

Cloud services market investigation

Initial views on selecting a potential
remedy package

6 June 2024

This is one of a series of consultative working papers which will be published during the course of the investigation. This paper should be read alongside the [Issues Statement](#) published on 17 October 2023 and other working papers published.

These papers do not form the inquiry group's provisional decision report. The group is carrying forward its information-gathering and analysis work and will proceed to prepare its provisional decision report, which is currently scheduled for publication in September/October, taking into consideration responses to the consultation on the Issues Statement and responses to the working papers as well as other submissions made to us. Parties wishing to comment on this paper should send their comments to CloudMI@cma.gov.uk by **27 June 2024**.

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1. Introduction

- 1.1 This working paper provides our emerging views on the type of remedies that may be appropriate if we were to find an adverse effect on competition (AEC) resulting from one or more of the features that we have identified in our market investigation into public cloud infrastructure services (cloud services).
- 1.2 We are at an early stage of considering potential remedies and as our understanding of the market(s) and the potential issues develops, we expect our consideration of potential remedies to evolve. As set out in the CMA's guidance,¹ we will consider and discuss potential remedies alongside working on understanding what features may give rise to adverse effects.
- 1.3 We have set out the evidence that we have gathered to date in our investigation of four theories of harm, plus a cross-cutting assessment of how competition works in cloud services, in separate working papers.² We have set out our early views on potential remedies to any potential AEC(s) in working papers which cover technical barriers, egress fees, committed spend agreements and software licensing practices.
- 1.4 The purpose of this working paper is to:
- (a) set out our framework for the assessment and selection of remedies;
 - (b) discuss cross-cutting considerations for potential remedies, including those that have the potential to address more than one of the features under investigation;
 - (c) set out the types of remedies available and issues relating to the composition of any package of remedies;
 - (d) consider the potential role for any structural remedies; and
 - (e) summarise the potential remedies currently under consideration by reference to the theories of harm under investigation.
- 1.5 We invite interested parties to make submissions on any element of this working paper, including our emerging thinking on the wider, cross-cutting considerations and the different types of potential remedies discussed.
- 1.6 This paper does not include consideration of any consultation responses received relating to the earlier working papers as the consultation period is still open. We

¹ CMA3 (Revised), Market Studies and Market Investigations: Supplemental guidance on the CMA's approach (publishing.service.gov.uk), paragraph 3.50.

² [Cloud services market investigation - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/cloud-services-market-investigation)

will consider all responses received as we refine and update our thinking on potential remedies.

2. Framework for our assessment of potential remedies

2.1 Should we identify one or more AECs, we are required to determine:

- (a) whether we should take action ourselves, or whether we should recommend others to take action for the purpose of remedying, mitigating or preventing the AEC or any detrimental effect on customers, so far as it has resulted from, or may be expected to result from the AEC;
- (b) where we consider that we should take action ourselves, whether that should be through exercising our order-making powers or through accepting undertakings from parties;
- (c) what action needs taking, including whether a single remedy or a package of two or more remedies is required.^{3,4}

2.2 In coming to a view on potential remedies, the Enterprise Act 2002 (the Act) requires the CMA to 'in particular have regard to the need to 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'.⁵

2.3 Our interventions seek to remedy, mitigate or prevent the AEC or its detrimental effects on customers. Our clear preference is to deal comprehensively with the cause or causes of AECs wherever possible, and by this means significantly increase competitive pressures in a market within a reasonable period of time. However, while generally preferring to address the causes of the AEC, we will consider introducing measures which mitigate the harm to customers created by competition problems, for example if other measures are not available, or as an interim solution while other measures take effect.⁶

2.4 In assessing potential remedies, we consider their effectiveness and proportionality. With respect to effectiveness, we highlight that:

- (a) we consider the risks associated with different potential remedies and will tend to favour remedies that have a higher likelihood of achieving their intended effect;
- (b) a remedy should be capable of effective implementation, monitoring and enforcement. To facilitate this, the operation and implications of the remedy

³ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies (publishing.service.gov.uk)

⁴ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraphs 325 to 328.

