise to an AEC. As noted in Section II, the right AEC question to ask is "*whether <u>any feature, or combination of features</u>, of each relevant market <u>prevents, restricts or distorts competition</u> in … a part of*

Microsoft tightened its rules to capture dedicated infrastructure: specifically, Microsoft: (1) announced that customers would be prevented from bringing Windows Server licences purchased after 1 October 2019 to Listed Providers' shared or dedicated cloud infrastructure; and (2) began requiring customers wishing to bring their pre-existing (pre-1 October 2019) Windows Server licences to *dedicated* servers to purchase Software Assurance (a product that historically included "*upgrade rights*" and "*licence mobility*," which allowed customers to bring their licences to *shared* public cloud). This requirement had previously only applied to shared servers. Additionally, where a customer already had Software Assurance and exercised their "*upgrade rights*" to buy an upgraded version of Windows Server, the new version would not be grandfathered, meaning they could no longer run their Microsoft software on Listed Provider *shared or dedicated* servers, even if they had been originally.

79 See footnote 100 below.

80 Microsoft's Response, paras. 2.3, 2.4 and 2.7.

81 RedHat, another supplier of server operating systems, allows paying Linux customers to freely use their licences in the hardware environment of their choice (i.e. without imposing discriminatory price or quality differences if a customer chooses AWS, Alibaba or GCP as their cloud provider). MongoDB, a supplier of database software, allows its Atlas customers to do the same – as do many other software providers. While Microsoft is entitled to choose its own business model, the above examples show that IPR holders can monetise their IPR without the need for discriminatory BYOL restrictions.

the United Kingdom."[82] The CMA's Guidelines are explicit in noting that such features may include the costs to market participants of acquiring IPR[83] and the terms on which upstream firms supply inputs for the market (including where such terms are applied on a discriminatory basis).[84]

70. None of this should be controversial in the context of antitrust enforcement, nor are the concepts involved unique to the market investigation regime. There is a wealth of jurisprudence reaffirming the point that IPR holders are not exempt from compliance with competition law. Indeed it is established in EU and UK case law that the exercise of IPR can even amount to an abuse of dominance under Article 102 TFEU and Chapter 2 of the Competition Act which, as noted above in Section II.A, rests on more stringent tests than the finding of an AEC. Google Cloud notes *inter alia* that:

    - The Court of Justice of the European Union (**CJEU**) has consistently made clear that the European Commission may intervene in the *exercise* of IPR (as opposed to the existence of these rights) and that ownership of IPR provides no justification for the imposition of anticompetitive vertical restraints under (what is now) Article 101 TFEU.[85]

    - The same principles have been repeatedly recognised in an Article 102 TFEU context.[86] For example, the CJEU has confirmed that an abuse of dominance may occur where *inter alia* a dominant undertaking:

        - refuses to supply spare car parts protected by a registered design to independent repairers;[87]

        - applies selective and discriminatory licensing conditions to a competitor's main customers with a view to damaging that competitor's business;[88]

        - refuses to supply downstream competitors with interoperability information relating to a must-have software product (as found in *Windows Media Player* with Microsoft's defence that the information was covered by IPR (trade secrets) being rejected as an objective justification for the refusal in *Microsoft v Commission*[89]); and

        - charges excessive or unfair prices on products or works covered by IPR.[90]

- In the UK, there have been numerous cases applying these same principles in a Chapter I and Chapter II context. The CMA has found that a firm's conduct is not immune from the Chapter II prohibition

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82 Enterprise Act 2002, Section 134(1).

83 Microsoft's Response, para. 211. See also para. 225.

84 See Section 131(2) of the Enterprise Act 2002. See, also: CMA Guidelines, para. 374, which recognise the CMA's ability to impose remedies that ensure the upstream supply of IPR is on terms that enable downstream competitors to compete effectively; and para. 160 and Table 1, which imply that an AEC may arise from discrimination.

85 *Consten and Grundig v Commission* (Case 56/64). Article 101 TFEU was subsequently repeatedly applied by the European Commission (and the CJEU) to licences of intellectual property rights including patent licences (*Windsurfing International* (Case 193/83)), copyright licences (*Football Association Premier League v QC Leisure* (Case-403/08)), software licences (*Microsoft Internet Explorer*).

86 The European Union (Withdrawal) Act 2018, s.6, provides that as a general rule all CJEU judgments made on or before 11pm on 31 December 2020 are binding on UK courts and UK courts are required to interpret retained EU law in accordance with previous judgments of UK courts on relevant EU law matters.

87 *AB Volvo v Erik Veng (UK) Ltd.* (Case 238/87), para. 9.

88 See the European Commission's decision of 22 December 1987, *Eurofix Bauco v Hilti,* (IV.30787 and 31.488), with which the General Court (Case T-30/89) agreed.

89 *Microsoft v Commission* (Case T-201/04), para. 690. In its judgement, the General Court stated that "*Microsoft's argument is inconsistent with the raison d'être of the exception which [the] case law recognises in favour of free competition, since if the mere fact of holding intellectual property rights could in itself constitute objective justification for the refusal to grant a license, the exception established by the case-law could never apply*."

