APPENDIX A: MARKET POWER ASSESSMENTS

A.1 This appendix sets out the evidence and analysis which supports our provisional findings in Chapter 5 of this report.

Market power assessment – PC OS

A.2 We have considered Microsoft's market power in PC OS by considering evidence on:

(a) Microsoft's share of supply in PC OS;

(b) Barriers to competition in PC OS;

(c) Competition between Microsoft and alternative providers of PC OS; and

(d) Expected and foreseeable developments on Microsoft's market position in PC OS.

Microsoft's share of supply in PC OS

A.3 In this section we set out our analysis of Microsoft's size relative to alternative providers of PC OS.

A.4 Microsoft is by far the largest supplier of PC OS. Apple and Google are the main alternative providers with Apple likely larger than Google as a provider of PC OS to organisational customers.

A.5 As explained in sub-section 'PC Operating Systems' in section 'Market outcomes' of Appendix B, we have not been able to obtain revenue and user data from Apple in relation to organisational customers. However, other evidence – such as Microsoft's internal documents and Apple's user data for all customers (including consumers) – suggests that Apple is much smaller than Microsoft:

(a) A series of Microsoft board documents contain estimates for shares of supply for PC OS.[1] The March 2026 version of this document suggests that for global (excluding China) commercial customers in FY26 Q2, Microsoft had a share of 70-80% [✂], while Apple and Google had shares of 5-10% [✂] and 0-5% [✂] respectively.[2]

[1] For example: Microsoft's internal document, [✂] to section 69 notice dated [✂].
[2] Microsoft's internal document, [✂], to section 69 notice dated [✂]. The methodology for calculating these shares is unclear; however, it does indicate that Microsoft is considerably larger than Apple and Google.

(b) A comparison of user data shows that in 2024, Microsoft had [✂] more users from organisational customers than Apple had from all customers (i.e. including both organisational customers and consumers) in the UK.[3] We note that this is likely to overestimate Apple's size relative to Microsoft given the evidence indicates that usage of Apple is [✂].[4]

A.6 We have received both revenue and user figures from Google which show that Microsoft is substantially larger than Google.

(a) Data shows that Microsoft's PC OS revenues, including those earned from licensing PC OS to OEMs and from virtualised copies of PC OS, were [✂] times those of Google in 2025 globally and has grown from [✂] times larger over the past five years. [5] In fact, Google's PC OS revenues have [✂] over the period.[6]

(b) Microsoft's PC OS had [✂] times more average monthly active devices than Google's PC OS in 2025 globally and [✂] times more average monthly active devices in the UK. Microsoft has been a similar magnitude larger for the past five years.[7]

A.7 Overall, this evidence shows that Microsoft is by far the largest supplier of PC OS, which is consistent with its own internal documents.

Barriers to effective competition in PC OS

A.8 In this section, we set out a number of factors that influence customer choice and act as barriers to effective competition in PC OS, thereby reinforcing Microsoft's position. These barriers are:

(a) Limitations to technical integration and interoperability faced by alternative providers;

(b) Commercial bundling practices;

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[3] CMA analysis of data submitted by Microsoft and Apple: Microsoft's response dated [✂]to section 69 notice dated [✂]; Apple's response dated [✂] to section 69 under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

[4] Apple's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

[5] CMA analysis of data submitted by Microsoft and Google: Microsoft's response dated [✂] to section 69 notice dated [✂]; Google's response dated [✂] to section 69 notice dated [✂]. CMA analysis of data submitted by Microsoft and Google: Microsoft's response dated [✂] to section 69 notice dated [✂]; Google's response dated [✂] to section 69 notice dated [✂].

[6] CMA analysis of data submitted by Google: Google's response dated [✂] to section 69 notice dated [✂].

[7] CMA analysis of data submitted by Microsoft and Google: Microsoft's response dated [✂] to section 69 notice dated [✂]; Google's response dated [✂] to section 69 notice dated [✂]; Google's response dated [✂] to section 69 notice dated [✂].

(c) Network effects; and

(d) Customer-side frictions.

A.9 Based on the evidence we set out below, these barriers to competition mean that customers find it costly and disruptive to switch away from Microsoft's PC OS, making customers unwilling to change provider and weakening the competitive constraint to Microsoft in PC OS. These factors also affect potential new customers, making them more likely to choose Microsoft's PC OS.

Limitations to technical integration and interoperability faced by alternative providers

A.10 We understand that customers' use of other Microsoft products may influence their choice of PC OS or make it more challenging to switch away if they already use Microsoft's PC OS.

A.11 Microsoft told us that it has consistently operated an open platform in Windows that enables third-party applications and interoperability.[8] Microsoft also said that the core office applications are available cross-platform i.e. on Apple, Google, and mobile operating systems.[9]

A.12 The integration between Microsoft's PC OS and other Microsoft products is an important driver of customer choice in PC OS. For example, customers identified ease of access for staff and reduced administration for IT teams as benefits of the integration between Windows and Microsoft's Security Software.[10] We explain the implications of the technical linkages between Microsoft products for effective competition with Microsoft's Business Software Ecosystem in sub-section 'Competition with Microsoft's Business Software Ecosystem' in Chapter 5 'SEMP assessment'.

A.13 The evidence we have seen to date suggests that alternative providers of PC OS can face limitations to integration and interoperability with Microsoft's products, particularly Microsoft's historically on-premises software, PSS and Security Software. In addition, interoperability between PC OS and hardware can make switching harder for customers, as discussed further below.

A.14 First, interoperability and integration with Microsoft's historically on-premises software, such as Windows Server and Active Directory, leads to a degree of customer segmentation for the use of PC OS:

[8] Note of meeting with Microsoft on [✂].
[9] Microsoft's submission to the CMA dated [✂].
[10] Jigsaw Customer Research, 28 September 2026, page 60, paragraph 230.

(a) [✂]. Some alternative PC OS providers submitted that they compete less closely with Microsoft for traditional customers that have legacy on-premises workloads:

(i) An alternative provider submitted that these customers typically already use Microsoft business software due to Microsoft's strong position in on-premises software, for example with Windows Server and Active Directory. These customers are therefore more likely to choose Microsoft's PC OS due to its ability to interoperate and integrate with their existing IT setups which may have initially been designed around using Windows devices. This raises switching costs due to the potential loss of interoperability with on-premises IT setups.[11]

(ii) Another provider submitted that traditional enterprises face higher switching costs due to legacy reliance on on-premises workloads that rely on integration and interoperability with Microsoft products.[12]

(b) Consistent with the relevance of legacy on-premises workloads, we received some evidence that [✂] some alternative PC OS providers are more likely to be an alternative for customers that do not have historical Microsoft IT setups, for example digital/cloud natives, although even then competition with Microsoft may be limited.

(i) An alternative provider submitted that these customers are more flexible in device choice, including devices that do not interoperate as well with Microsoft's on-premises products. Despite this, the same provider submitted that due to Microsoft's position as the 'default PS and enterprise "backbone" provider, [✂].[13]

(ii) Another provider submitted that digital natives have fewer Microsoft dependencies and therefore more flexibility in software choice.[14] Alternative PC OS providers are therefore more viable for these types of customers, and this is reflected in [✂].[15]

A.15 Second, evidence we have seen to date suggests integration between PC OS and Microsoft's PSS is important for customers and alternative providers of PC OS. Customers that use Microsoft's productivity software may be less likely to switch to alternative PC OSs due to the actual and perceived risks of downgrading the

[11] [✂] response dated [✂] to section 69 notice dated [✂].
[12] [✂] response dated [✂] to section 69 notice dated [✂].
[13] [✂] response dated [✂] to section 69 notice dated [✂].
[14] [✂] response dated [✂] to section 69 notice dated [✂].
[15] [✂] response dated [✂] to section 69 notice dated [✂].

functionality of the other Microsoft products they use. This is particularly important given Microsoft's position in PSS.

(a) One customer noted that the functionality of Microsoft's PSS is lower on macOS than Windows and that the web versions of applications also lack features despite lower costs of delivering applications through a web browser.[16] Another customer told us that the functionality of PSS is a key factor in remaining with Microsoft. This customer noted that it would need to run Microsoft's productivity software regardless of its PC OS, and that the functionality of Microsoft's productivity software is more limited on other OSs, which makes using an alternative PC OS more difficult.[17]

(b) [✂].[18] [✂].[19] [✂].[20]

A.16 Third, similar to PSS, interoperability and integration with Microsoft's Security Software can be an important factor impacting customers' choice of PC OS providers. This is particularly important given Microsoft's position in Security Software.

(a) Some resellers noted that non-Microsoft PC OS usually needs to integrate with Microsoft Security Software, particularly in device management, and this can cause challenges for customers.[21] One reseller noted that management/policy parity is weaker for non-Windows devices.[22]

(b) An alternative provider submitted that [✂].[23] It also noted that [✂].[24]

(c) Apple noted issues with Microsoft taking time to adopt integrations it develops for its products. For example, it took until 3 years after launch for Microsoft to offer full support for identity integration for Apple's Platform SSO functionality.[25] Apple also noted [✂]. [26]

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[16] Note of call with [✂].
[17] Note of call with [✂].
[18] Google's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂], [✂]; Google's response dated [✂] to section 69 notice dated [✂]; Apple's response dated [✂] to section 69 notice dated [✂].
[19] [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].
[20] [✂] response dated [✂] to section 69 notice dated [✂].
[21] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].
[22] [✂] response dated [✂] to voluntary request for information dated [✂].
[23] [✂] response dated [✂]to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].
[24] [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[25] Apple's response dated [✂] to section 69 notice dated [✂].
[26] Apple's response dated [✂] to section 69 notice dated [✂].

(d) A competitor that provides identity and endpoint management software submitted that Intune and Defender's 'most valuable capabilities are reserved for, or function best on, Windows devices' which they told us pushed customers towards specific hardware and to 'standardise on Windows'.[27]

A.17 As a result of these integration and interoperability issues, customers are less likely to switch to away from Microsoft's PC OS which weakens the competitive constraint alternative providers of PC OS pose on Microsoft. For example, participants in our customer research said that the cost and upheaval of losing integration can act as a barrier to switching.[28] This is consistent with submissions from alternative providers, which said that integration and compatibility with Microsoft's ecosystem are important to their ability to compete for customers.[29]

A.18 Overall, this evidence suggests that the limitations to integration and interoperability when using third-party PC OS alongside products from across Microsoft's Business Software Ecosystem weakens the competitive constraint from alternative providers of PC OS on Microsoft. These limitations include reduced functionality of Microsoft's PSS, Security software, such as Active Directory, and Windows Server when using an alternative PC OS. Customers using other products in the Microsoft Business Software Ecosystem (often as part of historic on-premises IT setups) are more likely to choose Microsoft's PC OS due to its interoperability with Microsoft's other products. These factors limit the ability of alternative providers to provide equivalent functionalities to Microsoft's PC OS and raise switching costs for customers.

Commercial bundling practices

A.19 Microsoft frequently bundles its PC OS with PSS and Security Software via its M365 bundles,[30] with [✂] [90-100]% of PSS, PC OS, & Security Software revenue coming from customers that purchase all three.[31] In addition, customers can use Enterprise Agreements or other volume licensing arrangements to receive discounts when purchasing PC OS alongside a wider range of Microsoft products.[32]

A.20 Microsoft submitted that its suites, including those that contain PC OS (i.e. M365 business premium, M365 E3/5/7), are pro-competitive and reduce complexity and

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[27] [✂] response dated [✂]to section 69 notice dated [✂].
[28] Jigsaw Customer Research, 28 September 2026, page 62, paragraph 242.
[29] For example, [✂] submitted that 'integration and interoperability with Microsoft's software ecosystem is foundational to [✂] viability for customers', while [✂] said that 'Maximising compatibility with Microsoft's dominant enterprise software ecosystem is critical to [✂] ability to compete for enterprise device deployments' [✂] response [✂] to section 69 notice dated [✂]; [✂] response dated [✂]to section 69 notice dated [✂].
[30] Microsoft, Microsoft 365 Enterprise, 'Compare Plans and Pricing', not dated, Microsoft 365 Enterprise: Compare Plans and Pricing, PowerPoint Presentation, accessed by the CMA on 06 October 2026.
[31] See sub-section 'Customers that purchase specific combinations of digital activities' in section 'Customer data analysis' of Appendix B.
[32] See sub-section 'Competition with Microsoft's Business Software Ecosystem' in Chapter 5 'SEMP assessment'.

prices for customers.[33] We explain the implications of the commercial linkages between Microsoft products for effective competition with Microsoft's Business Software Ecosystem in Chapter 5 of this report.

A.21 The bundling of PC OS with other products can also weaken the competitive constraint on Microsoft in PC OS. Evidence collected to date suggests that the commercial bundling of Microsoft's PC OS can influence customer choices and act as a barrier to competition:

(a) Our customer research noted that Microsoft products, including Windows, are frequently purchased together, often in business premium, E3 or E5 bundles.[34]

(b) A reseller noted that Microsoft's position in business software is reinforced by its commercial bundling including the M365 E3/5 bundles.[35]

(c) Google noted that Microsoft's practice of bundling 'unrelated, must-have software, including Windows 10/11, Microsoft 365, Intune, and other key business applications' can act as a financial penalty for customers that want to opt out of using certain parts of a bundle.[36]

(d) Apple noted that the bundling of different products within Microsoft 365 can encourage customers to purchase all the business software the organisation needs from Microsoft.[37]

A.22 Overall, this evidence suggests that Microsoft's commercial bundling practices weakens the competitive constraint on Microsoft from alternative providers of PC OS. Microsoft commonly bundles PC OS with both its PSS and Security Software, and customers can use Enterprise Agreements to receive discounts when purchasing PC OS alongside a wider range of Microsoft products. This can influence customer choice, as customers face the removal of bundle-wide discounts when seeking to switch to an alternative PC OS.

Network effects

A.23 Microsoft's PC OS benefits from network effects that influence the choices made by customers and raise barriers to effective competition for alternative providers. These network effects are indirect as the value of developing applications that are

[33] Microsoft submission to the CMA dated [✂].
[34] Jigsaw Customer Research, 28 September 2026, page 59, paragraph 227.
[35] [✂] response dated [✂] to voluntary request for information dated [✂].
[36] Google's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[37] Apple's response dated [✂] to section 69 notice dated [✂].

compatible with Microsoft's PC OS increases as the overall number of customers that use Microsoft's PC OS increases.

A.24 Historically Microsoft has had the highest share of supply in PC OS meaning it was the most attractive platform for developers for which to write software.[38] This helped create a wide library of applications for Microsoft's PC OS, with 2023 Microsoft marketing materials stating that Windows 11 is compatible with 99.7% of third-party PC OS applications.[39] This makes Microsoft's PC OS more attractive to customers,[40] which in turn makes it more attractive to application developers.

A.25 Some applications are only available on Microsoft's PC OS and evidence from customers and resellers indicates customers choose Microsoft's PC OS to ensure their third-party applications are compatible with their PC OS.[41]

A.26 Existing customers also face higher switching costs as many of their business applications can be dependent on Microsoft's PC OS:

(a) Most of the customers that responded to our question on their ability to deploy business applications on non-Microsoft PC OS told us they would not be able to move all their current applications from Microsoft to other PC OS products.[42] This would mean that, to switch PC OS, customers would need to replace these applications, and this may require redesigning in-house applications. One customer told us that switching PC OS would require 're-

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[38] European Commission, Case COMP/C-3/37.792, Microsoft, Commission Decision of 24 March 2004, 37792_4177_1.pdf, paras 430-434.
[39] Microsoft, Windows IT Pro Blog, 'App confidence: From our compatibility story to yours', dated 23 February 2023, App confidence: From our compatibility story to yours | Microsoft Community Hub, accessed by the CMA on 15 September 2026.
[40] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[41] Jigsaw Customer Research, 28 September 2026, page 60, paragraph 232; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂]to voluntary request for information dated [✂].
[42] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act 2002 in the context of the CMA's Cloud Services Market Investigation [✂].

factoring and re-hosting' some applications,[43] while another stated some applications would need to be 'recompiled or re-written for an alternate OS.'[44] Another customer told us that, while they could switch away from Windows for most users, around 5% of its applications are Windows dependent. These applications, that are used for ERP and banking payment systems, constrain its ability to fully switch away from Microsoft.[45]

(b) Our customer research noted that the inability to use certain applications with other PC OS is a barrier to switching away from Microsoft.[46]

A.27 Overall, this evidence suggests that the strong network effects weaken the competitive constraint on Microsoft from alternative providers of PC OS.

Customer-side frictions

A.28 Microsoft submitted that customers can switch OS providers through 'established IT processes' that are 'commonly used' to manage large groups of devices.[47] Microsoft submitted that the increased adoption of cloud computing and SaaS solutions accessed via web browsers means that many applications are no longer tied to a specific OS which makes switching away from Windows easier.[48]

A.29 The evidence collected to date shows that Microsoft's existing customers face material barriers to switching to alternative providers of PC OS and that the overall cost of switching away from Microsoft acts as a disincentive to do so.