⁵ Section 134(6).

⁶ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraphs 330 to 333.

need to be clear to the parties to whom it is directed and also to other interested persons, such as customers, other businesses that may be affected by the remedy, sectoral regulators, and/or any other body which has responsibility for monitoring compliance;

- (c) we will generally look for remedies that prevent an AEC by extinguishing its causes, or that can otherwise be sustained for as long as the AEC is expected to endure. We also tend to favour potential remedies that are expected to show results within a relatively short time;⁷ and
- (d) where more than one measure is being introduced as part of a package of remedies, we will consider the way in which the measures are expected to interact with each other.⁸

2.5 In making an assessment of proportionality, we are guided by the following principles. A proportionate remedy is one that:

- (a) is effective in achieving its legitimate aim;
- (b) is no more onerous than needed to achieve its aim;
- (c) is the least onerous if there is a choice between several effective measures; and
- (d) does not produce disadvantages which are disproportionate to the aim.⁹

2.6 In reaching a judgement about whether to proceed with a particular remedy, we will consider its potential effects - both positive and negative - on those parties most likely to be affected by it, with particular regard to the impact of potential remedies on customers, as well as on those businesses subject to them.

2.7 Beneficial effects might include lower prices, higher quality products/services and/or greater innovation, while the potential negative effects of a remedy may arise in various forms, for example:

- (a) unintended distortions to market outcomes, which may reduce economic efficiency (including dynamic incentives to invest and innovate) and adversely affect the economic interests of customers over the longer term;

⁷ The CMA may also consider including a sunset clause in a remedy where the AEC is expected to be time limited, or may alternatively specify the circumstances in which it may be appropriate to review the functioning of or requirement for a given remedy.

⁸ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraphs 334 to 341.

⁹ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 344.

- (b) implementation costs, ongoing compliance costs, and monitoring costs (for example, the costs to the CMA or other agencies in monitoring compliance); and
- (c) if remedies extinguish Relevant Consumer Benefits (RCBs), the amount of RCBs foregone may be considered to be a relevant cost of the remedy.

2.8 We highlight, however, that where businesses have been found to be earning profits persistently in excess of their cost of capital as a direct result of a feature of the market and are likely to continue to do so in the absence of intervention, we will not usually give any significant weight to the anticipated reduction of such profits as a negative effect of a remedy.¹⁰

2.9 We set out the framework in this working paper, to describe our overall approach to remedies but note that much of our preliminary assessment of potential remedies against this framework has been included in previous working papers.

¹⁰ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraphs 348 to 353. The CMA will normally collect information from parties about the potential cost of implementing and complying with its remedies. In evaluating such information, the CMA will bear in mind that it has less information than the parties have about how such potential costs have been estimated and that there might be incentives for parties to overstate the cost of those remedies that they do not support. The CMA is likely to place most weight on estimates of implementation and compliance costs where parties have provided a clear explanation of how the estimate was reached, together with supporting evidence as to the assumptions used to derive those estimates.

3. Cross-cutting considerations

Introduction

- 3.1 There are a number of cross-cutting matters which may apply to more than one potential remedy. In this section we discuss:
- (a) remedial measures in other jurisdictions;
 - (b) geographic scope of potential remedies;
 - (c) the Digital Markets, Competition and Consumers Act 2024 (the DMCC Act).

Remedial measures in other jurisdictions

- 3.2 In this sub-section we outline our approach to considering remedial action taken by other regulatory authorities in other jurisdictions.
- 3.3 There have been numerous studies into cloud services around the world, notably including:
- (a) the Dutch competition authority, ACM, published a market study into cloud services in September 2022;¹¹
 - (b) the Japanese competition authority, JFTC, published the findings of its fact-finding survey regarding both trade practices and the state of competition in the cloud services sector in June 2022;¹²
 - (c) the French competition authority, *Autorité de la concurrence*, published a market study into competition in the cloud sector in June 2023;¹³
 - (d) the US Federal Trade Commission (FTC) issued a request for information in March 2023 seeking information about the competitive dynamics of cloud computing, the extent to which certain segments of the economy are reliant on cloud service providers, the security risks associated with the industry's business practices, and the interactions between AI and cloud computing;¹⁴ and