90 *AKKA/LAA* (Case C-177/16); *Duales System Deutschland GmbH v Commission* P (C-385/07).

solely on the basis that the distortive conduct results from it holding or exercising IPR[91] and has confirmed that a Chapter II infringement may occur when, for example, a firm with market power withdraws and delists a branded prescription drug from the NHS prescription channel following expiry of its patent but before the publication of the generic name for it.[92]

. Moreover, these principles underpin a number of statutory instruments as well. For example, the Technology Transfer Agreement Guidelines[93] (which were retained in the UK as assimilated law) note that "*the fact that intellectual property laws grant exclusive rights of exploitation does not imply that intellectual property rights are immune from competition law intervention*."[94]

. Microsoft's IPR-related justifications for its licensing restrictions fail to adequately engage with the competitive assessment at hand

71. In assessing the merits of Microsoft's IPR arguments, the CMA must keep in mind that: (a) Microsoft has significant market power in the relevant upstream software markets; and (b) the software concerned is "key, critical, fundamental or foundational"[95] for customers, who often have "no alternatives"[96] to its use.

72. Microsoft relies heavily on language in the CMA Guidelines which recognises that IPR provide an incentive to innovate by preventing free-riding and that specific intervention in relation to IPR may therefore risk creating distortions. However, this just means that as part of its AEC and remedies assessments, the CMA must weigh up the risk of reducing innovation against the harm caused by the AEC as part of its assessments on effects and proportionality.

73. When assessed in this way, none of the supposed threats to Microsoft's IPR stand up to scrutiny. They represent a weak attempt to justify the anticompetitive effect of Microsoft's restrictions and rely on a faulty argument that the exercise of IPR should be exempt from competition law. In doing so, they mischaracterise Microsoft's compensation model and Google Cloud's submissions. In addition to the points already made on compensation above:

. Contrary to the suggestion at paras. 2.7-2.9 of Microsoft's Response, our contention is not that Microsoft should treat dissimilar transactions alike(though we note that Microsoft appears to recognise that it is obliged to offer fair terms to "*smaller challenged competitors*"[97]), but rather that Microsoft is restricting competition by discriminating

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91 OFT, BSkyB, decision of 17 December 2002, para. 340. The OFT further found that the terms on which licences are granted can prevent, restrict or distort competition irrespective of whether the product licensed is an 'essential facility' (para. 337).

92 OFT, Reckitt Benckiser, decision of 13 April 2011. In *Paroxetine,* GlaxoSmithKline (**GSK**) had settled litigation challenging its IPR with two generic companies. The CMA found that GSK had infringed the Chapter I and II prohibitions by paying these generic companies to delay the market entry of generic versions of GSK's dominant paroxetine drug once the patent for the drug expired (CMA, *Paroxetine*, Case CE-9531/11, Infringement Decision, 12 February 2016). The CMA's decision was upheld on appeal.

93 Communication from the European Commission - Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements (C89/3) (**Technology Transfer Agreements Guidelines**).

94 *Ibid.*, para. 7.

95 Licensing WP, para. 3.59.

96 *Ibid.*, para. 3.52(c)

97 It is unclear whether, with this statement, Microsoft is conceding that its conduct is capable of foreclosing smaller rivals (on the basis that they would not have "sufficient war chests of available margin" to be able to absorb the additional costs Microsoft's licensing practices impose on AWS and GCP), or – on a more generous reading – whether it means to suggest it is taking on a redistribution or corporate welfare role. If the former, as set out in Section III above, Microsoft's conduct could lead to an AEC even if AWS and Google Cloud could absorb the

against customers that migrate to AWS, Alibaba or GCP.

. The comparison Microsoft draws between AWS, Alibaba and GCP licensing Windows Server on the one hand and HPE and Dell selling Windows Client on the other is telling.[98] Microsoft (which is not active in the downstream PC market) allows customers to BYOL their Windows Client licences from an HPE PC to a Dell PC at no additional charge. There is no suggestion that in doing so, Microsoft's right to "*charge for valid intellectual property that it created*" has been eliminated.

VI. [✂]

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75. [✂][101]

76. [✂][102] [103] [104]

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78. [✂]

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79. [✂].

80. [✂].[110]

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additional costs resulting from its licensing restrictions. If the latter, this would not be a compelling relevant customer benefit (see by analogy para. 29 of the European Commission's Guidance on Article 102 TFEU Enforcement Priorities.)

98 Microsoft's Response, para. 2.6.

99 *Ibid*., paras. 10.1-10.6.

100 *Ibid*., paras. 10.7 - 10.10.

101 [✂]

102 CMA Guidelines, paras. 325.

103 *Ibid*., paras. 334-347.

104 *Ibid*., paras. 348 et seq.

105 *Ibid*., paras 374 et seq.

106 *Ibid*., para. 376.

107 *Ibid*., table 1, p. 83.

108 *Microsoft v Commission* (Case T-201/04), paras. 688-712.

109 Microsoft's Response, para. 2.8.

110 Competition Commission, BAA airports market investigation, A report on the supply of airport services by BAA in the UK (19 March 2009).

VII. Conclusion

81. The Licensing WP contains a detailed and comprehensive assessment of the potential impact of software licensing practices by Microsoft on competition between cloud providers. The CMA applies a conventional approach that is consistent with the established legal framework for assessing AECs.