(a) Some customers we heard from indicated they would be unlikely to switch away from Microsoft's PC OS when faced with a 5% price increase.[49] One customer told us that, while it could switch away from Microsoft, it was not aware of another PC OS that met its requirements for coverage, governance,

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[43] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[44] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[45] Note of call with [✂].
[46] Jigsaw Customer Research, 28 September 2026, page 62-63, paragraph 244.
[47] Microsoft's response dated [✂] to section 69 notice dated [✂].
[48] Microsoft's response dated [✂] to section 69 notice dated [✂].
[49] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

safeguarding reporting, traffic monitoring, security patching and device control.[50]

(b) Evidence from alternative providers also suggests that Microsoft's existing customers face high switching costs compared to new customers. Apple submitted that customers choosing their IT infrastructure for the first time face a more genuine choice between device and software providers compared to customers with existing IT infrastructure.[51] Canonical also indicated it competes more closely with Microsoft for new deployments than those with existing Microsoft deployments.[52] Despite this, alternative providers do not appear to provide a strong constraint to Microsoft even for new customers and deployments as evidenced by shares of supply and the fact that many barriers to competition (eg network effects, user familiarity, and integration and interoperability with other Microsoft products) also apply to new customers.[53]

A.30 First, user familiarity with Microsoft's PC OS acts as a barrier to switching for customers. User familiarity is a key factor for customers when choosing PC OS, with users often having developed skills using Microsoft's PC OS through their education, personal use, and careers. [54] Users within organisations are typically familiar with how Windows works which means minimal need for training.[55] As such, customers may face significant retraining costs and friction when moving to an alternative PC OS its users may be less familiar with:

(a) Some customers identified user familiarity as a reason for choosing Microsoft over other providers and/or as a reason switching away from Microsoft's PC OS would be unlikely.[56]

(b) One customer noted the benefits of users carrying across Microsoft skills between different organisations and that Microsoft products are widely

[50] Note of call with [✂].
[51] Apple's response dated [✂] to section 69 notice dated [✂].
[52] Canonical's response dated [✂] to section 69 notice dated [✂].
[53] See 'Microsoft's share of supply in PC OS' section
[54] Jigsaw Customer Research, 28 September 2026, page 60, paragraph 231; Note of call with [✂]; [✂] response dated [✂] to voluntary request for information dated [✂] ; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated 13 July 2026 to voluntary request for information dated [✂]. ; [✂] response dated [✂] to voluntary request for information dated [✂].
[55] Jigsaw Customer Research, 28 September 2026, page 60, paragraph 231; [✂] response dated [✂] to voluntary request for information dated [✂], ; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]. ; [✂] response dated [✂] to voluntary request for information dated [✂].
[56] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

deployed in the education sector meaning switching away would require significant retraining.[57]

(c) Our customer research noted that customers typically anticipated an end-user resistance to moving away from Windows and there would be a loss of familiarity and need for training/support with any new PC OS.[58]

A.31 Second, the link between PC OS and hardware can make switching harder for customers. Most devices come with a PC OS pre-installed and as such customers will generally consider their choice of PC OS in relation to their choice of hardware.[59] The availability of particular hardware may therefore impact the range of PC OSs a customer considers.[60] For example, one customer noted that it takes decisions on which PC OS to run in part based on the practicality of the device.[61] This means switching PC OS can include a consideration of compatibility with existing hardware or more likely the replacement of existing hardware and the associated costs of doing so.[62]

A.32 Finally, as set out above, integration and interoperability with Microsoft products may also act as a barrier to switching for customers, due to the actual or perceived risks of losing functionality, ease of use, performance, or security of the other Microsoft products customers use.[63]

A.33 Overall, this evidence suggests that there are a number of switching costs and risks (including the need to replace existing hardware when switching PC OS and lack of user familiarity) that limit competition from alternative PC OS providers.

Competition between Microsoft and alternative providers of PC OS

A.34 This section sets out further evidence on the strengths of individual providers of PC OS, as well as mobile and tablet OS providers, and the competitive constraint these place on Microsoft.

A.35 Microsoft submitted that it faces substantial competitive constraints in PC OS, with macOS a strong competitor, particularly in professional and creative sectors, as are ChromeOS and Linux.[64]

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[57] Note of call with [✂].
[58] Jigsaw Customer Research, 28 September 2026, page 62, paragraph 243.
[59] Jigsaw Customer Research, 28 September 2026, page 58, paragraph 223.
[60] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[61] Note of call with [✂].
[62] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].
[63] See 'Limitations to technical integration and interoperability faced by alternative providers' section
[64] Microsoft's response dated [✂] to invitation to comment dated [✂]. Microsoft.pdf

Apple

A.36 Microsoft submitted that due to the tie between Apple's hardware and its PC OS, it can be relevant for organisations who prioritise user experience, device integration and consistent performance across hardware and software.[65]

A.37 Apple submitted that it competes for organisational customers primarily at the device level, that is it competes predominantly with devices that run Microsoft's PC OS, rather than directly at the software level with Microsoft's PC OS.[66] Apple also submitted that [✂].[67] Apple noted that it does not generally distinguish between personal and commercial users when it develops and launches macOS features, tools and capabilities, and that while [✂].[68]

A.38 While some customers and resellers identified Apple as an alternative to Microsoft in PC OS,[69] the evidence suggests that Apple is differentiated from Microsoft and exerts only a weak competitive constraint.

A.39 Apple's PC OS is differentiated by business model and some aspects of functionality. Due to these differences, it may not be suitable for all use cases by customers that use Microsoft's PC OS.

(a) Unlike Microsoft, Apple's PC OS is exclusively supplied with its proprietary hardware and cannot be licensed on a per user basis like Microsoft's PC OS.[70]

(b) Some customers view Apple's PC OS as having a lower rate of application compatibility than Microsoft.[71]

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[65] Microsoft's response dated [✂] to section 69 notice dated [✂].
[66] Apple's response dated [✂] to section 69 notice dated [✂].
[67] Apple's response dated [✂] to section 69 under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[68] Apple's response dated [✂] to section 69 notice dated [✂].
[69] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[70] Apple, Apple Legal, 'Software License Agreements', not dated, Legal - Software License Agreements - Apple, macOSSequoia.pdf, accessed 01 October 2026.
[71] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246; see also [✂] response dated [✂] to voluntary request for information dated [✂].

(c) Apple's PC OS can be virtualised for use in some VDI/DaaS contexts, but it does not offer its own service for this, unlike Microsoft. [72] Apple requires virtualised versions of its PC OS to be run on Apple hardware.[73]

(d) Our customer research found that some customers considered Apple's PC OS as strong for specific use cases (i.e. creative work) and in security.[74] However, some customers in the research viewed application compatibility and lower interoperability with Microsoft's Business Software Ecosystem (particularly Intune) in comparison to Microsoft's PC OS as drawbacks of Apple's PC OS.[75] Apple's PC OS is also generally viewed as a more premium option compared to Microsoft, although one customer noted that the gap in total cost of ownership may be decreasing.[76]

(e) Resellers had mixed views on the suitability of Apple's PC OS as an alternative to Microsoft with some viewing it as more suitable for specific user groups. [77]

A.40 The evidence suggests that Apple [✂]. As such, Apple's PC OS may act as a complement to Microsoft's PC OS rather than a PC OS which is likely to widely replace Microsoft.

(a) While no customers told us that they use Apple's PC OS exclusively, some customers told us that they used both Apple and Microsoft's PC OS within their organisations.[78] Use of Apple's PC OS appears to be driven by preferences from specific user groups within organisations[79] and may be preferred for creative use cases,[80] indicating Apple may provide a stronger constraint for these user groups, but not entire customer deployments.

(b) Apple submitted that it [✂].[81]

A.41 Overall, this evidence shows that, while Apple is likely Microsoft's closest competitor in PC OS, it is significantly smaller than Microsoft and exerts only a limited constraint on Microsoft due to strong differentiation of its offer. In particular, Apple's PC OS is exclusively supplied with its proprietary hardware and its PC OS

[72] Apple, Apple Developer Documentation, 'Virtualization', not dated 2026, Virtualization | Apple Developer Documentation, accessed 01 October 2026.
[73] Apple, Apple Developer Documentation, 'Virtualization', not dated, Virtualization | Apple Developer Documentation, accessed 01 October 2026.
[74] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246.
[75] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246.
[76] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246; Note of call with [✂].
[77] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].
[78] Note of call with [✂]; Note of call with [✂]; Note of call with [✂]; Note of call with [✂]; Note of call with [✂].
[79] Note of call with [✂]; Note of call with [✂]; Note of call with [✂].
[80] Jigsaw Customer Research, 28 September 2026, page 63, paragraph 245; Note of call with [✂]; Note of call with [✂].
[81] Apple's response [✂] to section 69 notice [✂].

may be more suitable and compete more closely for specific users within organisations such as creative teams.

Google

A.42 Microsoft submitted that the cloud-first nature of Google's PC OS means it can be useful to organisations that are already using cloud-based applications or that prioritise low total cost of ownership, ease of administration and rapid device provisioning.[82]

A.43 While some customers and resellers identified Google as an alternative to Microsoft,[83] the evidence reviewed to date suggests that Google's PC OS is differentiated from Microsoft's PC OS and exerts only a limited competitive constraint on Microsoft.

A.44 Google's PC OS is differentiated by business model and some aspects of functionality. Due to these differences, it may not be suitable for all use cases by customers that use Microsoft's PC OS.

(a) Google's PC OS is cloud first, meaning most business applications must be accessed via a browser rather than locally installed desktop apps.[84] Additionally, as noted in section further 'Limitations to integration and interoperability faced by alternative providers' above, even where an application can be run in a browser, there may be interoperability issues.

(b) Google's PC OS is available pre-installed on a smaller family of Chromebook devices, although a version can be installed on existing Windows or Mac devices.[85]

(c) Unlike Microsoft, Google's PC OS is not typically available as a virtualised endpoint via VDI/DaaS.[86]

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[82] [✂] response [✂] to section 69 notice [✂].
[83] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[84] Google's response dated [✂] to section 69 notice dated [✂].
[85] Google, ChromeOS, 'ChromeOS Flex: Our cloud-based operating system', not dated, ChromeOS Flex: Our cloud-based operating system – ChromeOS, accessed 01 October 2026; Google, ChromeOS, 'A ChromeOS device for every business need', not dated, A ChromeOS device for every business need – ChromeOS, accessed 01 October 2026.
[86] For example, Google's PC OS is not available via AWS or Microsoft. Amazon, Amazon WorkSpaces, 'What is Amazon WorkSpaces?', not dated, What is Amazon WorkSpaces? - Amazon WorkSpaces, accessed 01 October 2026; Microsoft, Microsoft Learn, 'Linux VDI Options - Azure Virtual Machines', 12 September 2026, Linux VDI Options - Azure Virtual Machines | Microsoft Learn, accessed 01 October 2026; Microsoft, Microsoft Learn, 'What is Windows 365?', 18 November 2025, (What is Windows 365? | Microsoft Learn, accessed 01 October 2026.

A.45 Consistent with this, evidence from customers and resellers shows that Google's PC OS is not generally a suitable alternative to Microsoft's PC OS.

(a) Participants in our customer research viewed Google's PC OS as a low-cost option that, due to its cloud-based nature, is easy to manage and well suited to web-based workloads.[87] However, the research also indicated that users lack familiarity with the software.[88] One customer submitted that Google's PC OS is not suitable for enterprise-grade applications.[89] In our evidence gathering, another customer told us that Google did not seem mature enough to be recommended to the customer's board and it would be nervous to use an alternative that was not already in use by other similar organisations.[90]

(b) Some resellers did not view Google as a suitable alternative to Microsoft's PC OS,[91] with two noting that Google is more suitable for web-centric and frontline workloads but more limited when application compatibility and integration with Microsoft's Business Software Ecosystem is required.[92]

A.46 Evidence we have seen to date suggests Google's PC OS competes more strongly for specific use cases within organisations, rather than for entire organisational customers. As a result, Google's PC OS may act as a complement to Microsoft's PC OS rather than an alternative.

(a) While no customer told us it exclusively used Google's PC OS, some customers told us they used both Microsoft and Google's PC OSs.[93] One of these customers noted that Google's PC OS was used for web-based and frontline workloads.[94] Some resellers also noted that Google's PC OS is more suitable for web-based and frontline workloads.[95]

(b) Google submitted that the cloud first nature of its PC OS makes it more suitable for certain use cases and enterprise customers [✂].[96] It estimated that [80-90]% [✂] of its ChromeOS commercial customers also use/manage Microsoft's PC OS and [60-70]% [✂] of its commercial customers did not use Google as their primary PC OS.[97] Similar to Apple, this suggests Google's

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[87] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246.
[88] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246.
[89] Note of call with [✂].
[90] Note of a call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions and the note has been transferred to the case file for this investigation.
[91] [✂] response [✂] to voluntary request for information [✂]; [✂] response [✂] to voluntary request for information dated [✂]; [✂] response [✂] to voluntary request for information [✂].
[92] [✂] response [✂] to voluntary request for information [✂]; [✂] response [✂] to voluntary request for information [✂].
[93] Note of call with [✂]; Note of call with [✂].
[94] Note of call with [✂].
[95] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].
[96] Google's response [✂] to section 69 notice dated [✂].
[97] Google's response [✂] to section 69 notice dated [✂].

PC OS may be a complement to Microsoft's PC OS rather than an alternative that is likely to widely replace Microsoft's PC OS.

A.47 Overall, this evidence shows that Google exerts only a weak constraint on Microsoft and has a much smaller number of customers for PC OS. It offers a cloud-first PC OS meaning most business applications must be accessed via a browser and its customers are limited in the applications they can use.

Linux distributions

A.48 Microsoft submitted that it competes with Linux distributions for customers, referencing the following providers: SUSE, Canonical, IBM, elementary OS, Zorin OS, and Linux Mint.[98]

A.49 We have not seen evidence that Linux distributions compete with Microsoft in PC OS for organisational customers to any meaningful extent. The CMA's Cloud Market Investigation found that non-Microsoft, Google, and Apple PC OSs represented a very small share of the market ([0-5]%).[99]

A.50 Linux distributions are very clearly differentiated from Microsoft's PC OS:

(a) Linux distributions are open source, often distributed for free, and supported by their communities.[100]

(b) Some Linux distributions are available pre-installed on some OEM devices[101] but they generally do not have the same level of compatibility with applications as Microsoft's PC OS.[102]

A.51 Customer evidence is consistent in showing that Linux distributions are not a suitable alternative to Microsoft's PC OS. While some customers identified Linux distributions as an alternative to Microsoft, most said they were unlikely to

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[98] Microsoft's response dated [✂] to section 69 notice dated [✂].
[99] Cloud MI, Final Decision report, 31 July 2025, Appendix R: Market power – supplementary framework and evidence, paragraphs R.99-102.
[100] Canonical, Ubuntu Desktop documentation, 'About Ubuntu Desktop', dated 04 May 2026, About Ubuntu Desktop - Ubuntu Desktop documentation, accessed 01 October 2026.
Linux Mint, Linux Mint, 'Home', not dated Home - Linux Mint, accessed 01 October 2026.
[101] For example, see Dell, Dell UK, 'Ubuntu Linux Buy Dell Laptops – Latest PCs for Work, Gaming & Business', not dated, Ubuntu Linux Buy Dell Laptops – Latest PCs for Work, Gaming & Business | Dell UK, accessed 02 October 2026.
[102] For example, AutoCAD 'cannot be installed or reliably used on Linux operating systems' and is 'developed, tested, and supported exclusively' for Microsoft Windows and Apple MacOS. Consistent with this, other application providers do not list Linux as a supported OS. AutoDesk, 'AutoCAD and verticals on Linux', date 28 January 2026, AutoCAD and verticals on Linux, accessed 07 October 2026; Microsoft, Microsoft Support, 'System requirements for Microsoft 365 for business, education and government use', not dated. System requirements for Microsoft 365 for business, education and government use | Microsoft Support, accessed 07 October 2026; Adobe, 'Technical requirements for Creative Cloud apps', date 29 September 2026, Technical requirements for Creative Cloud apps | Download and Install, accessed 07 October 2026.

switch.[103] Customers identified several factors that limited the attractiveness of Linux distributions, including differentiation and lack of customer familiarity:

(a) One customer told us it would consider Linux distributions for its developers, but they lacked sufficiently secure, enterprise grade management capabilities and were therefore not suitable.[104] Another customer told us that Linux distributions did not feel mature enough to recommend to its board and it would be nervous to use an alternative that was not already in use by other similar organisations.[105]

(b) Customers in our customer research noted that users generally needed training and extra skills to use Linux based PC OSs and that it is harder and more expensive to hire staff with these skills.[106] One customer told us that its users have freedom to choose PC OS but that Windows users were unlikely to switch to Linux unless they had already used Linux.[107]

A.52 Overall, the evidence suggests that Linux distributions are very clearly differentiated from Microsoft's PC OS and do not compete with Microsoft in PC OS for organisational customers to any meaningful extent.

Mobile and tablet OSs

A.53 Microsoft submitted that it competes with Android and iOS for customers, although noted that competition reflects the different device mix and work patterns found in organisational environments.[108]

A.54 The evidence shows that mobile/tablet OSs are not generally considered an alternative to PC OS and we currently consider that increased use of mobile and tablet devices has not substantially impacted Microsoft's position in PC OS:

(a) Only one customer identified a mobile/tablet OS as an alternative to Windows 10/11, and this was for its store and depot staff.[109] One customer told us that

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[103] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

[104] Note of call with [✂].

[105] Note of a call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions and the note has been transferred to the case file for this investigation.

[106] Jigsaw Customer Research, 28 September 2026, page 63-64, paragraph 246.

[107] Note of call with [✂].

[108] Microsoft's response [✂] to section 69 notice [✂].

[109] [✂] response [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂].

its staff will use tablet OSs as a complement to PC OS rather than an alternative; it noted that tablet OS is most commonly used by people who move around frequently.[110] Another customer told us that it is testing a mobile OS to understand if it can replicate the current user experience of a PC OS.[111]

(b) An alternative PC OS provider submitted that tablet OSs remain complementary to PC OS rather than acting as substitutes, with many organisational customers relying on PCs for 'productivity intensive tasks and enterprise workflows' [✂].[112] Another provider submitted that mobile/tablet OSs are not viable alternatives to PC OSs for organisational customers, noting that procuring a mobile device does not negate the need for the use of a PC for primary knowledge work.[113]

A.55 Overall, this evidence suggests that, while mobile and tablet OSs may be suitable alternatives to PC OSs for certain use cases, such as for shop workers, they are not typically considered an alternative to PC OS, but rather a complement to it.