¹¹ [Market study cloud services \(acm.nl\)](https://www.acm.nl/en/publications/2022-09-01-market-study-cloud-services)

¹² [Report Regarding Cloud Services | Japan Fair Trade Commission \(jftc.go.jp\)](https://www.jftc.go.jp/eng/press/2022/06/20220622_01.html)

¹³ [Cloud computing: the Autorité de la concurrence issues its market study on competition in the cloud sector | Autorité de la concurrence \(autoritedelaconcurrence.fr\)](https://www.autoritedelaconcurrence.fr/fr/actualites/2023-06-01-cloud-computing-the-autorite-de-la-concurrence-issues-its-market-study-on-competition-in-the-cloud-sector)

¹⁴ [FTC Seeks Comment on Business Practices of Cloud Computing Providers that Could Impact Competition and Data Security | Federal Trade Commission](https://www.ftc.gov/press-release/2023/03/ftc-seeks-comment-business-practices-cloud-computing-providers)

- (e) the Spanish National Markets and Competition Commission (CNMC) has launched a study into cloud services, and has a public consultation open until 21 June 2024.¹⁵
- 3.4 We are also aware of laws that have recently been passed in other jurisdictions that impose new obligations on cloud providers. For example, the European Union's (EU) Data Act (the EU Data Act) which entered into force on 11 January 2024.¹⁶ The EU Data Act governs the use and exchange of data within the EU and imposes obligations on cloud providers.
- 3.5 We set out the specific obligations required by the EU Data Act in our earlier egress fees working paper¹⁷ but the recent French legislation, for example, has only very recently entered into force,¹⁸ and we have not referred to this provision to date.
- 3.6 Although the above legislative provisions do not apply in the UK, we may consider the actions taken by regulatory and legislative authorities in other jurisdictions where they have or are likely to result in future changes in the conduct of market participants in the UK, which may have implications for any AEC finding, as well as when assessing the effectiveness and proportionality of potential remedies. As noted in the paragraph above, we discuss the specific obligations required by the EU Data Act in our earlier egress fees working paper and welcome any relevant submissions in relation to the recent French legislation. We are interested in understanding how, if at all, these legislative provisions, and any actions taken in response to them, might influence the long-term economic incentives of providers in relation to their supply of cloud infrastructure services in the UK.¹⁹
- 3.7 In terms of the implications for remedy effectiveness, there may be circumstances where interventions in other jurisdictions would impede the effective implementation of our proposed remedies. This might include where international requirements are incompatible with our planned approaches.
- 3.8 The similarity, or otherwise, of changes required elsewhere and those we may require in the UK may also impact any proportionality assessment of possible remedies. For example, if cloud service providers have already or will soon be required to make changes to certain aspects of their businesses in other jurisdictions, it may be relatively less costly to make similar changes in the UK.

¹⁵ [CNMC public consultation on cloud services | CNMC](#)

¹⁶ EU Data Act, Article 50

¹⁷ See [Cloud services market investigation](#)

¹⁸ Recent legislation in France to secure and regulate the digital space (SREN) which contains provisions relating to cloud providers [Sécuriser et réguler l'espace numérique \(senat.fr\)](#)

¹⁹ In some cases, statements or actions may be made voluntarily in response to short-term incentives such as those arising from an investigation, rather than as a result of changes in the underlying market. When assessing such voluntary actions, we would carefully consider the longer-term incentives of the parties that have taken these voluntary steps.