82. In contrast, Microsoft's Response ignores the majority of the issues raised in the Licensing WP and instead focuses on various irrelevancies (e.g. a supposed threat to Microsoft's intellectual property rights; the size of its main competitors; its licensing charges as a proportion of its competitors' overall revenues; and so on). Its argument boils down to saying that AWS, Alibaba and GCP are well-resourced companies and therefore Microsoft's attempts to raise their costs will not send them out of business.

83. When assessed against the CMA's conceptual framework (with which Google agrees), the core facts are simple and demonstrate an AEC in respect of Microsoft's licensing practices:

    . First, the licensing practices relate to software products where Microsoft has significant market power such that customers, particularly traditional enterprises, are heavily reliant on this software and need to be able to deploy it in the cloud.

    . Second, as a result of: (i) Microsoft's upstream market power; (ii) the "*key, critical, fundamental or foundational*"[111] role its software (and Windows Server in particular) plays for customers, who often have "*no alternatives*"[112]; and (iii) the technical challenges, costs and time involved for companies wishing to refactor or modernise their workloads, rival CSPs do not have an effective counter strategy.

    . Third, as a result of Microsoft's BYOL and SPLA restrictions, Microsoft's software products are provided at a higher price [✂] to customers that choose one of Microsoft's rivals in cloud infrastructure services to be their cloud provider, weakening competition between Microsoft and other cloud providers.

84. The combination of these factors is resulting in harm to competition, and foreclosing Microsoft's closest rivals from the traditional enterprise customer segment. As we show in Section III of this paper, a correct application of the (stricter) As-Efficient Competitor test supports an AEC finding and Google Cloud's analysis also indicates that a correctly applied RRC analysis would result in the same conclusion. Contrary to Microsoft's claims, this is already being borne out in 'real-world' signs. [✂], Microsoft acquired more than 60-70% of all new UK cloud customers in both 2021 and 2022.[113]

85. By failing to meaningfully engage with the CMA's conceptual framework or with the evidence presented to it, Microsoft highlights the weaknesses in its case. The CMA's conceptual approach is the right one. It should not be deterred from taking urgent remedial action to protect the interests of UK enterprises if it finds an AEC.

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111 Licensing WP, para. 3.59.

112 *Ibid.*, para. 3.52(c)

113 Competitive Landscape WP, para. 5.51.

ANNEX 1

Microsoft Response: non-exhaustive list of factual and legal errors

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
The AEC test		
Microsoft unduly narrows the CMA's ability to assess for an AEC		
1.3(a)	"[T]he central AEC issue is one of raising rivals' costs: meaningfully raising Amazon's and Google's costs to the point of genuine foreclosure."	See Section II.A of this paper, which explains that according to the CMA Guidelines the AEC test is broad and allows the CMA to take account of multiple sources of harm (including both price-related and non-price-related features). Microsoft has sought to unduly narrow the CMA's ability to assess whether its licensing practices are resulting in an AEC. Microsoft effectively argues that its conduct can have no restrictive or distortive effect on competition unless rivals are unable to cover their costs (i.e. there is total market exit). As settled case law makes clear, foreclosure can arise without affected rivals necessarily exiting the market (see e.g. *Microsoft*, T-201/04, para. 563 and *Tomra*, C-549/10, para. 42).
1.3(c)	"[This case] centres on a standard *raising rivals' costs* ("**RRC**") or *partial input foreclosure* theory: the alleged high cost of the licensed IP input and how it affects downstream prices."	
1.3(e) (see also 5.4)	"[T]he case is miles away from a 'margin squeeze' while the CMA's licensing fee comparison is asking itself the wrong question."	Margin squeeze is not necessary for an AEC finding. In any event, the CMA correctly considers margin squeeze as an "*extreme form*" of raising rivals' costs and is able to find that conduct falling short of margin squeeze can lead to an AEC (see Section II.A of this paper).[114]
2.3	"Amazon, Google and their allies" argue that "the AEC test is there, in this case, apparently to regulate and indeed eliminate an innovator's right to charge for valid intellectual property that it created and – without any legal obligation to do so – makes	Microsoft has mischaracterised Google Cloud as claiming that Microsoft should not be allowed to monetise its IP. This is inaccurate. We are stating that Microsoft should not be allowed to impose such higher prices [✂]- when customers deploy Microsoft software on AWS, Alibaba or GCP compared to on Azure - that it impedes

114 See also para. 240 of the CMA's Guidelines, which notes (in relation to coordination) that the scope of conduct that may be assessed under the market investigations regime is broader than just conduct that may infringe Chapter I and/or II of the Competition Act 1998: "*While enforcement action on some cases of coordinated behaviour may fall within Article 101 of the TFEU or Chapter 1 of CA98, the* [CMA] *may investigate all forms of coordination. Any form of coordination has the potential to reduce strategic uncertainty among competitors to the detriment of their customers and, depending on the degree, may thereby result in an AEC.*"