Expected and foreseeable developments in PC OS

A.56 As we have described above, Microsoft's PC OS has a substantially larger user base than any rival, and this position has remained stable for at least the past five years while there are also significant barriers to competition which reinforce Microsoft's position. We have considered current evidence on market developments and evidence on the expected and foreseeable developments which may affect Microsoft's market power over the next five years.

A.57 Microsoft submitted that its competitive strategy/plans for PC OS over the next five years would focus on improving product quality as well as addressing customer needs related to AI and cloud enabled services.[114]

A.58 Alternative providers submitted that they did not expect a material change in their ability to compete with Microsoft over the next five years.

(a) Apple submitted that its recently launched MacBook Neo, which it added to its line of devices at a lower price point, [✂].[115]

[110] Note of call with [✂].
[111] Note of call with [✂].
[112] [✂] response dated [✂] to section 69 notice dated [✂].
[113] [✂] response dated [✂] to section 69 notice dated [✂].
[114] Microsoft's response dated [✂] to section 69 notice dated [✂].
[115] Apple's response dated [✂] to section 69 notice dated [✂].

(b) Google submitted that AI would continue to be a key feature of innovation in PC OS, [✂].[116] Google also noted the upcoming release of its more premium Googlebook line of devices that have AI highly integrated into the OS[117] with which it aims to win new customers through [✂].[118] Despite this, Google [✂].[119]

(c) Canonical submitted that it did not expect any dramatic changes in the market to impact its ability to compete with Microsoft.[120]

AI

A.59 Current evidence on AI integration indicates that it may be an important factor of competition going forward but is unlikely to significantly impact Microsoft's position in PC OS.

A.60 Microsoft submitted that generative AI may affect competition in PC OSs in multiple ways:

(a) First, AI integration into PC OSs may become the primary basis for competition with customers evaluating PC OSs based on AI functionality alongside more traditional drivers of customer choice such as performance and manageability. It noted Apple and Google are developing comparable AI capabilities for their PC OS.[121]

(b) Second, the development of AI assistants may reduce the importance of PC OSs generally as AI assistants become the primary interface for completing tasks across applications.[122]

A.61 The evidence we have seen to date suggests that AI functionalities could become an increasingly important factor for PC OS.

(a) As referenced above, Google submitted that AI may become a key factor in PC OS competition, noting its plans to [✂].[123]

(b) Two resellers noted that they anticipated the introduction AI capabilities into hardware in the next five years.[124] One noted that this could mean larger

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[116] Google's response dated [✂] to section 69 notice dated [✂].
[117] Google, Google Blog, 'Introducing Googlebook, designed for Gemini Intelligence', May 12 2026, Introducing Googlebook, designed for Gemini Intelligence, accessed 02 October 2026.
[118] Google's response dated [✂] to section 69 notice dated [✂].
[119] Google's response dated [✂] to section 69 notice dated [✂].
[120] Canonical's response dated [✂] to section 69 notice dated [✂].
[121] Microsoft's response dated [✂] to section 69 notice dated [✂].
[122] Microsoft's response dated [✂] to section 69 notice dated [✂].
[123] Google's response dated [✂] to section 69 notice dated [✂].
[124] [✂] response [✂] to voluntary request for information [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].

business customers look to refresh devices more frequently with the behaviour trickling down over time.[125] This could potentially increase competition as customers are more often prompted to consider their choice of PC OS when buying PCs.

A.62 However, some evidence suggests that the developments may also advantage Microsoft's position in PC OS.

(a) The Browser Choice Alliance suggested the development of on-device AI is likely to enhance the importance of the PC and further entrench Microsoft's position in PC OS.[126]

(b) One Microsoft internal document noted that it faces [✂].[127] The same document also notes '[✂]' and '[✂]'.[128]

A.63 While the development of AI and its integration into PC OS and hardware could impact competition, it does not seem likely to significantly diminish Microsoft's position. This is because, although alternative providers are well placed to implement AI into their PC OS products, Microsoft appears equally well placed to do so. In addition, AI does not appear likely to reduce or remove the factors which support Microsoft's strong position, as set out above including the importance of application compatibility, interoperability with Microsoft's business software ecosystem, user familiarity and bundling.

Web-based applications

A.64 Microsoft has submitted that the adoption of cloud computing and software as a service means that many applications are now web-based and that prevalence of this is increasing.[129] These applications are then compatible with any PC OS which can run a browser. This could reduce the importance of application compatibility and lower switching costs, by enabling users to access applications and work environments through remotely hosted infrastructure, ultimately making other PC OSs and potentially mobile OSs more viable for organisational customers.[130]

A.65 However, we have not seen evidence that web-based applications are likely to make customers less dependent on Microsoft's PC OS.

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[125] [✂] response dated [✂] to voluntary request for information dated [✂].
[126] Browser Choice Alliance's submission to the CMA dated [✂].
[127] Microsoft's internal document, [✂] to section 69 notice [✂].
[128] Microsoft's internal document, [✂].
[129] Microsoft's response dated [✂].
[130] Microsoft's response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].

(a) Some customers submitted that some of their business applications are web-based and can, in theory, be used on different operating systems. However, most of these customers noted that in practice barriers to switching remained.[131] For example, one customer noted that it needed a mature and well-supported framework to deploy, configure manage and secure the environment.[132] Another customer suggested that it would need to undertake re-factoring and re-hosting to deploy the business applications.[133] None of the customers indicated that they switched PC OS as a result of their use of web-based applications.

(b) Two resellers noted the potential for customers to move to more web-based applications.[134] One noted this could modestly open the door to alternative PC OS providers, but that Windows is still expected to remain the dominant PC OS.[135]

A.66 Web-based applications are not a new development in business software. Therefore, we consider that, if they were to significantly impact Microsoft's PC OS market position, this would already be apparent. There is no evidence of such an impact.

[131] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

[132] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

[133] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

[134] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].

[135] [✂] response dated [✂] to voluntary request for information dated [✂].

Market power assessment – PSS

A.67 We have considered Microsoft's market power in PSS by considering evidence on:

(a) Microsoft's share of supply in PSS;

(b) Barriers to competition in PSS;

(c) Competition between Microsoft and alternative providers of PSS; and

(d) Expected and foreseeable developments on Microsoft's market position in PSS.

Microsoft's share of supply in PSS

A.68 In this section we set out the evidence we have seen to date on Microsoft's share of supply in PSS, including our analysis of the size and position of Microsoft relative to alternative providers of PSS.

A.69 We have considered two measures of share of supply for PSS in the UK and globally – one indicating Microsoft's share relative to Google, the alternative provider that Microsoft considers to be its 'most significant competitor' (as discussed below) and another that indicates Microsoft's share relative to Google and a number of other alternative providers of PSS (including most, if not all, of the largest providers). We further explain our methodology and the data we have used to calculate shares of supply in Appendix C.[136]

A.70 When comparing Microsoft's revenues to those of Google, our analysis shows that Microsoft's revenues are [5–10] times larger than Google's in the UK. This translates to Microsoft accounting for between [80-90%] and [90-100%] of revenue in the period 2020 – 2025 for organisational customers in the UK, whilst Google accounted for between [5-10%] and [10-20%] (this is shown in Table A.1). On a global basis, Microsoft's share of revenues from organisational customers has been [80-90]% of revenue in the period 2020 – 2025.

[136] See sub-section 'Productivity Software Suite' in Appendix C 'Market outcomes'.

Table A.1: Microsoft and Google shares of supply by revenues from organisational customers for PSS in the UK and globally (2020-2025)

Measure	*Provider*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*
UK	Microsoft	[90-100]%	[90-100]%	[90-100]%	[80-90]%	[80-90]%	[80-90]%
	Google	[5-10]%	[5-10]%	[5-10]%	[10-20]%	[10-20]%	[10-20]%
Global	Microsoft	[80-90]%	[80-90]%	[80-90]%	[80-90]%	[80-90]%	[80-90]%
	Google	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%

Source: CMA analysis of CMA analysis of Microsoft [✂] response dated [✂] and Google [✂] response [✂].

A.71 When considering Google and other alternative providers of PSS (such as other providers of productivity suites, providers of standalone applications, and providers of AI features and functionalities) including, among others, Zoom, Canva, and Salesforce, our analysis shows that Microsoft's share was [70-80%] in the UK and [60-70%] globally in 2025.[137] In comparison, all other providers had shares of less than 10% in UK in 2025, while globally Google had a [10-20%] share and all other providers had [0-10%] shares.

A.72 Our analysis is broadly consistent with other evidence on Microsoft's share of supply which shows that Microsoft is by far the largest supplier of PSS. For example:

(a) The CMA's Cloud Market Investigation found that Microsoft held a [80-90%] share of supply in the global market for productivity suites across the three measures it considered for the time periods then available.[138]

(b) In 2025, the European Commission preliminarily found that Microsoft had a [70-80%] in the worldwide market for SaaS Productivity Applications for Professional Use since at least 2017.[139]

(c) While Microsoft's internal documents typically consider a subset of applications within PSS and are therefore not directly comparable to our estimates, they indicate that Microsoft's share of monthly active users remains high across categories.[140] In the most recent figures from November 2025, Microsoft's share of overall commercial and educational customers

[137] We further explain our methodology and the data we have used to calculate shares of supply in Appendix C.
[138] The different measures of share of supply for productivity suites on a global basis published by the CMA's Cloud Market Investigation were: (i) shares by revenue calculated from an industry report submitted by Microsoft, 2020-2022; (ii) shares by revenue calculated from data submitted by Microsoft and Google, 2018-2023; (iii) shares by count of users based on data submitted by Microsoft and Google, 2018-2023. Cloud MI Final decision report, 31 July 2025, page 431.
[139] European Commission decision in AT.40721 – MICROSOFT TEAMS and AT.40873 – MICROSOFT TEAMS II dated 12 September 2025, paragraph 88. [AT_40721_7220.pdf]
[140] Applications covered in these documents include Word, Excel, PowerPoint, Forms, OneNote, and Outlook. For example: Microsoft's internal documents to section 69 noticed [✂]; [✂]; [✂]; [✂]; [✂].

ranged from [50-60%] to [80-90%] for Windows devices globally across the PSS applications included in these documents.[141]

A.73 Overall, our analysis shows Microsoft is by far the largest supplier of PSS and over [5 - 10] times the size of its nearest rival Google in 2025, a position that has been stable since at least 2020. This analysis is broadly consistent with other evidence on Microsoft's share of supply which shows that Microsoft is by far the largest supplier of PSS.

Barriers to competition in PSS

A.74 In this section, we set out a number of factors which influence customer choice and act as barriers to effective competition in PSS, thereby reinforcing Microsoft's position. These barriers are:

(a) Limitations to technical integration and interoperability faced by alternative providers;

(b) Commercial bundling practices;

(c) Network effects; and

(d) Customer-side frictions.

A.75 Based on the evidence we set out below, these barriers to competition mean that customers find it costly and disruptive to switch away from Microsoft's PSS, making customers unwilling to change provider and weakening the competitive constraint to Microsoft in PSS. These factors also affect potential new customers, making them more likely to choose Microsoft PSS.

Limitations to technical integration and interoperability faced by alternative providers

A.76 Microsoft submitted that interoperability for alternative providers of PSS is supported through standardised file formats, Microsoft Graph API, add-ins, connectors and other developer tools, enabling third parties to integrate with Microsoft products and allowing organisational customers to deploy competing solutions alongside Microsoft's Productivity Software Suite. [142]

A.77 The integration between applications, features, and functionalities within Microsoft's PSS as well as between Microsoft's PSS and other Microsoft products

[141] Microsoft internal document, [✂] to section 69 noticed dated [✂].
[142] Microsoft's submission to the CMA dated [✂]; Microsoft's response dated [✂] to section 69 notice dated [✂].

across digital activities is an important driver of customer choice in PSS.[143] For example, our customer research found that the level of integration between Microsoft's PSS products and between Microsoft's PSS and its Security Software products was identified as one of the most common benefits of using Microsoft's PSS.[144] We explain the implications of the technical linkages between Microsoft products for effective competition with Microsoft's Business Software Ecosystem in Chapter 5 of this report.

A.78 However, while some alternative providers and customers told us that third-party products can be integrated and used alongside Microsoft's products,[145] the evidence we have seen to date indicates that alternative providers of PSS can face limitations to integration and interoperability with Microsoft's products. These include limitations related to applications, features, and functionalities within Microsoft's PSS, as well as with other Microsoft products across digital activities.

A.79 First, alternative providers of PSS told us that the quality and functionality of their products may be reduced due to unequal access to Microsoft data, APIs and technical interfaces that are a consequence of Microsoft's control of Graph APIs, application surfaces and integration points.[146]

(a) Some alternative providers of PSS told us that the experience of users with their products depends on integration and interoperability with Microsoft products and that their products may not achieve the same functionality as Microsoft's PSS due to them not having equivalent access to the necessary technical interfaces.[147]

(b) Some alternative providers of PSS said that compatibility with Microsoft document formats does not always enable competing products to reproduce the same document behaviour or functionality available within Microsoft's

[143] Some customers said that integration within Microsoft's PSS and its products in other digital activities influenced their purchasing decisions. Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to questions in lieu of a call dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. Two resellers identified integration between Microsoft's PSS applications and integration with Security Software as reasons why customers choose Microsoft's PSS. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂].

[144] Jigsaw Customer Research, 28 September 2026, page 38, paragraph 175.

[145] For example: [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. Note of call with [✂] on [✂].

[146] In addition, a reseller told us that interoperability between Power BI and other Microsoft products is more seamless than with alternative providers products. It said that while Microsoft's APIs allow interoperability with other providers, the fields don't match as cleanly as with Microsoft's products. It added that Copilot is another example of an application for which integration is cleaner and easier with Microsoft's products. Note of call with [✂] on [✂].

[147] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

applications.[148] Google provided internal documents with examples of issues it and its customers have encountered with Microsoft's file formats.[149]

(c) Some providers of AI features and functionalities said that API restrictions, interface limitations and dependence on Microsoft-controlled interoperability routes can reduce the functionality, integration quality and interoperability of their products relative to Microsoft's own.[150]

A.80 Second, alternative providers of PSS told us that they are unable to replicate the same access to organisational data and workflow context Microsoft generates across its PSS. For example, alternative providers of PSS told us that access to files, emails, meetings, calendars, chats, Teams conversations, meeting transcripts, permissions and other workflow signals allows Microsoft to provide more contextual and personalised functionality than their products.[151] This can decrease the attractiveness of products offered by alternative providers of PSS relative to Microsoft, which is able to provide more contextualised and personalised functionality to customers.

A.81 Finally, the native integration and default positioning of Microsoft applications, features, and functionalities within its PSS and other Microsoft products is not always available to alternative providers of PSS and enables Microsoft to offer a more seamless experience for users when interacting with its PSS offering.

(a) Some alternative providers of PSS said that Microsoft benefits from embedding functionality from its PSS applications directly within its other PSS applications and wider Business Software Ecosystem.[152] For example, a provider told us that users can access OneDrive directly from Windows File Explorer meaning M365 is natively integrated into Windows OS,[153] while an alternative provider noted that Microsoft PowerPoint includes a 'Present in

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[148] [✂] response dated [✂] to section 69 notice dated [✂] and [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[149] Google's internal document, [✂] to section 69 notice dated [✂]. Google's internal document, [✂] to section 69 notice dated [✂].
[150] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[151] [✂] response dated [✂]to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[152][✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[153] [✂] response dated [✂] to section 69 notice dated [✂].

Teams' button does not allow users to be redirected to alternative providers.[154]

(b) Some alternative providers of PSS told us that Copilot benefits from being integrated directly into Microsoft applications and workflow surfaces.[155] For example, an alternative provider said that Copilot benefits from embedded entry points within Microsoft's applications, including the Dynamic Access Button, contextual prompts, and dedicated keyboard shortcuts.[156]

A.82 As a result of these integration and interoperability issues, customers are less likely to switch away from Microsoft's PSS which weakens the competitive constraint alternative providers of PSS pose on Microsoft.

(a) Our customer research and other evidence from customers indicates that the loss of integration benefits – both among PSS applications, features, and functionalities, as well as with Microsoft products in other digital activities – discourages customers from switching to alternative providers of PSS.[157]

(b) Some customers said that limitations in integrating products from alternative providers of PSS with Microsoft products in other digital activities, together with the costs and complexity of managing these integrations with Microsoft products over time, reduced the attractiveness of switching away from Microsoft to alternative providers of PSS.[158]

(c) Some alternative providers told us that the inability of their products to match the integration and interoperability between Microsoft's PSS and other Microsoft products across digital activities is a key source of differentiation with Microsoft that makes organisational customers less likely to purchase their PSS offering.[159]

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[154] [✂] submission in the context of the CMA deciding whether to exercise its digital markets functions, dated [✂].
[155] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[156] [✂] response dated [✂] to section 69 notice [✂].
[157] Jigsaw Customer Research, 28 September 2026, page 42, paragraph 186. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[158] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response [✂] to questions in lieu of a call dated [✂].
[159] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

A.83 Overall, the evidence we have seen to date shows that Microsoft's PSS is deeply integrated and interoperable with other products in its Business Software Ecosystem in ways that alternative providers cannot match. This is due to alternative providers having restricted access to Microsoft-controlled APIs, interfaces and data; restricted access to organisational data and context; and the native integration and default positioning of Microsoft products. These limitations to technical interoperability and integration weaken the competitive constraint on Microsoft from alternative providers of PC OS.