Geographic scope of potential remedies

- 3.9 In coming to a view on potential remedies, we would need to consider how best to specify the geographic scope of any remedies to ensure that they achieve as comprehensive a solution to the AEC and resulting adverse effects in the UK as is reasonable and practicable (see section 2).
- 3.10 Where we consider it appropriate to constrain the geographic scope of a remedy, we would need to consider how to define any relevant requirements.
- 3.11 The characteristics of the UK public cloud infrastructure services market(s) mean that the great majority of revenues are captured by global providers, who have data centre networks across the world. It is a business-to-business market, where end customers are different from providers' direct customers, and sometimes with many layers in between. For example, independent software vendors are direct customers of cloud providers, but also themselves offer cloud services to end customers. Customers may be based in the UK and/or overseas and some have a single contract covering their global operations, utilising data centres around the world.²⁰
- 3.12 As an example of an approach taken to the geographic scope of an intervention, the EU Data Act applies to 'providers of data processing services, irrespective of their place of establishment, providing such services to customers in the [European] Union'.²¹
- 3.13 In considering the parameter, or combination of parameters, that may be most suitable for geographically classifying customers in relation to potential remedies, we think that the starting point could be based on where customers are billed, as many cloud providers themselves do when geographically classifying customers. Such an approach would have the advantage of relying on an existing method of geographic classification used in the market.
- 3.14 However, classifying customers based on billing location may, in some instances, present some difficulties for implementation of remedies, or be relatively easy for providers to circumvent. Where global contracts can be held in one country, providers may be incentivised to shift the location of that contract to or from the UK if remedies were introduced, all other things being equal. This risk could perhaps be mitigated to some extent by an approach that relies on both where the customer is billed and where it is headquartered, ie stating that a particular remedy applies to customers that are either billed or headquartered in the UK. However, we may expect the market and customer behaviour to adapt. It may be that certain

²⁰ [Competitive landscape working paper \(publishing.service.gov.uk\)](#), paragraph 2.36.

²¹ Article 1(3)(f). For the full list, which has been omitted here for brevity and lack of relevance, see Article 1(3).

potential remedies require mandatory geographic definitions and we will continue to consider this further as our work progresses.

- 3.15 We welcome views and suggestions from stakeholders on approaches to geographic classification that may be suitable for remedies in cloud services.

Digital Markets, Competition and Consumers Act

- 3.16 The DMCC Act gives the CMA new powers to intervene in digital markets by establishing a new, targeted regime for digital markets.
- 3.17 The DMCC Act has been introduced in recognition of the fact that there are specific features of fast-moving digital markets that can lead to a small number of firms establishing substantial and entrenched market power. The new regime will strengthen the existing competition rules and allow the CMA to take faster, more targeted and effective action where required.
- 3.18 The digital markets competition regime will apply to firms designated by the CMA as having Strategic Market Status (SMS) in relation to one or more digital activities. The DMCC Act sets out that a digital activity is the provision of a service by means of the internet, the provision of digital content (which includes software), or any activity which is being carried out for the purposes of providing an internet service or digital content.
- 3.19 Under the DMCC Act, for a firm to have SMS, it must have:
- (a) substantial and entrenched market power in a digital activity which is linked to the United Kingdom;
 - (b) a position of strategic significance; and
 - (c) global turnover of more than £25 billion or UK turnover of more than £1 billion.
- 3.20 The DMCC Act sets out that once the CMA designates a firm with SMS, the CMA may impose conduct requirements (CRs) on the designated firm to guide how that firm should conduct itself in relation to that digital activity. The CMA can also impose pro-competitive interventions (PCIs), following an investigation, if the CMA finds that a factor or combination of factors relating to a digital activity is having an adverse effect on competition.
- 3.21 The DMCC Act provides that certain decisions can be made by the CMA Board including whether to begin an initial SMS investigation and the CMA Board, or an

appropriately authorised Board committee, will decide whether to make an SMS designation and whether to impose CRs.²²

- 3.22 On 24 May 2024, the CMA published draft guidance for consultation on the CMA's functions under the DMCC Act. The draft guidance sets out how the CMA will carry out its new functions, in particular, how the CMA will identify what a digital activity is, its approach to SMS investigations and how it will assess substantial and entrenched market power and whether a firm has a position of strategic significance.
- 3.23 The DMCC Act and the new powers that will be conferred on the CMA are relevant to our consideration of possible remedial action arising. For example, we could make a recommendation to the CMA Board to consider whether to make an SMS designation and whether to impose CRs where we considered that use of the CMA's new functions would be an effective remedy to any AEC(s) identified.
- 3.24 We will consider the CMA's new powers under the DMCC Act and published guidance as part of our consideration of any potential remedies.