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
	freely available to rivals so that they can make money incorporating it into their own cloud services."	competition, which is consistent with the broad AEC test the CMA has to apply (see Section II.A of this paper). Even if Microsoft were to return the input costs it imposes on AWS, Alibaba and GCP in line with the equivalent costs it incurs itself and imposes on other cloud providers, it would continue to monetise its IP (see Figures 1 and 2 of this paper).
4.1	"If there were a foreclosure concern warranting intervention, the CMA would need to show two things: [...] the market is not well-functioning as Microsoft is overcharging customers [and] the harm is as a result of raising rivals' costs."	As above, Microsoft is seeking to unduly narrow the CMA's ability to assess for an AEC. See also Section II.B of this paper, and in particular note that Microsoft (a) does not appear to deny that it imposes significant price [✂] differences when customers deploy Microsoft software on AWS, Alibaba and GCP (see para. 21 of this paper) and (b) does not claim that the CMA's raising rivals' costs theory of harm does not apply to lower-spending customers (see paras. 23-24 of this paper). It is worth recalling the situation today as against a counterfactual where the restrictions in place were less distortive of competition (i.e. the situation pre- and post-2019) [✂]. [✂].
Microsoft has misapplied the RRC framework in its assessment of partial foreclosure		
Materiality test		
2.16	"At its core, the materiality test asks a simple question of the *numerator*, and the *denominator*: the cost to Amazon and Google of the input [...] as *a percentage, or proportion* of **total revenues** (prices charged to end-customers for the downstream product)."	See Section II.C and Section III of this paper. Microsoft's proposal to assess the materiality of Google Cloud's SPLA input costs against Google Cloud's total revenues is flawed because (a) the correct scope of products to be included within the denominator should be limited to those necessary to run Windows Server VMs (see paras. 42-46 of this paper) and (b) the framework for raising rivals' costs should assess costs rather than revenues (see paras. 47-51 of this paper). Furthermore, Microsoft appears to conflate market definition with products that
7.6	"The downstream market, by the CMA MIR's own definition is cloud infrastructure services. The starting point is therefore the total costs, and total revenues, of Amazon and Google in cloud	

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
	infrastructure services. Otherwise, the CMA would have to define different downstream markets, for which no evidence has been cited."	customers buy. In the market investigation context, an AEC need not affect an entire market and nor does the CMA have to define different downstream markets for the purposes of finding an AEC (see footnote 73 of this paper).
7.12	"[I]t is also not appropriate to define a downstream market (generate a denominator) that is wider than 'VMs running an OS' but narrower than 'cloud infrastructure services', and is instead demarcated in respect of customers who have a 'high' input cost of Microsoft IP when measured against an arbitrary threshold."	
7.10	"[I]f *all a customer really wants is VMs running Windows Server*, one would intuitively expect this fraction of demand to gravitate to Microsoft. But demand for this service alone on Azure does not meaningfully exist."	[✂]. Moreover, and as we note above, Microsoft again appears to conflate market definition with the test for an appropriate denominator.
2.16	"[T]he [RRC] test can also be posed in relation to the smaller denominator of **total costs** [...] but is less pertinent in an industry like software with low variable costs and therefore *high* gross margins."	See paras. 48-49 of this paper. Even Microsoft concedes that the relevant downstream industry is cloud services (or more appropriately Windows Server VMs) rather than software. [✂].
2.17	The "Licensing WP's approach of defining the input as Microsoft software and the downstream product market as being a market for the same Microsoft software sidesteps the reality of cloud competition and mislabels the input itself as the downstream product. It is like saying a speedometer maker can foreclose competition for the supply of cars because the price of the speedometer itself is more when sold stand-alone then [*sic*] when part of a car, despite being a tiny proportion of the overall car price."	Microsoft has mischaracterised the CMA's analysis, which does not assess rivals' costs by assessing Microsoft software as the upstream input against the same downstream product market. [✂].
7.4	The Licensing WP and Disclosed Analysis "[eschew] any denominator tied to the downstream market and effectively [compare] using the [speedometer/car] analogy, the cost of	See Section II.A and Section II.C of this paper: the CMA has latitude to form a 'rounded judgement' based on the evidence before it (see para. 9 of this paper) and does not need to demonstrate that Microsoft's conduct is raising rivals' costs in

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
	speedometers across Azure, Amazon and Google taking into account Microsoft's AHB discount as the cost of the speedometer on Azure."	order to conclude that its licensing practices are leading to partial foreclosure (let alone an AEC) (see para. 30 of this paper). In any event, as we explain in our Supplemental Response to the CMA's Licensing WP, we believe the CMA has used the right analytical framework to assess Microsoft's conduct.
8.16	"[S]imply looking at how many customers use products running Microsoft IP in the cloud will give no sense of proportion of cost or revenue that the Microsoft IP represents for rivals, and ultimately whether competition is harmed."	As far as we are aware, neither the CMA nor any others have claimed there should be an exclusive focus on how many customers use products running Microsoft IP in the cloud. Google Cloud has repeatedly argued that the CMA should keep in mind that traditional enterprise customers (who have typically invested heavily in developing significant on-premises workloads that run on Windows Server) make up the vast majority of the total addressable market. As a result, the "scope for [Microsoft's] conduct to have a material impact on the cloud infrastructure market may be measured not only in relation to the current usage of Microsoft software on the cloud, but also by reference to the potential future usage of Microsoft software on the cloud" (Licensing WP, para. 1.10(b)).
The importance of the input		
6.1-6.9	Microsoft argues by reference to the CMA's market investigation into Private Motor Insurance and Phase 2 merger investigations into *BT/EE* and *Virgin/O2* that input costs of up to 8% of total downstream costs do not constitute a material input.	Notwithstanding the case-specific nature of each assessment that Microsoft refers to (particularly in the case of telecoms markets that were already subject to direct regulation) and the limited relevance of *ex ante* SLC assessments, [✂].
Foreclosure		
1.3(b)	"[T]here are no real-world signs of actual or future foreclosure."	See Section IV of this paper (as well as our previous submissions). There are clear real-world signs of actual foreclosure.
3.2	"Both AWS and GCP actively market the ability to run Windows Server workloads on their clouds, and both AWS and GCP are continuing to profitably compete for and win Windows Server VM opportunities."	GCP has to actively market the ability to run Windows Server workloads because Windows Server has, in Microsoft's own words, been customers' "trusted operating