Commercial bundling practices

A.84 Microsoft frequently bundles its PSS with PC OS and Security Software via its M365 bundles, with customers who buy Microsoft's PSS, PC OS, and Security Software together accounting for [90-100]% of all revenue from these digital activities.[160] In addition, customers can use Enterprise Agreements or other volume licensing arrangements to receive discounts when purchasing PSS alongside a wider range of Microsoft products.[161]

A.85 Microsoft told us that customers benefit from purchasing a range of productivity applications from the wide selection of suites that it offers through lower prices and reduced complexity.[162] Microsoft submitted that 'the combined prices of point solutions far exceed the prices of productivity suites' and provided an example in which replicating a suite with point solutions would cost between three and seven times more.[163] Microsoft said that it offers suites and standalone offers, and that customers can 'choose the solution that best meets their needs at a point in time'.[164]

A.86 Evidence we have seen to date suggests that customers value purchasing a range of applications, features, and functionalities as part of Microsoft's PSS.[165] In addition, one customer told us that purchasing Microsoft's PSS alongside its PC OS in an M365 bundle provides 'ease' in managing software procurement.[166] Another customer said that bundled products can be more cost effective and easier to implement for customers.[167] We explain the implications of the

[160] See sub-section 'Customers that purchase specific combinations of digital activities' in section 'Customer data analysis' of Appendix B.
[161] See sub-section 'Competition with Microsoft's Business Software Ecosystem' in Chapter 5 'SEMP assessment'.
[162] Microsoft's submission to the CMA dated [✂].
[163] Microsoft's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. Microsoft's submission to the CMA dated [✂].
[164] Note of meeting with Microsoft on [✂].
[165] Jigsaw Customer Research, 28 September 2026, page 37, paragraph 166. Note of call with [✂] on [✂].
[166] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[167] Note of call with [✂] on [✂].

commercial linkages between Microsoft products for effective competition with Microsoft's Business Software Ecosystem in Chapter 5 of this report.

A.87 However, we have also received evidence that Microsoft's commercial bundling also weakens the competitive constraint on Microsoft in PSS. This occurs where Microsoft's commercial bundling practices influence the choice of Microsoft's existing customers and act as a barrier to competition for alternative providers of PSS.

A.88 First, Microsoft's commercial bundling practices influence customer purchasing decisions as products included within Microsoft's bundles are perceived as available at little or no additional cost, reducing the willingness and incentive of customers to purchase products from alternative providers of PSS.

(a) Our customer research found that Teams is 'perceived as "free" or low-cost within the [Microsoft] license', which led to alternatives being seen as an additional cost for their organisations.[168] Participants in this research also said that the availability of Copilot Chat 'for free' in some licenses meant many participants were reluctant to use alternative AI assistants even though Copilot was described by many as a weaker product.[169]

(b) Some customers told us that Microsoft's bundling practices influenced their decisions not to purchase from alternative providers.[170] For example, one customer told us that purchasing Microsoft's bundles 'can steer which products are used' because they are 'bundled in with the license for free', noting Teams as an example.[171]

(c) Alternative providers submitted that Microsoft's practice of including individual applications alongside 'must-have' productivity software applications within PSS (as well as its bundling of PSS with PC OS and Security Software) can result in alternative applications and suites being perceived as an additional cost for products already included within Microsoft's bundled offering at 'zero cost'.[172]

A.89 Second, Microsoft's commercial bundling practices can create substantial switching costs when customers move to alternative providers due to the duplication of license costs. Some alternative providers submitted that bundling

[168] Jigsaw Customer Research, 28 September 2026, page 39, paragraph 178.
[169] Jigsaw Customer Research, 28 September 2026, pages 39, 49 and 54-55, paragraph 178, 198 and 216.
[170] Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[171] Note of call with [✂] on [✂].
[172] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

could create switching costs due to the duplication of licence costs when customers must continue paying for functionality included in a Microsoft bundle while also purchasing an alternative solution.[173] In addition, a reseller told us that Microsoft's commercial bundling through its M365 E3 and E5 suites can raise switching costs for organisational customers.[174]

A.90 Finally, the loss of discounts under Enterprise Agreements incurred when switching away from Microsoft's PSS can reduce customers' incentives to adopt alternative providers. A provider submitted that Microsoft's practice of bundling of PSS with other products in its Business Software Ecosystem can discourage customers from switching their PSS. The provider said this could result in a customer paying more for its remaining Microsoft products than it would have paid for its original set of products, leading to customers remaining with Microsoft despite a preference for the rival provider's products.[175]

A.91 Overall, this evidence shows that Microsoft's commercial bundling practices weaken the competitive constraint on Microsoft from alternative providers of PSS as they reduce customers' incentives to switch away from Microsoft's PSS, thereby creating an additional barrier that alternative providers must overcome to compete effectively. Customers often perceive Microsoft's products to have little or no marginal cost when included in its popular M365 bundles (such as M365 E3 and E5), so are encouraged to use them and are less likely to pay for a similar product from an alternative provider since this would involve duplication and additional cost. If customers switch from Microsoft products, they may also lose volume discounts under their Enterprise Agreements.

Network effects

A.92 Microsoft's PSS benefits from network effects that influence the choices made by customers and raises barriers to effective competition for alternative providers. These can be direct network effects, as the value of using Microsoft's PSS for a customer increases as the overall number of customers using it increases. They can also be indirect, as the value of developing applications that integrate with Microsoft's PSS increases as the overall number of customers that use Microsoft's applications increases.

A.93 The widespread adoption of Microsoft's PSS creates direct network effects that make it easier for organisations to interact with their customers, suppliers, and

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[173] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[174] [✂] response dated [✂] to voluntary request for information dated [✂].

[175] [✂] supported its response with customer case studies and internal documents which reference these practices. [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] to section 69 notice dated [✂]. [✂] to section 69 notice dated [✂].

other organisations with whom they need to work and collaborate. This makes switching away from Microsoft's PSS less attractive and more costly for customers.

(a) Our customer research showed that the ease of working with clients and partners – because 'the bulk' use Microsoft's PSS – was a driver of purchasing Microsoft's PSS.[176]

(b) Some customers said that the use of Microsoft's PSS by other organisations influenced their purchase decision.[177] For example, one customer told us that the widespread adoption of Microsoft's PSS in their industry makes it easier to share documents and collaborate.[178] Another customer told us that, while Google Workspace's ability to open Microsoft proprietary file formats is nearly always sufficient for its needs and that formatting issues are rare, it retains Microsoft's PSS alongside Google Workspace as some employees continue to use Microsoft's PSS as a result of its widespread use in their profession.[179]

(c) Some resellers identified industry adoption as a factor in customers' decisions to purchase Microsoft's PSS.[180]

(d) One alternative provider said that Microsoft benefits from 'powerful network effects' and Cisco said that the widespread adoption of Teams creates network effects.[181]

A.94 Microsoft's PSS also benefits from a larger number of third-party integrations than alternative providers of PSS, which creates indirect network effects that makes switching away from Microsoft's PSS less attractive and raises barriers to effective competition for alternative providers that cannot replicate the same volume and variety of third-party integrations. For example, Microsoft's M365 marketplace lists over 1800 add-ins for each of Microsoft Word and Excel,[182] whereas Google's marketplace lists around 100 add-ins for each of Google Docs and Sheets.[183] Consistent with this, some alternative providers told us that Microsoft benefits from

[176] Jigsaw Customer Research, 28 September 2026, page 39, paragraph 175.
[177] Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂].
[178] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[179] Note of call with [✂] on [✂].
[180] [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂].
[181] [✂] response dated [✂] to section 69 notice dated [✂]. Cisco's response dated [✂] to section 69 notice dated [✂].
[182] Microsoft, Microsoft Marketplace, not dated, accessed by the CMA 28 September 2026. [Microsoft 365, Excel, Microsoft 365 Apps Apps | Microsoft Marketplace]; Microsoft, Microsoft Marketplace, not dated, accessed by the CMA 28 September 2026. [Microsoft 365, Word, Microsoft 365 Apps Apps | Microsoft Marketplace]
[183] Google, Google Workspace Marketplace, not dated, access by the CMA 28 September 2026. [Google Workspace Marketplace and Google Workspace Marketplace]. [✂].

more third-party integrations than alternative providers, with one submitting that this 'entrenches Microsoft's position through powerful indirect network effects'.[184]

A.95 Overall, this evidence shows that the widespread adoption of Microsoft's PSS, its broad range of third-party application integrations, and the benefits of compatibility and collaboration with other organisations using Microsoft products, create network effects that are an additional barrier to competition that alternative providers must overcome to compete effectively with Microsoft.

Customer-side frictions

A.96 Microsoft submitted that switching from its PSS is primarily a data migration exercise.[185] Microsoft considers that switching mainly involves a customer selecting a new provider, migrating data, and reconfiguring user access.[186] While customers using multiple Microsoft products may have more data and services to migrate, Microsoft told us that the process remains fundamentally the same and they can decide to switch individual services while retaining others.[187]

A.97 While we have seen some evidence that suggests Microsoft's customers can migrate to alternative providers of PSS without experiencing challenges,[188] most evidence available to us shows that Microsoft's existing customers face material barriers to switching and that, in particular, the overall costs – as well as the risks associated with the process – of switching away from Microsoft act as a disincentive to do so.

A.98 First, the evidence we have seen to date shows that moving away from Microsoft's PSS requires training users and administrators on how to use products offered by alternative providers of PSS and this can represent a significant switching cost.

(a) Our customer research identified end-user resistance and the need to retrain users in the products offered by alternative providers of PSS as barriers to switching away from Microsoft.[189]

(b) Some customers told us that user familiarity with Microsoft's PSS and the cost of retraining users reduced the likelihood of them switching to alternative

[184] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[185] Microsoft's response dated [✂] to section 69 notice dated [✂].
[186] Microsoft's response dated [✂] to section 69 notice dated [✂].
[187] Microsoft's response dated [✂] to section 69 notice dated [✂].
[188] Note of call with [✂] on [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. We also note that only a small number of the customers we heard from as part of our investigation had switched away from Microsoft for at least a majority of their PSS needs. Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂].
[189] Jigsaw Customer Research, 28 September 2026, page 42, paragraph 188.

providers.[190] One customer said that it experienced cultural challenges when switching away from Microsoft's PSS due to employees' experience using Microsoft's tools, requiring the customer to train staff to overcome these issues.[191]

(c) Some alternative providers said that customers face costs related to retraining users and administrators.[192]

A.99 Second, switching PSS provider can require changes to existing business processes and workflows, such as governance frameworks and compliance controls, which can create costs when moving provider.

(a) One customer told us that the extent to which Microsoft is embedded in its existing business processes would lead to significant disruption when switching.[193] Another customer told us that having different PSS applications in its productivity, communication, and collaboration software stack with different authentication mechanisms, policies, and document and data classifications can be time consuming and inefficient for staff.[194]

(b) One reseller said that common challenges when migrating include data governance, security policy alignment, and collaboration workflows.[195]

(c) Some alternative providers said that customers face costs for re-architecting workflows and business processes, such as governance frameworks, compliance controls, and custom integrations.[196]

A.100 Third, some customers seeking to switch away from Microsoft's PSS said that they face data portability challenges that increase the costs and complexity of switching provider.

(a) Some customers said that portability challenges reduced their willingness to switch productivity provider.[197] Another said that moving away from

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[190] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[191] Note of call with [✂] on 14 [✂].
[192] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] submission dated [✂] in the context of the CMA deciding whether to exercise its digital markets functions [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[193] [✂] response dated [✂] to questions in lieu of a call dated [✂].
[194] Note of call with [✂] on [✂].
[195] [✂] response dated [✂] to voluntary request for information dated [✂].
[196] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[197] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂].

Microsoft's productivity software would be difficult due to the volume of data stored in SharePoint.[198]

(b) A provider submitted that Microsoft increases the technical barriers to data migration through encryption practices and limits to the number of API requests a user can make, which increase migration time.[199] The provider supported its response with internal documents.[200]

(c) Some alternative providers indicated that data migration can represent a significant barrier to switching, particularly for customers with large volumes of files and complex spreadsheets, as the process can be costly, disruptive, and require substantial time and resources.[201]

A.101 Fourth, existing supplier relationships can reduce the administrative, procurement and organisational costs of remaining with Microsoft relative to adopting an alternative provider.

(a) An internal [✂] document identified legacy relationships as one of the main reasons [✂] lost deals to Microsoft between February 2020 and November 2022, suggesting that customers may be less likely to switch from an established supplier.[202]

(b) Customers said that Microsoft's Office applications are the 'backbone' of their organisations' operations and that the core PSS tools are used as 'default' in our customer research.[203]

(c) A provider submitted that Microsoft benefits from already being approved by customers' compliance, procurement, IT and leadership teams, meaning customers may need to incur additional time and resources to evaluate and approve an alternative provider.[204]

A.102 Overall, this evidence shows that Microsoft's existing customers face significant costs that deter them from switching to alternative providers, thereby weakening the competitive constraint on Microsoft from alternative providers of PSS. These costs arise from the need to retrain users and administrators, adapt existing business processes and workflows, manage complex data migration requirements, and overcome technical dependencies built around Microsoft products.

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[198] Note of call with [✂] on [✂].
[199] [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. [✂] to section 69 notice dated [✂].
[200] [✂] to section 69 notice dated [✂]. [✂] to section 69 notice dated [✂]. For example, one document notes that [✂].
[201] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[202] [✂] to section 69 notice dated [✂].
[203] Jigsaw Customer Research, 28 September 2026, page 36, summary box in section 3.2.1 and paragraph 161.
[204] [✂] response dated [✂] to section 69 notice dated [✂].

Competition between Microsoft and alternative providers of PSS

A.103 This section sets out further evidence on the strengths of alternative providers of PSS and the competitive constraint they place on Microsoft.

A.104 Microsoft submitted that it faces strong competition in PSS.[205] Microsoft said it competes with a range of suite providers (including Google Workspace, Zoom Workplace, Apple iWork, Zoho Workplace and Kingsoft). Microsoft also told us that it also competes with a variety of suppliers of standalone productivity software applications that offer functionality comparable to individual components of the Microsoft's productivity software packages (such as Slack for collaboration, Box for content management, and Zoom for communication). Microsoft considers that competitive pressure has intensified as several providers of standalone productivity software applications have expanded their offerings to offer a suite of productivity software (for example, Zoom AI Productivity Suite).

A.105 As part of our assessment of competition between Microsoft and alternative providers of PSS, we have considered the constraint imposed on Microsoft from:

(a) Google Workspace;

(b) Other providers of productivity suites;

(c) Providers of standalone productivity applications; and

(d) Providers of AI features and functionalities.

Google Workspace

A.106 Microsoft submitted that Google is its 'most significant' competitor because 'it offers a complete suite of products', including 'productivity application functionality provided by Sheets, Docs, and Slides that is directly comparable to the Microsoft 365 Apps'.[206] In addition, Microsoft said that Google is well positioned in AI due to its capabilities across the AI stack.[207]

A.107 Google submitted that, while it competes 'closely on core application functionality', it considers that Workspace is differentiated from Microsoft's productivity software in several respects.[208] For example, Google told us that Microsoft's PSS features a broader scope of specialised enterprise applications.[209] Google submitted that its PSS is differentiated from Microsoft's in terms of its deployment model, the

[205] Microsoft's response to section 69 dated [✂]. Microsoft's response dated 04 June 2026 to invitation to comment dated 14 May 2026, paragraph 2.3.1. Microsoft.pdf
[206] Microsoft response dated [✂] to the to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[207] Microsoft's response dated [✂] to section 69 notice dated [✂].
[208] Google's response dated [✂] to section 69 notice dated [✂].
[209] Google's response dated [✂] to section 69 notice dated [✂].

features and functionalities of its applications, and the level of integration with other parts of Microsoft's Business Software Ecosystem, including Windows and Entra ID.[210] In addition, Google identified some applications within Microsoft's PSS for which it does not offer a 'broadly equivalent' application, such as Loop, Viva Learning, and Sway.[211]

A.108 The evidence we have seen to date shows that despite Google being seen as the closest alternative, the differences in functionality, integrations with other Microsoft products, deployment models, and migration costs limit the ability of Google to attract customers away from Microsoft in PSS.

(a) While Google Workspace was the most commonly identified alternative by Microsoft's PSS existing customers, these customers said they had a low likelihood of switching.[212] Customers raised several factors that limited the attractiveness of Google Workspace, including challenges replicating the level of integration with Microsoft products, migration costs, and limitations in functionality (for example in relation to Google Sheets relative to Microsoft Excel).[213]

(b) Some resellers identified Google Workspace as an alternative to Microsoft's PSS that their customers consider.[214] However, several of these resellers

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[210] Google's response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[211] Google's response dated [✂] to section 69 notice dated [✂].
[212] Jigsaw Customer Research, 28 September 2026, page 44, paragraph 193. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to questions in lieu of a call dated [✂]. [✂] response [✂] to section 174 notice under the Enterprise Act 2002 in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. ; Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[213] Jigsaw Customer Research, 28 September 2026, page 44, paragraph 195. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to questions in lieu of a call dated [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂].
[214] [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂].

considered Workspace to be a somewhat unsuitable alternative, for reasons including its functionality and migration complexity.[215]

(c) Microsoft's internal documents contain customer research which suggests that, [✂].[216] In addition, another internal document identifies a number of products and features included in Microsoft enterprise bundles but not available within Workspace, including Loop pages and some security features.[217]

(d) As set out in the CMA's Cloud Market Investigation, Google Workspace is only available through a browser.[218]

(e) Microsoft also benefits from a larger number of third-party integrations than Google Workspace which create indirect network effects (as explained [in Network Effects section] above). For example, Microsoft's M365 marketplace lists over 1800 add-ins for each of Microsoft Word and Excel,[219] whereas Google's marketplace lists around 100 add-ins for each of Google Docs and Sheets.[220]

A.109 Google's ability to compete varies by customer segment, with stronger positioning among [✂], but weaker competitive strength among [✂].

(a) Two Microsoft internal documents indicate that Google's share of users is higher for [✂] and [✂] than amongst [✂] for several PSS applications.[221]

(b) Google told [✂].[222] However, Google said it has [✂].[223] In addition, Google submitted that its win/loss data indicates that [✂].[224]

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[215] [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂].