²² Sections 2 and 19 of the DMCC Act. See further the CMA's [draft digital markets competition regime guidance](#), paragraphs 9.28-9.29.

4. Types of remedies available

- 4.1 We usually classify remedies as either structural or behavioural. Structural remedies in market investigations are generally one-off measures that seek to increase competition by altering the competitive structure of the market. Behavioural remedies are generally ongoing measures that are designed to regulate or constrain the behaviour of parties in a market and/or empower customers to make effective choices. Remedies can also include recommendations for others to take action.^{23,24}

Structural remedies

- 4.2 In market investigations, structural remedies typically take the form of a divestiture.
- 4.3 The aim of a divestiture will generally be to address competition problems resulting from structural features of a market. This can be done by either creating a new source of competition through disposal of a business or assets to a new market participant, or by strengthening an existing source of competition through disposal of a business or assets to an existing market participant that is independent of the divesting party (or parties).²⁵

Behavioural remedies

- 4.4 Behavioural remedies can generally be classified as taking the form of either enabling measures or controlling outcomes.
- 4.5 Enabling measures operate principally to facilitate increased competition by removing obstacles to competition or stimulating actual or potential competition. Within the category of enabling measures, further distinctions can be made between:
- (a) market-opening measures, which are intended to open up a market to new sources of competition by removing or reducing barriers to entry, expansion or switching;
 - (b) informational remedies, which are aimed at giving customers information to help them make choices and thereby increase competitive pressure on firms in the market; and

²³ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 371.

²⁴ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 379.

²⁵ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 372.

(c) remedies that restrict the adverse effects of vertical relationships.²⁶

4.6 Controlling outcomes involve measures that seek to prevent the exercise of significant market power and thereby control the detrimental effects arising from an AEC. For example, price caps, supply commitments and service level undertakings all control the way a business can operate to limit possible detrimental effects on customers.²⁷

Selection of remedies

4.7 The CMA's selection of remedies is an iterative process in which a potentially wide range of remedy options are progressively narrowed down until a solution has been found that enables the CMA to meet its statutory duties.²⁸

Package of remedies

4.8 The CMA's experience to date suggests that remedies in market investigations may take the form of a 'package' of measures, rather than the implementation of a single measure.

4.9 This may be because there could be several features giving rise to an AEC, and consequently an individual measure may be incapable of addressing such an AEC as comprehensively as is reasonable and practicable.²⁹ For example, to deal with problems associated with a lack of customer switching it might be necessary to both remove contractual barriers to switching and also to put in place informational remedies that raise customer awareness of the potential benefits of switching.

4.10 Alternatively, an individual intervention may contribute to addressing multiple features either alone or in combination with other measures. For example, requirements around technical barriers could seek to both improve customers' ability to switch and reduce the barriers facing a new entrant.

4.11 Where more than one measure is introduced, the CMA will consider the way in which the measures are expected to interact with each other,³⁰ which may be complementary in their effects and costs, or they may be in tension in some areas.

²⁶ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 376.

²⁷ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 378.

²⁸ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 381.

²⁹ Section 134(6) of the Act², says that in making a decision about remedies for an AEC, 'the CMA shall, in particular, have regard to the need to achieve as comprehensive a solution as is reasonable and practicable to the adverse effect on competition concerned and any detrimental effects on customers so far as resulting from the adverse effect on competition.'

³⁰ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 393.

We would consider both the effectiveness of individual measures in the context of an overall package, and the potential package of remedies as a whole.