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
3.3	"AWS' and GCP's SQL Server vcore hours have increased over time [...]."	system for 30 years" and "continues to power the hybrid cloud network today."[115] [✂].
3.4	Microsoft's "data provide no prima facie support that Microsoft is weakening Amazon and Google's ability to compete for cloud workloads that include Microsoft's IP for its most popular cloud software, Windows Server and SQL Server."	
5.1	"[C]omparing relative input costs is missing the point of the foreclosure question, which does not turn on 'input price parity'"	As explained above in this Annex, the CMA has latitude to form a 'rounded judgement' based on the evidence before it. The CMA can and should take into account harm arising from Microsoft's discriminatory treatment of AWS, Alibaba and Google Cloud relative to Azure (see para. 11 of this paper and para. 52 of the CMA Guidelines).
5.5	"Given case throughput, there is more agency experience of foreclosure theories in merger control than in MIR or single-firm conduct (abuse of dominance) cases. Merger guidelines are therefore also relevant."	The CMA's merger guidelines are of limited relevance given the different legal tests that apply under between the mergers and market investigation regimes. Similarly, the economic considerations underpinning these tests seek to address fundamentally different points: the market investigation regime is focused on whether one or a combination of many features of a market gives rise to an AEC and therefore may require *ex post* (as well as *ex-ante*) remedial action, whereas merger theories of harm only consider the far narrower question of merger-specific effects.
5.5	"The CMA's 2010 Merger Assessment Guidelines ('**2010 MAG**'), a reference point when the 2013 MIR Guidelines were being revised, and in force at the CMA from 2014-2021, note: '*[...] All else being equal, if the input accounts for only a small part of the total costs incurred, the merged firm will be less able to harm its rival manufacturers' ability to compete than if the input accounts for a greater part of the total costs.*'"	Notwithstanding the limited relevance of the CMA's merger guidelines for its assessment of whether a particular feature of the cloud market may be leading to an AEC, [✂].

115 See Microsoft, Windows Server (here).

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
8.14(a)	"There is no evidence of input foreclosure as the licensing cost paid by the hyperscalers to Microsoft has consistently made up a small portion of their revenues from UK customers that rely on Microsoft's software."	[✂].
8.15	"The picture from comparing input costs to relevant revenues (even limited to revenue in which Windows Server/SQL Server played a role) is already clear: any variation of a RRC analysis does not, remotely, produce results consistent with input foreclosure concerns."	Microsoft's licensing restrictions mean that addressable customers with a significant existing Microsoft footprint are unlikely to migrate to GCP as a result of the significant price [✂] in doing so. Any analysis by Keystone that compares Windows Server and SQL Server spend against total cloud spend for GCP customers [✂] is flawed (see para. 40 of this paper). As we have explained, the more appropriate analysis would be to compare the input costs Microsoft imposes on Google Cloud against Google Cloud's costs of supplying Windows Server VMs to end customers. [✂]
8.19	"Keystone on behalf of Microsoft submitted analysis showing that AWS and GCP currently charge list prices with a positive markup of their HSPLA costs of approximately [X]. This does not suggest a margin squeeze or severe cost pressure."	[✂]
Counter strategies		
1.3(c)	"In the downstream cloud services context, [the AEC issue] boils down to whether Amazon or Google can afford to match Microsoft on *cash discounts*…"	See paras. 34 and 52-54 of this paper. Google Cloud's ability to match Microsoft's 'discounts' or, more appropriately, offset its input costs is not relevant for assessing whether Microsoft's conduct raises Google Cloud's costs and thereby weakens competition. As we explain above in this Annex, Microsoft's claim that its conduct can have no restrictive or distortive effect on competition unless rivals are unable to cover their costs (i.e. there is total market exit) is inconsistent with settled case law.
6.11	"Properly framed, the key issue is: do Microsoft's IP cost terms amount to such high proportions of AWS's and GCP's downstream revenues that they have insufficient margin left both (1) to price competitively to customers and thus win business and (2) to generate positive margins over time?"	