[216]For example: Microsoft's internal document, [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. Microsoft's internal document, [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. Microsoft's internal document, [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

[217] Microsoft's internal document, [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

[218] Cloud MI Final decision report, 31 July 2025, page 432.

[219] Microsoft, Microsoft Marketplace, not dated, accessed by the CMA 28 September 2026. [Microsoft 365, Excel, Microsoft 365 Apps Apps | Microsoft Marketplace]; Microsoft, Microsoft Marketplace, not dated, accessed by the CMA 28 September 2026. [Microsoft 365, Word, Microsoft 365 Apps Apps | Microsoft Marketplace]

[220] Google, Google Workspace Marketplace, not dated, access by the CMA 28 September 2026. [Google Workspace Marketplace and Google Workspace Marketplace]. [✂].

[221] Microsoft's internal document, [✂], to section 69 noticed dated [✂].

[222] Google's response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[223] Google's response dated [✂] to section 69 notice dated [✂].

[224] Google's response dated [✂] to section 69 notice dated [✂].

A.110 Overall, this evidence shows that, although Google is the second-largest supplier of PSS in the UK, it provides a weak competitive constraint to Microsoft. While some customers identified Google Workspace as an alternative to Microsoft's PSS, customers also raised differences in functionality, integration with other Microsoft products, and migration and retraining costs, as factors that limit the attractiveness of switching to Google. Google also does not offer an equivalent range of products to Microsoft's PSS. Google's PSS is stronger among [✂], but weaker among [✂]. Even those customers who do use Google PSS for most staff may also need to use some Microsoft PSS in order to collaborate with suppliers, partners or customers.

Other providers of productivity suites

A.111 Microsoft identified several other providers of productivity software suites with which it submitted that it competes closely, including Zoom, Apple, Zoho, and Kingsoft.[225]

A.112 The suites offered by these providers use different deployment models and do not have the same range of applications, features, and functionalities as Microsoft's PSS.

(a) Some customers told us that alternative productivity suites lack the range of features and functionalities of Microsoft's PSS.[226] For example, one customer said that self-hosted solutions, such as Collabora, are materially less comprehensive than Microsoft's suite.[227]

(b) Microsoft's internal documents indicate that alternative providers of productivity suites offer a narrower range of features and functionality than Microsoft.[228] For example, these documents identify [✂] email, calendar, security and compliance capabilities,[229] and note that [✂] lacks various features available in Microsoft applications, such as [✂].[230] Microsoft's submissions also highlighted broader product range differences, including OpenOffice's lack of comparable email and calendaring applications and [✂] less comprehensive offering.[231]

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[225] Microsoft RFI response dated [✂].
[226] Note of call with [✂] on [✂]. [✂] response dated [✂] to questions in lieu of a call [✂]. Jigsaw Customer Research, 28 September 2026, page 44, paragraph 195.
[227] Note of call with [✂] on [✂].
[228] Microsoft's internal document, [✂], to section 69 notice dated [✂]; Microsoft's internal document, [✂] to section 69 notice dated [✂].
[229] Microsoft's internal document, [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[230] Microsoft's internal document, [✂] to section 69 notice dated [✂].
[231] Microsoft's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

(c) While alternative providers identified functional overlap with Microsoft's applications, features, and functionalities,[232] alternative providers of productivity suites submitted that they are differentiated from Microsoft in terms of the range of applications, features, and functionalities of as Microsoft.[233] For example, [✂].[234] Similarly, Zoho submitted that its spreadsheet application offers fewer advanced features than Excel, that some of its applications have more limited desktop environment than the corresponding Microsoft applications, and that Microsoft's PSS generally benefits from deeper integration with other products in Microsoft's wider ecosystem.[235]

(d) Some alternative providers of productivity suites submitted that they differ from Microsoft in terms of their commercial and deployment model.[236] For example, Apple said that its suite is supplied at no additional cost with MacOS devices and is primarily targeted at Mac users, while The Document Foundation said that LibreOffice is supplied as a free and open-source suite.[237]

A.113 The more limited range of applications, features, and functionalities offered by other providers of productivity suites means that Microsoft's existing customers would need to integrate these other suites with standalone productivity applications to replicate the full functionality of Microsoft's PSS. This is uncommon due to the barriers to switching and the costs associated with managing integrations between products from several providers of PSS we have identified above.

A.114 Further, the evidence we have seen to date shows that customers in general do not consider these other providers of suites to be an alternative with their use currently limited and focussed on particular subsets of customers.

(a) Of the other productivity suite providers identified by Microsoft, only Apple and open-source software providers (such as LibreOffice and OpenOffice)

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[232] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[233] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[234] [✂] response dated [✂] to section 69 notice dated [✂].

[235] Zoho's response dated [✂] to section 69 notice dated [✂].

[236][✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[237] Apple's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. Apple's response dated [✂] to section 69 notice dated [✂]. The Document Foundation's response dated [✂] to section 69 notice [✂].

were identified by customers as alternatives to Microsoft Office in our customer research.[238]

(b) Evidence we have seen shows that Microsoft's existing customers appear less likely to view alternative providers of productivity suites as credible alternatives for their specific needs.[239]

(c) Microsoft's internal documents indicate that use of alternative providers is typically greater (in terms of their share of users) amongst [✂] than they are for [✂] in relation to a range of PSS applications.[240]

(d) [✂].[241]

(e) Microsoft submitted that Apple's suite is 'more popular with those already in the Apple ecosystem' and Zoho's suite is perhaps 'more suited to smaller organisations'.[242]

(f) Some alternative providers submitted that they compete for certain customers or use cases. Apple told us that its PSS is primarily targeted at Mac users, including consumers and SMEs, while Zoom submitted that that its alternatives to Word, PowerPoint, Excel and OneNote/Loop are designed for [✂].[243]

A.115 Overall, this evidence shows that other providers of productivity suites (such as Apple iWork, LibreOffice, Zoho Workplace and Kingsoft) pose a weak competitive constraint to Microsoft's PSS amongst UK customers. These providers have different PSS deployment models and do not have an equivalent range of applications, features, and functionalities to Microsoft's PSS. This means that Microsoft's existing customers would need to integrate these suites with standalone applications in order to replicate the full functionality of Microsoft's

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[238] We note that customers also identified other products as alternatives for specific applications in Microsoft Office, including alternatives for project management software and PDFs. These products are discussed further in the section 'Providers of standalone productivity applications'. Jigsaw Customer Research, 28 September 2026, page 44, paragraph 195.

[239] [✂] response dated [✂] to questions in lieu of a call dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂]. [✂] response dated [✂] to voluntary request for information dated [✂].

[240] For example: Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂].

[241] Microsoft's internal document, [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. Microsoft's internal document, [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

[242] Microsoft's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

[243] Apple's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. Apple's response dated [✂] to section 69 notice dated [✂]. Zoom's response dated [✂] to section 69 notice dated [✂].

PSS; for this reason, other providers provide a weak competitive constraint on Microsoft's PSS.

Providers of standalone productivity applications

A.116 Microsoft submitted that it competes with providers of standalone productivity applications that provide functionality equivalent to various applications within its productivity software suite. For example, Microsoft identified providers of standalone productivity applications as competitors to Teams (Salesforce, Zoom Cisco), OneDrive (Box, Dropbox, pCloud), OneNote (Notion, Bending Spoons, Obsidian), and PowerBI Pro (Google, Salesforce, Amazon).[244]

A.117 These providers are unable to offer the same commercial and integration benefits across the broad range of PSS which Microsoft can offer while also facing a number of other barriers to competition. These benefits include providing an integrated suite (including interoperability between applications and lower combined pricing for a suite of applications).[245] This is because standalone providers are typically adopted by customers only where they offer functionality which is particularly important for a customer's specific use case.

A.118 As a result, providers of standalone productivity applications tend to be an alternative for some specific customers or for specific use cases rather than all Microsoft's existing PSS customers.[246] This is consistent with the evidence that shows standalone applications are commonly used as a complement to – rather than as a substitute for – Microsoft's PSS.

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[244] Microsoft's response dated [✂] to section 69 notice dated [✂].

[245] These benefits are set out in the sub-section 'Commercial bundling practices' above. In addition, Microsoft submitted that 'customers demand suites because of their low total cost, … their ability to work together, and because of the efficiency and greater simplicity of procuring a suite compared to a collection of point solutions'. In contrast, Microsoft said that standalone applications 'have distinct economics and are comparatively more expensive than suites – the combined prices of point solutions far exceed the prices of productivity suites that integrate corresponding C&C [communication and collaboration] and productivity functionality'; [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

[246] For example: [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to questions in lieu of a call dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Microsoft's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. Consistent with this, providers of standalone productivity software said that they provide applications that are comparable to individual applications and/or a subset of applications within Microsoft's PSS. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂].

(a) Microsoft submitted that 'customers complement suites with point solutions when they provide incremental value to the organization as a whole or to groups or categories of workers'.[247]

(b) Our customer research found that a minority of participants used Slack and Zoom in addition to using Microsoft's PSS as they were deemed better than Teams for certain use cases, but very few were seriously considering replacing use of Microsoft. A few customers used competitors' instead of some of Microsoft's productivity tools where they saw benefits, for example, Canva for whiteboards as it is viewed as better for design and collaboration.[248]

(c) Some customers we have spoken to said they use standalone productivity applications alongside Microsoft's PSS.[249] For example, one customer said they use Zoom alongside Microsoft 365 because their customers and partners prefer it for calls.[250]

(d) Some providers of standalone productivity applications told us that their products are frequently used alongside Microsoft's Office 365 applications.[251] For example, Salesforce said that customers may use Slack alongside Teams where they consider it offers differentiated functionality, such as using Slack for channel-based communication and Teams for voice and video calling.[252]

A.119 At times standalone providers have posed a potential competitive threat to Microsoft's PSS, eg Zoom and Slack in communications and collaboration software. However, when this occurs Microsoft is able to expand the range of applications, features, and functionalities included in its suites (such as by adding Teams to its PSS offering in response to competition from providers such as Zoom

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[247] Microsoft's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[248] Jigsaw Customer Research, 28 September 2026, page 44, paragraphs 193 and 194/
[249] [✂] response dated [✂] to questions in lieu of a call dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. Note of call with [✂] on [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[250] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[251] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[252] [✂] response dated [✂] to section 69 notice dated [✂].

and Slack) and distributing this across its customer base in PSS.[253] This ability to expand its PSS offering can limit the ability of standalone providers to grow, obtain scale, and develop into stronger competitors to Microsoft in PSS.

A.120 In principle, a customer could use products from multiple standalone providers as an alternative to Microsoft's PSS.[254] However, we have not seen evidence to date that this is common, and a customer attempting to do would need to overcome the costs associated with managing integrations between products from several providers of PSS we have identified above.

A.121 Overall, this evidence shows that providers of standalone productivity applications (such as Slack, Box, Zoom, and Dropbox) pose a weak competitive constraint to Microsoft's PSS.

Providers of AI features and functionalities

A.122 Microsoft submitted that it faces competition to Copilot in PSS from providers of AI Assistants, including Google (Gemini); OpenAI (ChatGPT); Anthropic (Claude); and Perplexity.[255] Microsoft said that these providers possess distinct capabilities and continue to innovate rapidly, such that they may influence customers' purchasing decisions regarding productivity software.[256] Microsoft told us that AI features are increasingly influencing organisational customers' purchasing decisions in a competitive and fast-moving market for productivity software, while customers can integrate their preferred AI tools into Microsoft's products through open interfaces and interoperability tools.[257]

A.123 We have considered whether providers of AI features and functionalities are a competitive constraint to Microsoft's position in PSS, for example by leading customers to switch away from Microsoft's PSS to make use of the AI features and functionalities offered by alternative providers.

A.124 Microsoft's internal documents identify a range of providers of AI features and functionalities (particularly Gemini, ChatGPT, and Claude) as competitive threats in AI-related services.[258] Other AI competitors (such as Glean and Canva) appear

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[253] For example, [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[254] For example, [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[255] Microsoft's response dated [✂] to section 69 notice dated [✂]. Microsoft's submission to the CMA [✂].

[256] Microsoft's response dated [✂] to section 69 notice dated [✂]. Microsoft's response dated [✂] to section 69 notice dated [✂]. and Microsoft's response dated [✂] to section 69 notice dated [✂].

[257] Microsoft's response dated [✂] to section 69 notice dated [✂].

[258] For example: Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂]to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice

in Microsoft's internal assessments but are referenced less frequently.[259] These documents indicate that Microsoft closely monitors developments among competing providers of AI features and functionalities, in particular their potential impact on customer adoption of AI-enabled productivity tools that may rival Microsoft's M365 Copilot Offerings.

A.125 However, although these providers are a potential competitive threat to Microsoft, the competitive constraint on Microsoft in relation to its PSS as a whole from these providers is still emerging.

A.126 Our provisional analysis shows that the overall use of the main providers of AI features and functionalities by UK organisational customers is increasing rapidly when considering both paid and unpaid users. Microsoft's M365 Copilot Offerings are more widely used ([3.5-4.0] million, July 2026) followed by Gemini for Workspace ([1.5-2.0] million, May 2026), Claude ([1.0-1.5] million, July 2026), and ChatGPT ([300,000-400,000], July 2026) in the most recent month of data currently available to us.[260] This is shown in Figure A.1 below.

Figure A.1: Monthly active users of selected providers of AI features and functionalities by UK organisational customers since January 2025

[✂]

Source: CMA analysis of: Microsoft's response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

A.127 Among customers that currently use AI features and functionalities, the evidence we have seen to date suggests that some use alternative providers alongside Microsoft's M365 Copilot Offerings, in some instances for different use cases.

(a) Our customer research shows that while Copilot is commonly used, particularly due to accessibility of the free version within the Microsoft ecosystem, many customers are also testing alternatives (including Claude, ChatGPT, and a wide range of others) for specific use cases and are keen to keep exploring the emerging capabilities.[261]

(b) [✂].[262]

dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂].

[259] Microsoft's internal document, [✂] to section 69 notice dated [✂].

[260] [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[261] Jigsaw Customer Research, 28 September 2026, page 49, paragraph 197.

[262] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂] [✂] response dated [✂] to section 69 notice dated [✂].

(c) One of Microsoft's internal documents indicates that, [✂].[263]

A.128 While organisations may use multiple providers of AI features and functionalities, the evidence we have seen to date suggests that customers benefit from using Microsoft's M365 Copilot Offering for productivity tasks where integrated with Microsoft products in PSS, as well as other digital activities. This integration is valued by customers and makes Microsoft's M365 Copilot Offering particularly attractive for Microsoft customers relative to other providers of AI features and functionalities.

(a) Microsoft's internal documents suggest that its M365 [✂].[264]

(b) Our customer research found that Microsoft's M365 Copilot Offerings are preferred by participants due to its tenant integration, while using alternative providers may increase IT complexity and raise concerns regarding data residency requirements.[265]

(c) Some customers told us that, although they had evaluated or trialled alternative AI assistants (including ChatGPT, Claude and Gemini) and considered these providers to offer stronger capabilities for particular tasks, they adopted the M365 Copilot Offerings for productivity due its integration with Microsoft products.[266]

(d) Some alternative providers of AI features and functionalities told us that, while customers may use their products for some productivity tasks (such as editing Word documents or managing work in Excel),[267] they expect to be used alongside Copilot as opposed to instead of, due to interoperability restrictions which Copilot does not face.[268]

(e) Microsoft's public resources on its M365 Copilot Offerings similarly emphasise the benefits of using, for example Agents for M365 Copilot, for existing customers, stating 'when you customize Microsoft 365 Copilot with agents and use actions and connectors to extend Copilot's skills and knowledge, you're taking advantage of the entire Microsoft 365 ecosystem to extend the reach of your apps, services, and data'.[269]

A.129 In addition, the strong adoption of M365 Copilot Offerings reflects the impact of Microsoft's commercial bundling practices in PSS. Copilot Chat is included as part

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[263] Microsoft's internal document, [✂] to section 69 notice dated [✂].
[264] For example: Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂]. Microsoft's internal document, [✂] to section 69 notice dated [✂].
[265] Jigsaw Customer Research, 28 September 2026, page 52, paragraph 206.
[266] Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[267] [✂] response dated [✂] to section 69 notice dated [✂].
[268] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[269] Microsoft, 'Copilot extensibility in the Microsoft 365 ecosystem', undated, accessed by the CMA on 10 September 2026. Agents, Actions, and Connectors in the Microsoft 365 Ecosystem | Microsoft Learn

of most Office/Microsoft 365 subscriptions and M365 Copilot is included with other applications in scope of the PSS digital activity in the highest-tier frontier suite (Microsoft 365 E7) since March 2026.[270] Microsoft's inclusion of the M365 Copilot Offerings to its PSS packages creates a barrier that other providers of AI features and functionalities must overcome to attract customers away from Microsoft, as Microsoft's commercial bundling practices mean that customers often perceive Microsoft's products to have little or no marginal cost when included in its PSS packages. Our Customer Research identified the perceived 'free' cost of Microsoft's Copilot Chat as an important benefit of using it as an AI assistant, with a few customers mentioning that the paid version (M365 Copilot) was offered at low initial cost within some licences.[271]

A.130 However, while the use of AI features and functionalities by organisations is growing quickly, the evidence we have seen to date shows that their overall use in the UK is currently limited relative to use of Microsoft's PSS as a whole. For example, the ONS found that around 35% of UK businesses with 10 or more employees reported using at least one AI technology in June 2026, increasing from around 12% since September 2023.[272] The [3.5-4.0] million monthly active users of Microsoft's M365 Copilot Offerings by organisational customers in July 2026 is a relatively small proportion of the [30-35] million monthly active users of Microsoft's Word, Excel, PowerPoint and Outlook applications at UK organisational customers in December 2025 (the latest month of data currently available to us).[273]

A.131 Given the early stages of adoption of the products by organisations, there is significant uncertainty as to how use of AI features and functionalities will evolve. For example, customers are testing multiple providers and experimenting with different use cases before deciding on wider deployment due to uncertainties around security and governance.[274] Our customer research shows that organisations will increase the use of AI in a staged and selective way through continued use of pilots and the testing of multiple alternatives will continue before scaling up given uncertainties around security and cost.[275]

A.132 Overall, this evidence shows that the use of AI features and functionalities by customers is still developing and there is significant uncertainty about how widely their products will be adopted by organisations in the UK. Consequently, the competitive constraint from alternative providers of AI features and functionalities

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[270] See sub-section 'Microsoft's M365 Copilot offerings', in section 'Productivity Software Suite' of Chapter 4 Digital Activities.
[271] Jigsaw Customer Research, 28 September 2026, page 52, paragraph 208.
[272] ONS, 'Artificial intelligence in UK businesses: 2023 to 2026', dated 20 July 2026, accessed by the CMA on 28 September 2026. Artificial intelligence in UK businesses - Office for National Statistics
[138] [✂] response dated [✂] to section 69 notice dated [✂].
[274] For example: Jigsaw Customer Research, 28 September 2026, pages 49, 52 and 54, paragraphs 197, 206 and 213-215. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[275] Jigsaw Customer Research, 28 September 2026, pages 49 and 52, paragraphs 199 and 205.

on Microsoft in relation to its PSS as a whole from these providers is still emerging. We therefore consider the extent to which providers of AI features and functionalities might become a sustained competitive threat to Microsoft and whether they are likely to materially impact Microsoft's existing position in PSS as part of our forward-looking assessment below.