5. Structural remedies

Divestment

- 5.1 We have considered the possibility of including structural remedies in any potential remedies package. This would consist of divesting a business unit or set of assets to create a new source of competition or strengthen an existing source of competition, and in doing so would seek to address the lack of rivalry at source.³¹
- 5.2 The largest cloud providers are global businesses with operations spanning numerous different activities. This would likely make divestment more complex, with higher associated risks from both an effectiveness and proportionality perspective.
- 5.3 We have identified three potential divestments which might contribute to an effective remedies package if an AEC was identified, these are:
- (a) divesting providers' entire cloud operations creating a separation between cloud and the wider business;
 - (b) divesting a fraction of providers' full-stack (i.e. IaaS + PaaS) cloud operations, resulting in more full-stack providers of a similar scale; or
 - (c) in contrast to (b), divesting IaaS or PaaS operations from the rest of a provider's operations, resulting in an IaaS-only and PaaS-only provider.

Divesting cloud operations

- 5.4 By requiring the divestment of a company's entire cloud operations, this option would seek to create a separation between cloud and the wider business, reducing the potential for leveraging into or from cloud.
- 5.5 There are risks associated with this remedy, in particular that it could disrupt legitimate, pro-competitive combinations between cloud and non-cloud services. There are also likely to be particular practical difficulties with separating out the relevant assets, particularly where a cloud provider uses its cloud services to host or support its own digital activities as part of its wider (non-cloud) business.

Divesting part of cloud operations

- 5.6 By requiring the divestment of part of a provider's cloud operations, this option would seek to create an alternative competitor at a sufficient scale to compete with

³¹ CC3 (Revised), Guidelines for market investigations: Their role, procedures, assessment and remedies, paragraph 373.

incumbents, directly reducing concentration, which might be expected to reduce any associated market power of the affected party(s).

- 5.7 There are risks associated with this remedy, in particular the potential to introduce inefficiencies, for example from a loss of scale, which are likely to be hard to address through other parts of a remedies package. There is also a risk that, absent any other interventions, the characteristics of the market mean it 'tips' back in favour of the previous incumbent who regains previous scale and competition concerns return.

Divesting IaaS or PaaS operations

- 5.8 By requiring the divestment of IaaS or PaaS operations, this option would seek to split parts of the existing supply chain and might allow for more intense competition on specific services or products.
- 5.9 For example, it might incentivise currently integrated providers to develop services which are more interoperable. In particular, we might expect a separated IaaS-only provider to have greater incentives to facilitate a wider range of PaaS services working on its infrastructure, than a vertically integrated IaaS and PaaS provider to have.
- 5.10 There are risks associated with this remedy, in particular it could reduce or eliminate the existing benefits of integration, and could introduce distortions through product scope when having to strictly differentiate between IaaS and PaaS products. It may also require ongoing monitoring to ensure the distinction remained over time.

Operational separation

- 5.11 While not a structural remedy, as it does not involve a transfer of ownership, we consider it helpful to discuss the potential for operational separation in the context of the structural considerations we have set out above, since it may be possible to achieve similar aims through this alternative route. Operational separation would require the company to operate affected businesses (or business units) separately and independently from each other. This seeks to achieve a similar purpose to a divestment albeit the measures required and extent of independence achieved would depend on the specific provisions, which might cover elements such as:
- (a) governance structures;
 - (b) management and local incentives;
 - (c) restricting sharing of assets (including data);
 - (d) requirements around arms-length agreements; and

(e) separate legal entities.

- 5.12 Operational separation would have the advantage of generally being less intrusive than structural remedies, although it would introduce greater potential risks around effectiveness given the continued common ownership. The extent to which any residual ability and/or incentive of any parent firm (or equivalent common ownership structures) might present risks to the effectiveness of the remedy would depend on the specific design of the operational separation remedy, and how it fits into any wider remedies package.
- 5.13 In the case of the three potential divisions we have set out in paragraph 5.3 above, we see operational separation as giving rise to many of the same concerns as divestment as well as having greater risks associated with ensuring the independence of the separated entities.