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
7.18	"[I]n a differentiated market, the currency in which to compensate for a disadvantage is: *cash*."	[✂]
8.3	"A firm might rationally absorb input costs into its margins if the market were *extremely competitive* and competitive pressure meant that it was more profit-maximising to secure lower-margin revenue than to lose the revenue (and any margin with it) entirely to rivals."	
8.4	"Public revenue and cost data already show that any relevant HSPLA input costs are tiny fractions of Amazon's and Google's reported cloud revenues (and costs), leaving ample margin to compete."	
8.25	"The relevant point here is: cash is the counter-strategy. It is not that Microsoft has coined a special name for its own discount, *AHB*, or that it has given a different name to a similar license right ("*Flexible Virtualisation Benefit*") with respect to all rivals except the Listed Providers." It costs Microsoft, Google and Amazon nothing to label their discounts however they please. The point is that they are all discounts, that is, cash or cash savings."	
1.3(g)	"Amazon and Google have competitive advantages (industry standard proprietary Linux OS from first-mover, Amazon, *which it does not license*; proprietary ad data from Google, *which it does not license*) but Microsoft concentrates its energies on competition on the merits – beating them in the market."	Google's proprietary ad data is not a critical upstream input for offering any downstream cloud services. Moreover, there are very few natural synergies between Google Cloud's business and other core Alphabet businesses like Google Ads. Unlike Microsoft, Google Cloud has not been able to leverage an existing enterprise IT customer base given the distinct nature of its Ads customers. Indeed, Google Cloud has built entirely new and separate sales, go-to-market and strategy teams for Google Cloud.
7.13	"Amazon and Google are perfectly able to encourage customers to switch to these market leading alternatives as part of their cloud migration or cloud switch to the extent customers were not	See para. 55 and footnote 54 of this paper.

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
	considering them already."	
The CMA's market investigation powers are not contingent upon receiving any particular analysis from other market participants		
1.3(c)	"There is also some significance in [Amazon and Google's] unwillingness to provide their own standard RRC analysis despite being best-placed to do so."	See para. 76 of this paper. [✂]
10.4	"[N]either Amazon nor Google suggest any RRC foreclosure analysis in their recent responses."	
IPR		
Microsoft's IPR do not exempt it from a finding of an AEC		
2.4	"As the largest distribution channel for Microsoft software use in the cloud, who make their own profitable commercial use of these solutions at scale, [Amazon and Google] must compensate Microsoft for use of its IP."	Microsoft's software is a critical input for cloud providers wanting to offer cloud services to customers with existing on-premises Windows Server and other Microsoft software-related workloads. Microsoft is leveraging that fact to prevent, restrict and distort competition with respect to its closest cloud rivals by limiting customer choice regarding where Microsoft software-related workloads can be run. As explained in para. 68 of this paper, Microsoft does, and Google Cloud is not disputing that it can, receive compensation for use of its software in the cloud.
2.6	"This dispute on pricing terms only arises because Microsoft grants all rivals IP licences in the first place to its software that is of most popularity for use in the cloud. It does this not because there is any legal obligation to share its IP with closest rivals in cloud, but for commercial reasons."	It is not necessary for the purposes of the MIR to determine whether Microsoft would be obliged to grant access to its dominant software products in a hypothetical scenario where it refused licences. The CMA is, however, empowered to consider whether the exercise by Microsoft of its IPR is preventing, restricting or distorting competition on the cloud infrastructure market. Microsoft's motives for licensing out its IPR (as opposed to its motives for doing so on discriminatory terms) are not relevant to this question. The fact is that Microsoft *does* choose to license its software and the CMA is fully entitled to assess the terms on which it does so

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
		(see Section V.B of this paper).
2.6	"Long before cloud existed, Microsoft offered its software for use by ISVs (like Google and Amazon) for use in their solutions. This commercial usage is different to end customer use rights and carries a different licensing model and charges. Much like HP and Dell are important channels through which to license software on new PCs and receive compensation for use of Windows Client, AWS and GCP are important channels for use and compensation for solutions like Windows Server."	See para. 68 and footnote 80 of this paper. See also the row of this Annex relating to Microsoft's claim at para. 2.7 of its response to the CMA's Licensing WP.
2.7	"Microsoft believes it is also accepted that licenses to software can come with specific use rights and different use rights can have different fees. It is lawful to charge more for **bulk commercial use** (to play a movie before a theatre audience) than **discrete end-user use** (buy a DVD or streaming for home/personal use."	Microsoft's analogy is inaccurate and misleading. Google Cloud does not buy a single Windows Server licence that multiple GCP customers can then use. Enterprises pay Google Cloud for licences and infrastructure on a pay-as-you-go basis according to their usage and Google Cloud pays Microsoft according to their end customers' consumption.
2.11	"Google and Amazon seek to confuse this question by arguing that Microsoft should be required to grant customers licences for Microsoft products for all use cases and customers should therefore be free to 'take' those licences to their cloud. This seeks to ignore the licence terms and grant new rights to customer purchases that could have occurred a decade or more ago."	Google Cloud has not claimed that Microsoft should have to grant customers new rights, nor that Microsoft has refused to supply Windows Server. Instead, Google Cloud argues that Microsoft should (a) respect the rights of customers who have already compensated Microsoft for perpetual licences (from a technical perspective, deploying a perpetual software licence in a machine in on-premises environment is in no way different to deploying that licence on an equivalent machine in the cloud), (b) monetise its subscription licences in a way that does not contribute to a restriction, distortion or prevention of competition and (c) in no other way misuse its IPR to manipulate customers into choosing Azure. Moreover, Microsoft's contention that there is no question of refusal to supply an essential input (invoking Chapter II and Article 102 TFEU case law) is beside the point – the CMA does not need to satisfy the essential facilities criteria in order to find an AEC. We note in any event that Microsoft does refuse to grant access to
2.12	"Microsoft does not believe that J.K. Rowling, Ian McEwan or Zadie Smith should be required to license their e-book content to Amazon at no charge (for any customer who claims to have purchased the hard- or paperback already, perhaps many years ago) so that (i) they are not compensated while (ii) Amazon can achieve a higher e-book sales margin with no royalty payment."	