Expected and foreseeable developments in PSS

A.133 As we have described above, Microsoft's PSS is substantially larger than any rival, and this position has remained stable for at least the past five years while there are also significant barriers to competition which reinforce Microsoft's position. We have considered current evidence on market developments and evidence on the expected and foreseeable developments which may affect Microsoft's market power over the next five years.

A.134 Microsoft submitted that competition in PSS is likely to intensify over the next five years, particularly as developments in generative AI continue to accelerate. Microsoft told us that both established providers and new entrants are developing products that compete directly with its offerings. In particular, Microsoft identified Google (which integrates Gemini into Google Workspace), OpenAI (which is building document, spreadsheet and presentation capabilities directly within ChatGPT), Anthropic (which is developing AI agents capable of performing end-to-end productivity tasks), the continued expansion by established providers of PSS (such as Salesforce and Zoom), and the emergence of AI-native alternatives capable of creating, editing and processing standard productivity content. [276]

A.135 Microsoft said that these developments represent a material competitive challenge to its position in PSS. In particular, Microsoft submitted that generative AI is lowering barriers to entry and may shift user activity away from traditional productivity applications towards AI assistants and agents. Microsoft told us that it must continue to innovate in order to retain and attract customers in PSS by investing heavily in AI across its productivity offerings through Copilot capabilities in Microsoft 365 and the development of AI agents. Microsoft submitted that these investments are intended to ensure its products remain competitive as customer demand increasingly shifts towards AI-enabled experiences. [277]

A.136 Our assessment of foreseeable market developments considers whether emerging technology, innovation or new entrants are likely to have a material negative impact on Microsoft's market position. In PSS, we have considered whether:

[276] [✂] response dated [✂] to section 69 notice dated [✂]. See also: Microsoft's submission to the CMA [✂]. Microsoft's response dated 4 June 2026 to invitation to comment dated 14 May 2026, paragraph 4.1 – 4.4. Microsoft.pdf
[277] Microsoft's response dated [✂] to section 69 notice dated [✂].

(a) Providers of productivity suites and standalone productivity applications could strengthen their offering through the integration of AI features and functionalities (for example, Google including Gemini in Workspace or Salesforce embedding Einstein AI in Slack) such that they become a strong competitive constraint on Microsoft and induce customers to switch away from Microsoft's PSS.

(b) Providers of AI features and functionalities expanding their offerings to include productivity functionalities (for example, OpenAI's addition of document, spreadsheet and presentation capabilities directly within ChatGPT) or developing agentic AI that enables users to complete productivity tasks without relying on traditional productivity applications (for example, Anthropic's Claude creating documents and presentations from natural language prompts) such that they become a strong competitive constraint on Microsoft and induce customers to switch away from Microsoft's PSS.

A.137 As set out above, while customers' adoption of AI features and functionalities is growing quickly, it remains substantially below the use of Microsoft's PSS. Furthermore, customers are likely to continue trialling and testing AI features and functionalities from multiple providers before deciding on wider deployment, and use is likely to increase in a staged and selective way given uncertainties around security, governance and cost. As a result, it is uncertain whether providers of AI features and functionalities will develop into a sustained and significant competitive threat to Microsoft's PSS in the next five years.

A.138 Alternative providers of PSS told us that, despite plans to develop their PSS offering to provide greater AI functionality which may offer opportunities, they did not expect to compete more strongly with Microsoft over the next five years due to the barriers to effective competition they face in PSS.[278] This includes Microsoft's commercial bundling practices that advantage its M365 Copilot Offerings, the integration of those Offerings with Microsoft's PSS and other products, limitations to interoperability between Microsoft products and third-party applications, and other competitive advantages that Microsoft benefits from in PSS (such as its large base of existing customers).

A.139 Alternative providers of AI features and functionalities also did not expect to compete more strongly with Microsoft, citing similar reasons to alternative providers of PSS for this, including Microsoft's commercial bundling practices, its control over integration and the user interface, and its distribution advantages.[279]

[278] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[279] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

One provider of AI features and functionalities also noted the importance of interoperability and open protocols for AI agents as important conditions for competition to remain focused on product quality in coming years.[280]

A.140 These competitive advantages available to Microsoft are evident in the strong adoption of M365 Copilot Offerings by organisations in the UK, which is substantially higher than other providers of AI features and functionalities (as set out above). Resellers expect customers to continue using Copilot because of its integration with the Microsoft ecosystem. These resellers also considered that, as Copilot and agentic AI become embedded in everyday productivity workflows, reliance on Microsoft will deepen, making switching less likely and increasing switching costs.[281]

A.141 Microsoft's partnerships with OpenAI and Anthropic means that users of its M365 Copilot Offerings can obtain the benefits of those AI models without purchasing AI features and functionalities from alternative providers. For example, a Microsoft internal document [✂].[282] These commercial relationships with OpenAI and Anthropic may reduce their incentive to compete directly with Microsoft in PSS. Customers can also install add-ins for ChatGPT or Claude to use them alongside Microsoft productivity applications (which means organisations can use them as a complement to Microsoft's PSS offering, rather than a replacement for it).

A.142 As a result of these competitive advantages and Microsoft's investments in AI features and functionalities, Microsoft appears well placed both to encourage adoption of its M365 Copilot Offerings as well as to maintain its position in PSS as organisations increasingly use of AI features and functionalities within PSS. For example:

(a) A Microsoft internal document suggests that [✂].[283]

(b) A Microsoft internal document titled [✂].[284] The document suggests that Microsoft views widespread adoption of its M365 Copilot Offerings as strategically important to maintaining its position as user interaction shifts from traditional applications to AI-enabled services. In this context, the greater use of Microsoft's M365 Copilot Offerings by UK organisational

[280] [✂] response dated [✂] to section 69 notice dated [✂]. [✂].

[281] [✂] noted that AI assistants (Microsoft 365 Copilot and agentic AI) are becoming embedded in everyday productivity, which will deepen reliance on the suite and raise switching costs further. Copilot and agentic AI is likely to deepen reliance on the Microsoft ecosystem over the next few years. [✂] response dated [✂] to voluntary request [✂].[✂] noted that AI and Copilot adoption will increase focus on security and governance, meaning customers are likely to optimise Microsoft 365 estates rather than switch rapidly, although AI value, data control and cost may prompt reassessment of alternatives. [✂] response dated [✂] to voluntary request for information [✂]. [✂] noted that from a customer's perspective it is easier to use Copilot because it is natively integrated, and was not aware of add-ins that rival providers can utilise to integrate with Microsoft. Note of call with [✂] on [✂].

[282] Microsoft's internal document, [✂] to section 69 notice dated [✂].

[283] Microsoft's internal document, [✂] to section 69 notice dated [✂].

[284] Microsoft's internal document, [✂] to section 69 notice dated [✂].

customers is consistent with the aim of increasing adoption as AI changes the ways users interact with its PSS applications.

Market power assessment - Security Software

A.143 We have considered Microsoft's market power in Security Software by considering evidence on:

(a) Microsoft's share of supply in Security Software;

(b) Barriers to competition in Security Software;

(c) Competition between Microsoft and alternative providers of Security Software; and

(d) The impact of expected and foreseeable developments on Microsoft's market position in Security Software.

Microsoft's share of supply in Security Software

A.144 In this section we set out the evidence we have seen to date on Microsoft's share of supply in Security Software, including our analysis of the size and position of Microsoft relative to alternative providers of Security Software.

A.145 In Chapter 4 of this report, we explain that Microsoft's Security Software comprises IAM (Entra and Active Directory), device management (Intune), and threat detection (Defender). We also explain that Security Software includes certain functionalities of Purview, Agent 365 and Security Copilot.

A.146 The shares of supply are based on revenue data we requested from Microsoft for Entra, Intune and Defender, as well as the largest alternative providers. As Entra, Intune and Defender are included in Microsoft 365 E3-E7 suites – and [✂] – we have approximated Microsoft's total revenues using a methodology explained in Appendix C Market Outcomes.

A.147 Google was not able to provide us with [✂].[285] We have therefore only included Google's revenues from standalone security software sales.

A.148 The analysis shows that Microsoft has had a material and stable share of supply in Security Software over the last six years. Table A.2 shows that, based on revenue, Microsoft has consistently been the largest provider of Security Software to organisational customers in the UK over the period 2020 to 2025:

[285] Google submitted that 'In the ordinary course of business, Google Cloud reports revenue for [✂]. Google's response dated [✂] to CMA follow-up questions dated [✂], following the section 69 notice dated [✂]; Google submitted that 'Google Cloud [✂].' Google's response dated [✂] to CMA follow-up questions dated [✂], following the section 69 notice dated [✂].

(a) Microsoft's share of supply was between [50-60]% and [60-70]% over the six year period.

(b) Okta (which is only active in IAM) was the next largest alternative provider, with a share of supply of between [5-10]% and [10-20]% over the same period.

Table A.2: Security Software shares of supply based on revenue from organisational customers in the UK (2020 – 2025)

Provider	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*
Microsoft	[50-60]%	[50-60]%	[50-60]%	[50-60]%	[50-60]%	[60-70]%
Okta	[5-10]%	[5-10]%	[10-20]%	[10-20]%	[5-10]%	[5-10]%
CrowdStrike	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[5-10]%
Ping Identity	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[5-10]%
Palo Alto Networks	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Amazon	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
SentinelOne	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Trend Micro	[10-20]%	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%
BeyondTrust	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
IBM	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Saviynt	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Cloudflare	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Cisco	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
JumpCloud	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Broadcom	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Thales	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Google	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Zscaler	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%

Source: CMA analysis of data received from market participants in response to section 69 notices.
Notes: These shares of supply have been constructed by aggregating revenue data from three Security Software product areas – IAM (eg Entra ID), threat detection (eg Defender) and device management (eg Intune). Active Directory, Purview, Agent 365 and Security Copilot are excluded from our analysis as we were unable to source comparable revenue data across market participants. Microsoft's share of supply includes an apportionment to account for revenue relating to Security Software that is included in bundles. Google's share of supply is calculated using revenues of standalone security software sales only (as we were unable to estimate the proportion of bundled revenue relating to Security Software). Shares may not sum to 100% due to rounding.

A.149 On a global basis, Microsoft also accounts for a substantial share of supply in Security Software of between [30-40]% and [40-50]% in the period from 2020 to 2025 (see Appendix C Market Outcomes for further details).

A.150 As discussed later in this section, customers also told us they often used Security Software from alternative providers alongside Microsoft's Security Software. For example, a customer may use the IAM product of an alternative provider to manage identity for non-Microsoft applications and on-premises directories, while

retaining Entra ID for Microsoft workloads. In short, the Security Software of Microsoft and alternative providers are often complementary, rather than fully substitutable.

A.151 Our estimated shares of supply reflect the scope of our investigation and may differ from shares of supply that include a wider set of security software. However, we note that our findings are broadly consistent with evidence in Microsoft's internal documents which show that Microsoft is the largest supplier of security software. For example, Microsoft's internal documents report that it is a market leader in security software:

(a) A strategy paper stated that '[✂]'.[286]

(b) A strategic planning document estimated that Microsoft's security revenue in FY26 [✂].[287]

A.152 Overall, our analysis shows that Microsoft has consistently been substantially larger than alternative providers of Security Software.

Barriers to competition in Security Software

A.153 In this section, we set out the factors that influence customer choice and act as barriers to effective competition in Security Software, thereby reinforcing Microsoft's position. These barriers are:

(a) Limitations to integration and interoperability faced by alternative providers.

(b) Commercial bundling practices.

(c) Network effects.

(d) Customer-side frictions.

A.154 Based on the evidence we set out below, these barriers to competition mean that customers find it costly and disruptive to switch away from Microsoft's Security Software, making customers unwilling to change provider and weakening the competitive constraint to Microsoft in Security Software. These factors also affect potential new customers, making them more likely to choose Microsoft's Security Software.

[286] Microsoft internal document, response dated [✂] to section 69 noticed dated [✂].
[287] Microsoft's internal document, response dated [✂] to section 69 notice dated [✂].

Limitations to integration and interoperability faced by alternative providers

A.155 Microsoft submitted that customers were more likely to use Microsoft's security software if they use other Microsoft solutions, and that they typically evaluated which security software would meet their organisational requirements after selecting the solutions, such as productivity software, that they want the security product to protect.[288]

A.156 Microsoft submitted that its products were interoperable through commonly used mechanisms such as documented APIs, integration hooks and platform extensibility.[289] It told us that Microsoft 365 and related workloads are designed to accept third-party security products, and customers can deploy non-Microsoft endpoint protection, threat detection or monitoring products as their primary security controls.[290] Microsoft also told us that whether third-party security software complements or replaces the functionality of Microsoft's security products varies depending on the scenario and the resources protected.[291]

A.157 Microsoft also noted some limitations to interoperability.[292] For example, a third-party IAM tool can only be used alongside Entra ID to meet security and performance requirements on Microsoft cloud services.[293] Microsoft submitted that this design is standard across major cloud platforms, not unique to Microsoft, and reduces latency which would harm the user experience and increase the scope for security attacks.[294] Microsoft submitted that deploying a third-party IAM solution might require configuration alongside Microsoft Entra ID.[295] Microsoft also told us that while third party IAM could work alongside Entra ID, it was Entra ID that ultimately authorised the user.[296]

A.158 The integration within functionalities across Microsoft's Security Software, as well with other products in its Business Software Ecosystem, is an important driver of choice in Security Software.[297] For example, our customer research identified that the level of integration between Microsoft's Security Software, and between Microsoft's Security Software and Microsoft's PSS, was one of the most common benefits of using Microsoft's Security Software.[298] Microsoft submitted that a key strength of Microsoft's offering is the strong technical links across its Security

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[288] Microsoft's response dated [✂] to section 69 notice dated [✂].
[289] Microsoft's response dated [✂] to section 69 notice dated [✂].
[290] Microsoft's response dated [✂] to section 69 notice dated [✂].
[291] Microsoft's response dated [✂] to section 69 notice dated [✂].
[292] Microsoft's response dated [✂] to section 69 notice dated [✂].
[293] Microsoft's response dated [✂] to section 69 notice dated [✂].
[294] Microsoft's response dated [✂] to section 69 notice dated [✂].
[295] Microsoft's response dated [✂] to section 69 notice dated [✂].
[296] Microsoft's response dated [✂] to section 69 notice dated [✂].
[297] Several customers told us that integration within Microsoft's Security Software and its products in other digital activities influenced their purchasing decisions. Note of call with [✂] on [✂]. [✂] response dated [✂] to questions in lieu of a call [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[298] Jigsaw Customer Research, 28 September 2026, page 71, paragraph 267.

Software products, and that: 'Microsoft Entra ID, Intune, and Defender are intended to function as complementary layers… This design reduces fragmentation between traditionally separate security domains and enables a coordinated response to risks that span users, devices, and applications.'[299]

A.159 Some alternative providers and customers reported having fewer issues integrating and using third-party products with Microsoft's products.[300] However, the evidence we have seen to date indicates that alternative providers of Security Software can face limitations to integration and interoperability with Microsoft's products. These include limitations related to depth and functionality when interacting with Microsoft's Security Software, as well as with other Microsoft products across its Business Software Ecosystem.