Emerging views on structural remedies and operational separation

- 5.14 Given that we have identified alternative potential remedies, discussed in working papers,³² and the initial concerns we have identified above, we are not currently minded to prioritise further consideration of structural or operational separation remedies. However, we would welcome responses on our emerging views in this area.

³² [Cloud services market investigation - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

6. Behavioural remedies

- 6.1 As discussed above behavioural remedies can take the form of enabling measures and controlling outcomes.
- 6.2 We are at an early stage of considering potential remedies and as our understanding of the market(s) and the potential issues develops, we expect our consideration of potential remedies to evolve. Notwithstanding this we discussed potential behavioural remedies for each of the features we are investigating in their relevant working papers.
- 6.3 Potential remedies would be designed to remedy, mitigate or prevent any AEC and based on our current theories of harm are likely to be targeted on reducing barriers to switching and/or using a multi-cloud approach for customers, and reducing barriers to entry and expansion for rival cloud providers.
- 6.4 Lowering barriers to switching and/or more integrated forms of multi-cloud may be expected to unlock a number of benefits for customers and rival providers. In doing so, we acknowledge that some sources of friction may remain and therefore potential interventions might seek to lower rather than remove these barriers.
- 6.5 Given the importance of considering these collectively as part of a remedy package and how they interact (see paragraphs 4.8 to 4.11 above), we include summaries below.

Technical barriers

- 6.6 The potential remedies that we consider in the technical barriers working paper can be grouped as follows:
- (a) increase the degree of standardisation of cloud services and/or interfaces. This could be achieved through:
 - (i) voluntary standards;
 - (ii) mandatory standards; or
 - (iii) broader principles-based requirements;
 - (b) improve the interoperability of cloud services, through the use of abstraction layers;
 - (c) increase interconnectivity and reduce latency;
 - (d) increase transparency around the interoperability of cloud services;
 - (e) improve the portability of skills between cloud providers.

Egress fees

6.7 The potential remedies that we consider in the egress fees working paper concern:

- (a) restricting the level of egress fees (price control remedies)
 - (i) banning egress fees;
 - (ii) capping egress fees by reference to other fees charged by cloud providers;
 - (iii) Capping egress fees by reference to the costs incurred by cloud providers;
- (b) information transparency remedies, to increase the visibility and clarity of egress fees for customers.

Committed spend agreements

6.8 The potential remedies that we consider in the committed spend agreement working paper concern:

- (a) banning the use of commitments in return for discounts;
- (b) setting restrictions on the structure of any volume-related discounts;
- (c) setting a maximum duration for any CSDs;
- (d) increasing information transparency about discount structures.

Software licensing practices

6.9 The potential remedies that we consider in the software licensing practices working paper concern:

- (a) non-discriminatory pricing for Microsoft software products, regardless of which cloud infrastructure they are hosted on;
- (b) allowing customers to freely transfer previously purchased Microsoft software products to the cloud infrastructure of their choice without incurring additional costs;
- (c) increasing price transparency in relation to the use of Microsoft software products on Azure and third party cloud infrastructure;
- (d) requiring parity of Microsoft software products and product functionality for use on Azure and third party cloud infrastructure.

Invitation to comment on behavioural remedies

6.10 We welcome submissions and evidence from parties on any of these potential remedies individually or as a potential package.³³ In particular, we welcome submissions in line with our framework for assessing potential remedies (see section 2) as well as our articulation of what potential remedies might be looking to achieve³⁴. For example, whether potential remedies should focus on reducing barriers to customers adopting different forms of multi-cloud and/or reducing barriers to switching completely between providers. And whether constituent elements might work best in a package, that also looks at ways to reduce providers' barriers to entry and expansion.

³³ This paper does not include consideration of any consultation responses received relating to the earlier working papers. We will consider all submissions received in response to this and our other working papers as we refine and update our thinking on potential remedies.

³⁴ See, Cloud services market investigation, updated issues statement sections titled Potential remedies and Responding to this statement.