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
7.21	"Microsoft licenses all cloud rivals who wish to use Windows Server in their offering, so there is no question of refusal to supply an essential input."	certain must-have inputs (e.g. through restrictions on the interoperability between Active Directory and third-party cloud IAM providers and critical security updates) for customers seeking to migrate to AWS, Alibaba or GCP (see Section IV of Google Cloud's Supplemental Response to the CMA's Licensing WP).
IP remedies		
10.8	"As the European Commission ('**EC**') puts it, European court jurisprudence is clear that intervention would only be warranted in '*exceptional circumstances*' where an IPR holder refuses to license must-have IP outright (which Microsoft does not do) and where that refusal prevents the emergence of a new market for which there is separate consumer demand (also irrelevant here)."	See Section VI of this paper.
10.8	"[A]t no point, under the modern Enterprise Act 2002 MIR rules or Competition Act 1998 rules, has the CMA or a predecessor obliged the compulsory licensing of IP or imposed price regulation on the terms at which IP licences are granted."	
10.9	"Any intervention under the AEC test with respect to Microsoft's IP in connection with UK customers and competition would therefore be a ground-breaking development both in setting a general precedent in the UK and specifically with respect to cloud services competition, because the UK would be regulating IP licensing terms that are not the subject of any current regulation or enforcement action in the US, EU or indeed any other jurisdiction."	
Microsoft's discriminatory treatment of AWS and Google Cloud relative to Azure		

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
2.5	"It is natural when offering a product such as software to find the biggest distribution opportunities to monetise those channels. The hyperscale channel is a massive distribution opportunity unrivalled by other cloud providers who represent a much smaller total addressable market and have very different business models for which Microsoft has proportionately tailored its licensing and traditional SPLA terms."	The CMA's Guidelines explicitly call out selective discounting and price discrimination by a firm with market power as being able to create barriers to entry or expansion when used systematically to reduce prices to particular customers that are more likely to switch to other suppliers (CMA Guidelines, para. 52). Microsoft concedes that it has tailored its licensing policies according to the size of its counterparties, which is preventing AWS, Alibaba and GCP from competing for existing on-premises Windows Server workloads and in turn having a restrictive and distortive effect on competition. Microsoft's tailored IP licensing terms are not the result of AWS, Alibaba and GCP having effective bargaining power ([✂][116]), they are the result of Microsoft's significant market power in respect of server operating systems and successful attempt to distort competition in the market for cloud infrastructure services in its favour. Microsoft is leveraging its significant market power in respect of server operating systems to apply dissimilar conditions to commercially comparable scenarios. This discrimination (which we describe in Section III and Section IV of this paper) clearly places AWS, Alibaba and GCP at a competitive disadvantage relative to Microsoft in relation to the supply of cloud services to customers with existing Windows Server workloads.
2.6	"Amazon and Google are powerful commercial counterparties with whom Microsoft has dealings across a wide range of commercial issues that go well beyond IP licensing terms under their respective bespoke HSPLAs."	
2.7	"Discrimination is not simply applying dissimilar conditions to equivalent transactions but also seeking to apply *equivalent* conditions to *dissimilar* transactions (or counter-parties)."	
2.8	"[T]he relevant consideration is not a specious claim of '*discrimination*' or demand for parity treatment, but whether software when offered on Azure compared to the terms on which it is available for Listed Providers – Amazon and Google – forecloses competition from them."	
Microsoft has significant market power both on the cloud infrastructure market and in key upstream software markets		
7.13	"Windows Server remains second to Linux as an OS."	See Section II of Google Cloud's Supplemental Response to the CMA's Licensing WP.
12.6	"[M]ost of the software cited by complainants (save for Windows Server and SQL Server, noted above) are not material inputs into cloud services competition."	