A.160 First, alternative providers of Security Software told us that the functionality, performance and ease of integration of their products may be reduced as a result of unequal access to Microsoft controlled operating systems and productivity layers:

(a) Alternative providers told us that Microsoft's Security Software is closely integrated with its wider ecosystem – including Windows OS, SQL Server and Azure – and it is difficult for third parties to replicate this.[301]

(b) Alternative providers submitted that publicly available APIs[302] do not always allow them to exchange information with Microsoft products in a way that replicates these native integrations.[303] For example, some of these alternative providers explained that third-party access is subject to rate limits and other factors that Microsoft controls.[304]

(c) Alternative providers submitted that they lack equivalent access to telemetry[305] data generated by Microsoft's Security Software products – or within Microsoft's PSS, Windows OS, Windows Server, SQL Server – and

[299] Microsoft's response [✂] to section 69 notice 26 May 2026, [✂].
[300] For example: [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[301] For example: [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[302] An API is a set of rules or protocols that enables software applications to communicate with each other to exchange data, features and functionality. IBM.com, 'What is an API?', dated 8 May 2026, accessed by the CMA on 10 September 2026 What Is an API (Application Programming Interface)? | IBM.
[303] [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[304] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].
[305] Telemetry is the automated collection and transmission of data and measurements from distributed or remote sources to a central system for monitoring, analysis and resource optimisation. IBM.com, 'What is telemetry?', dated 13 October 2025, accessed by the CMA on 15 July 2026. What Is Telemetry? | IBM.

this can be less timely and less complete.[306] One of these providers explained this directly affects the functionality, visibility and competitiveness of independent security products.[307]

(d) One alternative provider gave an example of its Data Loss Prevention (DLP) AI agents experiencing several interoperability issues, including slowness or freezing, as well as interference from Microsoft Defender when the [✂] tried to perform inspection operations on Microsoft applications.[308]

(e) Microsoft's internal documents indicate that Microsoft views [✂].[309]

A.161 Second, alternative providers told us that integration and interoperability issues limited their ability to compete with Microsoft's identify platform (Entra ID and Active Directory):

(a) Alternative providers submitted certain functionalities are limited for third-party IAM software and this can impact on the user experience.[310] For example, one alternative provider highlighted that switching or parallel use can result in the loss of capabilities that Microsoft reserves for customers using its own security software (eg being able to use Windows Hello without a password).[311]

(b) Some alternative providers submitted that Microsoft requires third-party IAM providers to use specialised and proprietary integration protocols, as opposed to industry standards, making it more costly to integrate with Microsoft environments and match the Entra experience.[312]

(c) Alternative providers also submitted that Microsoft's Conditional Access policies create interoperability restrictions as they require the use of Entra ID to secure applications like Microsoft 365.[313]

(d) One alternative provider told us that Microsoft requires third party AI agents to be registered with Entra ID in order to be brought under Agent 365 management and that this requires customers choosing third party AI agents

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[306] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response [✂] to section 69 notice dated [✂].
[307] [✂] response dated [✂] to section 69 notice dated [✂].
[308] [✂] response dated [✂] to section 69 notice dated [✂].
[309] Microsoft's internal document, response to [✂] to section 69 notice dated [✂].
[310] For example: [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[311] [✂] response dated [✂] to section 69 notice dated [✂].
[312] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[313] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

to accept weaker security and auditability over its own data compared with when a customer uses Microsoft's AI agents.[314]

(e) Some alternative providers explained that additional integration complexity when using a third-party product can discourage customers from switching away from Microsoft's Security Software.[315]

A.162 As a result of the above integration and interoperability issues, customers are less likely to switch away from Microsoft's Security Software, which weakens the competitive constraint alternative providers of Security Software pose on Microsoft:

(a) Customers in our customer research said that the 'joined up' nature of Microsoft's Security Software, and the coupling of Entra / Active Directory with Windows, acted as barriers to switching away from Microsoft.[316]

(b) Some customers also highlighted that integration across productivity, identity and security layers (including Active Directory, Entra ID, Defender and Microsoft 365) created barriers to switching, especially where interoperability and data portability were limited.[317]

(c) One customer explained that it retained Defender, despite also using Sophos, in part because Defender had access to Microsoft's telemetry data.[318]

(d) Some customers told us that switching away from Active Directory would be particularly challenging given strong technical links and the cost of migration.[319]

A.163 Overall, the evidence we have seen to date shows that limitations to integration and interoperability with Microsoft's Security Software and products in its wider Business Software Ecosystem weaken the competitive constraint to Microsoft from alternative providers of Security Software.

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[314] [✂] response dated [✂] to section 69 notice dated [✂].
[315] [✂] response [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[316] Jigsaw Customer Research, 28 September 2026, page 74, paragraph 277-278
[317] Anonymous 3's response dated 22 June 2026 to invitation to comment dated 14 May 2026, Q5. Anonymous_3.pdf; Anonymous 2's response dated 4 June 2026 to invitation to comment dated 14 May 2026, paragraph 1.2, page 1. Anonymous_2.pdf
[318] Note of call with [✂] on [✂].
[319] Note of call with [✂] on [✂]. Note of call with [✂] on [✂].

Commercial bundling practices

A.164 Microsoft submitted that its security software products can be purchased as part of a suite or on a standalone basis.[320] It said that suites are standard, and lower prices and complexity for companies.[321]

A.165 Microsoft submitted that customers benefit from suites incorporating complementary features such as security. It considered that the benefits include simplifying choice through pre-composed, integrated packages rather than overwhelming customers with 'à-la-carte' complexity and reducing effective prices, which intensifies price competition, incentivizes continued innovation and increases product differentiation.[322]

A.166 Microsoft's internal documents also indicate that Microsoft's strengths include [✂].[323]

A.167 Evidence we have seen so far suggests that customers value purchasing a range of applications, features, and functionalities as part of Microsoft's Security Software.[324] The commercial linkages between Microsoft products are an important factor in a customer's initial choice of Microsoft as a Security Software provider. One customer told us that bundles of security software from single providers have commercial advantages,[325] and another customer told us that bundles can be more cost effective and easier to implement.[326]

A.168 However, we have also received evidence that Microsoft's commercial bundling weakens the competitive constraint on Microsoft in Security Software. This occurs where Microsoft's commercial bundling practices influence the choice of Microsoft's existing customers and act as a barrier to competition for alternative providers of Security Software.

A.169 First, Microsoft's commercial bundling practices can influence customers' purchasing decisions as products included within Microsoft's bundles are perceived as being available at little or no additional cost, reducing the willingness and incentive of customers to purchase products from alternative providers of Security Software:

(a) Our customer research found that the inclusion of Microsoft Defender, Entra ID, Intune and Purview in bundles made it very difficult, on a commercial

[320] Microsoft's submission to the CMA dated [✂].
[321] Note of meeting with Microsoft on [✂].
[322] Microsoft's response dated [✂] to section 69 notice dated [✂].
[323] Microsoft's internal document, response to [✂] to section 69 notice dated [✂].
[324] Jigsaw Customer Research, 28 September 2026, page 71, paragraph 267
[325] Note of call with [✂] on [✂].
[326] Note of call with [✂] on [✂].

basis, to justify third-party alternatives unless there was a particular capability gap.[327]

(b) Participants in this research also often said there was 'no point in paying twice' for a third-party product; that a key driver for upgrading to an E5 license was the availability of all Microsoft security software within this tier; and that the use of Microsoft Defender could be a 'passive choice' that followed from its inclusion in a licensing bundle.[328]

(c) One customer said that, even where a third-party product might be a better fit for a specific need, existing licensing, tight integration and the fact it is 'already there' often leads to Microsoft becoming the default choice.[329] A different customer said that the main reason for purchasing Microsoft's security software was that it was bundled into existing Microsoft licensing agreements.[330] Another told us they purchase bundles that contain security software they do not fully use.[331]

(d) Alternative providers submitted that Microsoft's commercial bundling practices can create the impression that Microsoft's Security Software is 'zero cost', and this can make it harder for them to compete.[332] One of these alternative providers told us that Microsoft had progressively incorporated former standalone identity, endpoint management, security and AI capabilities into Microsoft 365 bundles for a small increase in price.[333]

A.170 Second, Microsoft's commercial bundling practices can create substantial switching costs when customers move to alternative providers of Security Software due to the duplication of license costs:

(a) Alternative providers submitted that Microsoft's bundling of security capabilities into broader Microsoft 365 enterprise discourages switching as customers need to pay twice – once for the Microsoft bundle, and again for the third-party security software.[334]

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[327] Jigsaw Customer Research, 28 September 2026, page 73-74, paragraph 276.
[328] Jigsaw Customer Research, 28 September 2026, pages 66 and 70, paragraphs 250 and 266.
[329] Anonymous 3's response dated 22 June 2026 to invitation to comment dated 14 May 2026, Q4, page 2. Anonymous_3.pdf
[330] Note of call with [≫] on [≫].
[331] [≫] response dated [≫] to questions in lieu of a call [≫]
[332] [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice [≫]; [≫] response dated [≫] to section 69 notice dated [≫].
[333] [≫] response dated [≫] to section 69 notice dated [≫].
[334] [≫] response [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫].

(b) Another alternative provider submitted that Microsoft's discounting structure was 'designed specifically to eliminate the competitive threat'.[335]

(c) One customer told us that it had made commitments to future use of Microsoft products in order to secure discounts on the products it currently uses, and it would incur a penalty if it chose to switch away from Microsoft.[336]

A.171 Overall, the evidence we have seen shows that Microsoft's commercial bundling weakens the competitive constraint from alternative providers. As Microsoft's Security Software is often perceived as having little or no marginal cost, this encourages adoption of additional Microsoft products and this can increase switching costs and make it more difficult for alternative providers to attract customers away from Microsoft.

Network effects

A.172 The widespread adoption of Microsoft's Security Software may also create indirect network effects, as Microsoft's Security Software customers benefit from a large number of third-party integrations. For example, Microsoft markets its Security Store as offering more than 100 third-party solutions from ecosystem partners,[337] and Microsoft's internal documents indicate that [✂].[338]

A.173 Microsoft told us that it has partnered with tens of thousands of UK companies,[339] including those that have, via partnership with Microsoft, built apps that integrate with and enhance aspects of Microsoft's PSS and Security Software, and have, as a result, developed a base of major customers.[340]

A.174 The presence of these indirect network effects may also mean that some customers are more reluctant to switch away from Microsoft's Security Software. For example, one customer told us than Entra ID was the default or best supported identity provider for integration with third-party SaaS products.[341]

A.175 Overall, these indirect network effects could make switching away from Microsoft's Security Software less attractive to customers and weaken the competitive constraint from alternative providers that lack a comparable marketplace and/or cannot replicate the same volume and variety of third-party applications.

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[335] [✂] response dated [✂] to section 69 notice dated [✂].
[336] Note of call with [✂] on [✂].
[337] Microsoft, Microsoft Security Store: Now Generally Available, 18 November 2025, accessed by the CMA on 28 September 2026, Microsoft Security Store: Now Generally Available | Microsoft Community Hub
[338] Microsoft's internal document, response to [✂] to section 69 notice [✂].
[339] Microsoft's submission to the CMA dated [✂].
[340] Microsoft's submission to the CMA dated [✂].
[341] Note of call with [✂] on [✂].

Customer-side frictions

A.176 Microsoft submitted that customers can switch between individual security solutions and need not replace all Microsoft security products in a single step, and switching typically occurs through parallel operation and incremental transition.[342] It also told us that customers have 'the ability to mix and match if they so choose and if they find sufficient value from the other solutions',[343] and that discounts of [✂] were offered to UK customers including for security software 'in the context of significant competitive pressure'.[344] Microsoft also told us that customers valued the ability of Microsoft security products to 'operate consistently to other Microsoft software such as by offering familiar user experiences'.[345]

A.177 While we have seen some evidence that suggests Microsoft's existing customers can migrate to alternative providers of Security Software without experiencing significant challenges,[346] evidence seen to date shows that Microsoft's existing customers face material barriers to switching and that, in particular, the overall costs – as well as the risks associated with the process – of switching away from Microsoft act as a disincentive to do so.

A.178 First, moving away from Microsoft's Security Software requires training users and administrators on how to use alternative providers' Security Software, and this can represent a significant switching cost:

(a) Our customer research identified that, given the widespread familiarity with Microsoft's Security Software, it has become increasingly difficult for in-house IT teams to work with alternative security software and that, while additional training was an option, some businesses could not see sufficient benefit in pursuing alternatives.[347]

(b) Some alternative providers also told us that retraining staff to use new security software was a cost to switching.[348]

(c) One alternative provider observed that there was often a degree of administrative teams and other personnel resisting change to business processes built around Microsoft products.[349]

A.179 Second, concerns around the risks of transitioning to an alternative provider of Security Software can deter customers from switching:

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[342] Microsoft's response dated [✂] to section 69 notice dated [✂].
[343] Microsoft's response dated [✂] to section 69 notice dated [✂].
[344] Microsoft's response dated [✂] to section 69 notice dated [✂].
[345] Microsoft's response dated [✂] to section 69 notice dated [✂].
[346] For example: Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[347] Jigsaw Customer Research, 28 September 2026, page 74, paragraph 279
[348] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[349] [✂] response dated [✂] to section 69 notice dated [✂].

(a) Some customers raised concerns around the deployment of security software from alternative providers, regarding audits and compliance, and so were not actively considering switching.[350]

(b) One customer explained that using alternatives to Microsoft would involve risk, and that unpicking the current environment would be time-consuming and security software must remain in place.[351]

(c) Alternative providers submitted that switching may incur operational risks, with customers cautious about any change in their security software provision that could interrupt access or risk gaps in protection during transition.[352]

(d) One alternative provider highlighted that migrating from one IAM platform to another is a complicated process that might last over a year.[353]

A.180 Third, switching Security Software can involve additional implementation and management costs that can act as a barrier:

(a) Our customer research identified that Microsoft's security solutions made security management and policy centralisation easier for some organisations, and that choosing a non-Microsoft solution for endpoint was often seen as not being worth the extra effort to manage.[354]

(b) Another customer told us that its strategic direction is to consolidate onto the Microsoft security stack where possible, as this would reduce both cost and operational complexity.[355]

(c) One customer told us that they expect high data transfer costs to be associated with any transition away from Purview, and that they would be likely to retain some Microsoft products so that they can avoid such exit costs.[356]

(d) Alternative providers submitted that customer switching can involve significant time, cost and effort.[357]

(e) Microsoft's internal documents also reference a Gartner report that '75% of organisations globally plan to consolidate the number of security vendors due

[350] Jigsaw Customer Research, 28 September 2026, page 74, paragraph 280
[351] Note of call with [≫] on [≫].
[352] [≫] response dated [≫] to section 69 notice dated [≫]. [≫] response dated [≫] to section 69 notice dated [≫].
[353] [≫] response dated [≫] to section 69 notice dated [≫].
[354] Jigsaw Customer Research, 28 September 2026, page 71, paragraph 268-269
[355] Note of call with [≫] on [≫].
[356] Note of call with [≫] on [≫].
[357] [≫] response dated [≫] to section 69 notice dated [≫]. [≫] response dated [≫] to section 69 notice dated [≫]. [≫] response dated [≫] to section 69 notice dated [≫]. [≫] response dated [≫] to section 69 notice dated [≫].

to increase dissatisfaction with operational inefficiencies and the lack of integration in a heterogeneous security stack'.[358]

A.181 Overall, the evidence we have seen to date shows that Microsoft's existing customers face additional barriers that can deter them from using alternative providers of Security Software. These costs include the need to retrain staff and manage complex data migration requirements, while incurring risks during a transition period. Taken together, this can mean that switching away from Microsoft can be costly and disruptive, making customers less willing to change provider and weakening the competitive constraint on Microsoft in Security Software.

Competition between Microsoft and alternative providers of Security Software

A.182 This section sets out further evidence on the strengths of individual providers in Security Software and the competitive constraint they place on Microsoft.

A.183 Microsoft submitted that Google was its most significant competitor across all digital activities, [359] and that CrowdStrike, Palo Alto Networks, Okta and Ping Identity were some of its rival providers across Security Software.[360] Microsoft told us that customers can and do use point solutions and specialist applications, and that competition was not limited to providers with productivity suites or other offerings that spanned multiple product categories.[361]

A.184 Google is the only alternative provider that offers security software alongside a productivity software suite. We therefore consider Google separately from other alternative providers.

A.185 Other alternative providers either offer a range of security software (eg BeyondTrust, CrowdStrike, Palo Alto Networks) or specialise in one area of security software (eg Okta and Ping Identity in IAM), and we consider these two groups separately. These alternative providers often offer either a complementary product / suite of products to Microsoft or cater to a different type of customer with specific set ups (eg 'hybrid environments').[362]

Competition from Google's Security Software

A.186 Google sells security capabilities through Google Workspace – where enterprise editions include security, compliance, endpoint management and data protection

[358] Microsoft internal document, response to [✂] to section 69 notice dated [✂].
[359] Microsoft's response dated [✂] to section 69 notice dated [✂].
[360] Microsoft's response dated [✂] to section 69 notice dated [✂].
[361] Microsoft's response dated [✂] to section 69 notice dated [✂].
[362] We use the term 'hybrid environments' when discussing Security Software to describe customers that operate across a mix of operating systems, cloud providers and on-prem (as distinct from customers who are more reliant on Microsoft's Business Software Ecosystem).

features. Google has recently widened its standalone security portfolio within Google Cloud including Mandiant (threat intelligence acquired in September 2022), as well as Wiz (a cloud security platform and March 2026 acquisition).[363]

A.187 As already set out above, and in line with Microsoft's own submissions, customers' choice of security software is related to their choice of other products, including PSS. Therefore, the strength of the constraint that Google imposes on Microsoft in Security Software is related to the strength of its PSS offer. Elsewhere in this report, we provisionally find that Google Workspace is a weak alternative to Microsoft's PSS.

A.188 Google offers a limited constraint at the Security Software level once customers have already chosen products from within Microsoft's wider Business Software Ecosystem:

(a) Google submitted that there are limited competitive interactions between Google and Microsoft's Security Software products. Google's Security Software products embed threat detection and enforcement capabilities directly into the cloud infrastructure and are generally available on a standalone basis to allow for flexible, multi-vendor integration, which benefits customers with a heterogeneous IT environment. Conversely, Microsoft's Security Software products have historically been designed to support predominantly Microsoft environments.[364]

(b) Google submitted that it can only compete effectively for certain [✂] customer groups, ie 'digital natives' and a [✂] sub-set of organisational customers that are able to switch away from Microsoft to adopt a 'best-of-breed' security strategy.[365] It said that Microsoft's Security Software is typically used by traditional enterprises with a broader reliance on Microsoft's BSE [✂].[366]

(c) Microsoft's internal documents describe [✂].[367]

(d) Industry reports do not include Google in their list of notable players in key security segments such as IAM, threat detection or endpoint protection.[368]

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[363] Cloud.Google.com, 'Welcoming Wiz to Google Cloud: Redefining security for the AI era', accessed by the CMA on 11 September 2026. Welcoming Wiz to Google Cloud: Redefining security for the AI era | Google Cloud Blog; Cloud.Google.com, 'Explore our products', accessed by the CMA on 11 September 2026. Security and identity products | Google Cloud.