116 [✂]

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
12.8	"It would far from suffice to establish either a finding of dominance in a Competition Act 1998 context or one of significant market power in the context, say, of a detailed and focused market study [...] let alone an MIR on the question, or in the SMS Regime context against a balance of probabilities standard."	As the CMA has recognised, Microsoft's market power in several enterprise software markets, including in the market for server operating systems, is already well-established. Moreover, the CMA has additionally done its own detailed analysis which Microsoft in no way engages with (Licensing WP, paras. 3.28-78).
Customer feedback		
9.1	"When asked whether differences in software products between Azure and non-Azure clouds impacted their choice of cloud, 'half' of customers said it did not affect their choice at all. The other half only said it affected their choice, with no indication by how much."	The CMA's Licensing WP found that half of customers do believe licensing terms affect their choice of cloud provider for Microsoft workloads. There is also no suggestion in the CMA's Licensing WP that all of the customers the CMA asked were traditional enterprises (we would not expect digital native customers without any existing Microsoft software footprint to be affected), nor that the CMA asked customers to indicate by how much their choice was affected. Moreover, the Microsoft Response fails to acknowledge that the separate Jigsaw research also found that "[m]ost customers [...] identified that there were price advantages from using Microsoft software products on Azure" and explained that "Microsoft make[s] it cheaper to use [Microsoft software] in [Azure] than they do if you use it in somebody else's cloud" (Jigsaw Report, para. 7.1.6).
9.1	"[C]ustomer complaints that they have become '*tied into the software agreements*' are simply not accurate since Microsoft does not refuse to license, tie, or self-preference its software products."	Google Cloud does not believe that customers cited in the Jigsaw research report are complaining that Microsoft refuses to license, ties, or self-preferences its software products. The Jigsaw research demonstrates that the interconnectedness of Microsoft's software increases its overall market power by making it difficult for customers to leave the Microsoft ecosystem.
SQL Server		
2.18	"[A] key point with respect to SQL Server (unlike Windows	SQL Server is tightly integrated with Windows Server (Licensing WP, paras. 3.133-

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
	Server) is that customers have "**License Mobility**" i.e., can "Bring Your Own License" ("**BYOL**") to Amazon or Google just the same as any other cloud provider."	134). This means that any customer wanting to migrate their SQL Server workloads to AWS, Alibaba or GCP will almost certainly also need to migrate their Windows Server workloads to the same environment. As a result, and irrespective of their ability to BYOL SQL Server licences using License Mobility (which Microsoft notably does not claim has an impact on its ability to monetise its IPR), customers are faced with the same significant price and quality differences the CMA has identified in its Licensing WP [✂] if they choose AWS, Alibaba or GCP over Azure. Moreover, Microsoft's claim ignores the high costs that are associated with the need for customers migrating SQL Server to AWS, Alibaba or GCP to purchase additional disaster recovery instances via Google Cloud's SPLA (which are offered for free under the Azure Hybrid Benefit).
12.5	"SQL Server has always had 'Licensing Mobility', that is, customers who have SQL Server on-premise with Software Assurance are free to 'Bring Your Own Licence' ('**BYOL**') at no extra charge to any cloud provider beyond Microsoft Azure itself – including all small cloud rivals and Amazon and Google."	
Miscellaneous		
1.3(d)	"[T]he larger the customer spend, the smaller the share of their total spend attributable to Microsoft IP and the *decreasing* spend/cost significance that Microsoft IP represents."	[✂]. As we explain in Section II.B of this paper, Microsoft does not deny that the CMA's proposed theory of harm applies to smaller customers. This impact on smaller customers cannot be dismissed, as acquiring multiple smaller customers may have just as significant of an impact on Google Cloud's ability to achieve scale as acquiring one larger customer.
1.3(e)	An appropriate analogy is to consider the Windows Server licence input for a Windows Server virtual machine hosted on cloud infrastructure as equivalent to the speedometer input for cars, partially because "*No-one can buy 'speedometers' alone*" and "customers cannot buy a plain Windows Server cloud-use license from Azure, AWS or GCP."	Microsoft's analogy is inaccurate. First, Windows Server is a critical input for customers migrating existing Windows Server workloads to the cloud and often a significant cost component. Second, Microsoft's implied contention that Windows Server VMs are a single product is wrong. Customers can and do buy Windows Server licences separately from cloud services: ● **Perpetual licences.** Customers that originally bought perpetual licences
2.10	"[C]loud is not a shrink-wrapped product model (product use is in perpetuity, i.e., for the expected lifetime of the underlying	

Microsoft Response (para.)	Microsoft claim	Google Cloud comment
	hardware, as per on-premise) but an IaaS, PaaS, or SaaS subscription or 'service' model where the user derives value directly from Microsoft's IP (if paid directly to Microsoft/Azure) or indirectly (via the wholesale charges applied to Amazon or Google via the HSPLA) and is fundamentally on 'pay as you go', or 'pay for what you consume' basis (that is, as customers derive value, measured by consumption volumes or vcore usage hours) for 'as long as you consume it' (units of time)."	should not have to start paying again for their licences on a pay-as-you-go basis simply because they migrate that licence for use on cloud infrastructure. ● **Subscription licences.** Customers with existing subscription licences that leverage the Azure Hybrid Benefit when they migrate their Windows Server workloads to Azure can apply those existing licences to achieve the advertised lower pay-as-you-go rate on Azure. Google Cloud is not claiming that customers should not continue paying for those licences on a pay-as-you-go basis when they migrate to the cloud, but is instead arguing that Microsoft should not be able to discriminate between cloud providers offering downstream services that incorporate Microsoft software. The product that Microsoft forces customers migrating to AWS, Alibaba and GCP to buy, the Windows Server VM, is a product that has been created by Microsoft so as to (a) convert customers to subscription licences to increase and prolong the monetisation of its IP and (b) prevent, restrict and distort competition with respect to traditional enterprise customers with existing Windows Server workloads.