[364] Google's response dated [✂] to section 69 notice dated [✂].

[365] Google's response dated [✂] to section 69 notice dated [✂].

[366] Google's response dated [✂] to section 69 notice dated [✂].

[367] Microsoft internal document, response to [✂] to section 69 notice dated [✂].

[368] IDC MarketScape: Worldwide Integrated Solutions for Identity Security 2025 Vendor Assessment, 2025, accessed by the CMA on 7 October 2026, idcdocserv.com/US52037224e_Microsoft; Microsoft.com, Microsoft named a Leader in the

A.189 Even where customers have switched to Google, they often use Microsoft's security software alongside Google products:

(a) One customer told us that they used Defender, as well as Wiz and Google Managed Security service, as part of its security lineup.[369]

(b) Another customer told us that, although it was moving away from Microsoft to Google 'as much as possible', there were specific security use cases where they were retaining Microsoft products to reflect their needs as a regulated institution'.[370]

(c) [✂]. [371] Google stated that it [✂] with independent third-party software providers [✂].[372]

(d) Google submitted that its enterprise customers often use Active Directory and Entra ID, and that [✂] of the largest organisational customers (ie those with over 25,000 user licenses) use Active Directory and Entra ID due to their historical reliance on Windows infrastructure and/or their inclusion in one of Microsoft's enterprise software bundles.[373]

(e) Google submitted that, for example, organisations with an underlying Microsoft infrastructure that are migrating to the cloud typically retain [✂], given its tight integration with Microsoft's ecosystem, while simultaneously deploying third-party solutions (such as [✂]) for data held in non-Microsoft cloud or on-premises environments.[374]

A.190 Overall, this evidence shows that, partly as a result of it being a weak competitive constraint in PSS, Google provides a weak competitive constraint to Microsoft in Security Software.

Gartner Magic Quadrant for Access Management for the ninth consecutive year, 21 November 2025, accessed by the CMA on 30 September 2026, Microsoft named a Leader in the Gartner® Magic Quadrant™ for Access Management for the ninth consecutive year | Microsoft Security Blog; Microsoft.com, Microsoft named a Leader in the IDC MarketScape for XDR, 2 October 2025, accessed by the CMA on 7 October 2026. Microsoft named a Leader in the IDC MarketScape for XDR | Microsoft Security Blog; Microsoft.com, Microsoft named a Leader in the 2023 Gartner Magic Quadrant for Endpoint Protection Platforms, 12 January 2024, accessed by the CMA on 30 September 2026. Microsoft is a Leader in the 2023 Gartner® Magic Quadrant™ for Endpoint Protection Platforms | Microsoft Security Blog.

[369] Note of call with [✂] on [✂].

[370] Note of call with [✂] on [✂].

[371] [✂] response dated [✂] to section 69 notice dated [✂].

[372] Google's response dated [✂] to section 69 notice dated [✂].

[373] Google's response dated [✂] to section 69 notice dated [✂].

[374] Google's response dated [✂] to section 69 notice dated [✂].

Alternative providers of Security Software

A.191 Microsoft submitted that customers remain free to (and frequently do) buy security products from other vendors such as CrowdStrike, Palo Alto Networks, Zscaler, and others and deploy them alongside Microsoft products.[375]

A.192 There are a number of alternative providers who offer Security Software with similar functionality to some of Microsoft's products:

(a) CrowdStrike submitted that several of its products had similarities to IAM, endpoint management, threat detection and data protection products offered by Microsoft,[376] and told us that Microsoft is a significant competitor across multiple security product areas.[377]

(b) One alternative provider submitted that it offers certain security products with similar capabilities to [✂].[378] This provider identified Microsoft as a [✂] competitor across [✂] security products.[379]

(c) Another alternative provider offers a wide range of security software products with similar capabilities to Entra, Intune, and Defender. This provider identified Microsoft as a competitor across some of its products though it told us that for certain products, this competition was not close.[380]

(d) Customers told us that they considered, and on occasion used, CrowdStrike as an alternative to Microsoft Defender, and that they often viewed it as a more 'premium product'.[381]

(e) Some customers also told us that they were able to use non-Microsoft security software products where they considered them to be better suited to their requirements.[382]

A.193 However, some alternative providers submitted that, in many cases, they have gaps or differences in capabilities with respect to Microsoft's broader offering.[383]

A.194 Further, the evidence we have seen to date suggests that alternative providers of Security Software either specialise in serving customers that operate across

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[375] Microsoft's response dated [✂] to section 69 notice dated [✂].
[376] CrowdStrike's response dated [✂] to section 69 notice dated [✂].
[377] CrowdStrike's response dated [✂] to section 69 notice dated [✂].
[378] [✂] response dated [✂] to section 69 notice dated [✂].
[379] [✂] response dated [✂] to section 69 notice dated [✂].
[380] [✂] response dated [✂] to section 69 notice dated [✂].
[381] Jigsaw Customer Research, 28 September 2026, pages 72 and 76, paragraph 273; Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[382] Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[383] For example, [✂] response dated [✂] to section 69 notice dated [✂]]; [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].

'hybrid environments' and/or in providing solutions that complement Microsoft's offer, including catering to customers with more 'complex' security needs:

(a) Alternative providers submitted that customers particularly valued their security software when they were operating across multi-cloud, hybrid cloud and on-premises environments.[384] Some alternative providers told us customers often used their security software for use cases across non-Microsoft technologies while retaining Microsoft's security software for Microsoft technologies.[385]

(b) Alternative providers submitted that a significant proportion of their customers were more security conscious and operated in regulated sectors, such as financial services.[386]

(c) Our customer research identified that customers may purchase third-party security software products to have 'defence in depth', ie an additional layer of security, and prevent them from solely depending on Microsoft's security software.[387]

(d) Alternative providers submitted that customers use third party products when they provide further capabilities than those offered by Microsoft.[388] Some alternative providers also told us that customers used multiple products to reduce the risk of relying on a single vendor.[389]

A.195 Other evidence also suggests the use of alternative providers' security software can be complementary:

(a) Alternative providers told us that using third-party security software products alongside Microsoft security software products was common.[390] Three alternative providers estimated that between 95-100% of customers used their products concurrently with Microsoft ones.[391]

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[384] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂].
[385] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[386] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. Note of call with [✂] on [✂].
[387] Jigsaw Customer Research, 28 September 2026, page 75, paragraph 284. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[388] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[389] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[390] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[391] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

(b) One alternative provider submitted that there were several reasons why customers supplemented Microsoft security software with their products including gaps in detection capabilities, a desire to reduce their dependency on one platform, and a need to protect non-Windows environments.[392]

(c) Microsoft submitted that Darktrace builds AI-native security that complements and integrates with Microsoft software, blocking more threats than either solution would alone.[393]

(d) Customers in our customer research said that the 'joined up' nature of Microsoft's security stack meant that any third-party product was generally deployed in addition to Microsoft's security software.[394] Some customers also told us that they used non-Microsoft security software products for specific use cases.[395]

A.196 Finally, in theory, a customer could use products from multiple standalone providers as an alternative to Microsoft's Security Software. However, we have not seen evidence that this is common, and we note that any customer attempting to do so would need to overcome the barriers to switching and the costs associated with managing integrations between products from several providers of Security Software we have identified above.

A.197 Overall, this evidence shows that alternative providers of Security Software are a weak competitive constraint on Microsoft.

Alternative providers of Security Software that specialise in IAM

A.198 Microsoft submitted that Okta and Ping Identity were some of its rival providers across Security Software.[396] Our shares of supply indicate that Okta and Ping are also two of the larger alternative suppliers of Security Software.

A.199 Both Okta and Ping Identity specialise in IAM products, offering a narrower range of security software than Microsoft. There is some evidence that both Okta and Ping Identity offer similar capabilities to Entra ID:

(a) [✂] submitted that its identity products compete directly with Entra ID,[397] and it also told us that it considers Entra ID to be [✂] competitor in identity.[398]

[392] [✂] response dated [✂] to section 69 notice dated [✂].
[393] Microsoft's response dated 04 June 2026 to invitation to comment dated 14 May 2026, paragraph 5.3, page 5. Microsoft.pdf
[394] Jigsaw Customer Research, 28 September 2026, page 74, paragraph 277.
[395] Note of call with [✂] on [✂]. Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[396] Microsoft's response dated [✂] to section 69 notice dated [✂].
[397] [✂] response dated [✂] to section 69 notice dated [✂].
[398] [✂] response dated [✂] to section 69 notice dated [✂].

(b) [✂] told us that it offers three IAM platforms, differentiated by deployment type and tenancy,[399] and [✂].[400] [✂] also submitted that it has many competitors in the IAM space, including Microsoft and [✂].[401]

A.200 However, both Okta and especially Ping Identity are much smaller providers compared to Microsoft (Microsoft's internal documents indicate that [✂].[402])

A.201 The evidence from customers and alternative providers indicates that Microsoft has strong positions in IAM especially amongst those customers who use other Microsoft products:

(a) Customers in our customer research told us Entra ID seamlessly integrated with their Microsoft software estate, and there would have to be an extremely compelling reason to choose a non-Microsoft solution. This reliance on Entra ID had been further solidified by migration onto Azure, where third party IAM solutions were found not to integrate as well.[403]

(b) Some customers in our customer research who had tried alternatives (including Okta and Ping Identity) did so unsuccessfully. [404] Another customer told us its strategic direction was to consolidate onto Microsoft's security stack where possible, and that alternative products from Okta and Ping Identity were less attractive to it now than in the past.[405]

(c) With respect to Microsoft's Active Directory, some alternative providers told us they did not offer an alternative product, and that the migration to the cloud risked locking customers into Entra ID from Active Directory,[406] and neither Okta nor Ping Identity provides an alternative product to Active Directory.[407] Some customers also said there was little likelihood of switching from Active Directory as they did not consider there was a viable alternative to this product.[408]

A.202 The above is consistent with the evidence (including Microsoft's own submissions) that alternative providers have stronger positioning among a subset of customers

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[399] [✂] response dated [✂] to section 69 notice dated [✂].
[400] [✂] response dated [✂] to section 69 notice dated [✂].
[401] [✂] response dated [✂] to section 69 notice dated [✂].
[402] Microsoft internal document, response to [✂] to section 69 notice dated [✂].
[403] Jigsaw Customer Research, 28 September 2026, page 68, paragraph 255-256.
[404] Jigsaw Customer Research, 28 September 2026, page 68, paragraph 256.
[405] Note of call with [✂] on [✂].
[406] [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[407] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[408] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂]to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

that operate across 'hybrid environments', where their IAM products are often used alongside Microsoft's Entra ID:

(a) One customer told us that it used Okta rather than Entra as its default identity in the cloud to avoid issues associated with navigating between on premises and the cloud and regarding full integration with other SaaS platforms not native to the identity product.[409]

(b) An alternative provider [✂] told us that it competes more effectively on its merits for customers adopting non-Microsoft solutions.[410] It submitted that a key differentiator between its platform and Entra ID was [✂] facilitates integration across deployment types, infrastructure and security providers.[411] [✂] also told us it can compete more effectively for 'cloud-native' organisations.[412]

(c) An alternative provider told us that its customers were often navigating complex environments, eg mixed deployments (cloud and on-prem) and multi cloud.[413] It also told us it sees a higher number of customers in the UK and EEA that require hybrid implementations to support data-sovereignty and critical-infrastructure requirement.[414] This provider also told us that many [✂] customers had complex legacy on-premises services.[415]

(d) An alternative provider explained that, even when a customer wishes to switch to its services, it may remain dependent on Entra ID for certain Microsoft workloads or hybrid identity function,[416] and that interoperability restrictions reduce the practical substitutability of its services even where it offers superior or differentiated identity functionality.[417]

(e) An alternative provider told us that it had [✂] found its role to be one of augmenting and complementing Microsoft products in non-standard use cases, rather than replacing Microsoft entirely.[418] It explained that an organisational customer that uses Microsoft's suite of products is unable to use [✂] IAM solutions without also using Microsoft's competing Entra product.[419]

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[409] Note of call with [✂] on [✂].
[410] [✂] response dated [✂] to section 69 notice dated [✂].
[411] [✂]. Source: [✂] response dated [✂] to section 69 notice dated [✂].
[412] [✂] response dated [✂] to section 69 notice dated [✂].
[413] Note of call with [✂] on [✂].
[414] [✂] response dated [✂] to section 69 notice dated [✂].
[415] Note of call with [✂] on [✂].
[416] [✂] response dated [✂] to section 69 notice dated [✂].
[417] [✂] response dated [✂] to section 69 notice dated [✂].
[418] Note of call with [✂] on [✂].
[419] [✂] response dated [✂] to section 69 notice dated [✂].

(f) Microsoft submitted that parallel use was common for IAM. For example, users might authenticate using Google's Cloud Identity IAM service but want access to Microsoft 365 services, which requires having an Entra ID identity.[420] This was particularly common amongst organisations operating across two or more cloud platforms as each requires its own IAM in order to gain access.[421]

A.203 Finally, evidence we have seen to date suggests that Okta and Ping target different use cases to Microsoft, such as [✂]:[422]

(a) [✂] told us that the financial performance of its [✂] segment consistently outpaced the [✂] segment in every quarter from Q1 FY25 through to Q4 FY26.[423]

(b) [✂] told us that [✂] there were greater challenges competing with Microsoft regarding workforce and employee identity, with [✂] of its customers also running a Microsoft service and likely to be using Microsoft 365 and therefore Entra ID.[424]

(c) Microsoft's internal documents suggest that Microsoft Entra ID's worldwide customer share is [✂] larger than Okta in employee identity management, with Okta having a more [✂] use cases.[425]

A.204 Overall, this evidence shows that alternative providers of IAM are a weak competitive constraint on Microsoft.

Expected and foreseeable developments in Security Software

A.205 As we have described above, Microsoft's Security Software is substantially larger than any rival, and this position has remained stable for at least the past five years while there are also significant barriers to competition which reinforce Microsoft's position. We have considered current evidence on market developments and evidence on the expected and foreseeable developments which may affect Microsoft's market power over the next five years.

A.206 Microsoft submitted that it expected the security market to be fundamentally shaped by Artificial Intelligence (AI) over the next five years.[426] It told us that AI

[420] Microsoft's response dated [✂] to section 69 notice dated [✂].
[421] Microsoft's response dated [✂] to section 69 notice dated [✂].
[422] CIAM governs the digital identities of customers and other users who sit outside an organization. Core CIAM functions include capturing customer profile data, authenticating users and facilitating secure access to digital services, such as e-commerce sites. What is Customer Identity and Access Management (CIAM)? | IBM accessed 9 October 2026.
[423] [✂] response dated [✂] to section 69 notice dated [✂].
[424] Note of call with [✂] on [✂].
[425] Microsoft internal document, response to [✂] to section 69 notice dated [✂].
[426] Microsoft's response dated [✂] to section 69 notice dated [✂].

was impacting the market in two ways. First, AI was lowering the cost and complexity of launching sophisticated cyberattacks, raising the bar for effective protection. Second, AI capabilities were becoming a key differentiator between providers, with established vendors and AI-native entrants investing heavily in AI-enabled threat detection and automated response.[427]

A.207 Microsoft told us that AI-powered threat detection and response capabilities are being developed by competitors including Palo Alto Networks, CrowdStrike and Wiz (owned by Google), each offering automated security operations that compete directly with Microsoft's Defender and related security products.[428] It also said that, in identity, Okta is expected to advance its offering in identity threat detection and AI-assisted access intelligence, while Ping Identity will likely continue focusing on hybrid and regulated enterprise deployments.[429]

A.208 Microsoft stated that it expected competition to intensify across productivity software, operating systems, cloud services, and security products as AI capabilities are incorporated into each of these areas.[430] It told us that it expected many of its key competitors to expand into different product areas within security, and that this evolving landscape would create sustained pressure on Microsoft's position across its security offerings, with the competitive dynamics remaining uncertain.[431]

A.209 We have considered whether emerging technology, innovation or new entrants are likely to have an impact on Microsoft's market position. In Security Software, we have considered whether:

(a) Alternative providers of Security Software could strengthen their offering through investments in, for example, AI-enabled threat detection and response capabilities or in Agentic AI such that they become a stronger competitive constraint on Microsoft.

(b) The ongoing transition to cloud may weaken Microsoft's market position in Security Software.

A.210 There is some evidence to indicate that AI related developments have the potential to increase competition in Security Software:

(a) Some customers expressed uncertainty about whether Microsoft's offering alone would be able to keep pace with AI-driven threats or provide sufficient functionality, and that they would be likely to use a range of providers.[432] One

[427] Microsoft's response dated [✂] to section 69 notice dated [✂].
[428] Microsoft's response dated [✂] to section 69 notice dated [✂].
[429] Microsoft's response dated [✂] to section 69 notice dated [✂].
[430] Microsoft's response dated [✂] to section 69 notice dated [✂].
[431] Microsoft's response dated [✂] to section 69 notice dated [✂].
[432] Note of call with [✂] on [✂]. Note of call with [✂] on [✂].

customer submitted that AI could mitigate some traditional forms of lock-in and make it easier for users to interact with underlying tools without needing to understand the tool itself.[433]

(b) Alternative providers also told us that they were developing products to compete with Microsoft's offering in agentic AI (eg Agent 365) as they expected the market to grow.[434] One of these alternative providers told us that AI related investments may create opportunities to compete for both new and existing customers.[435]

A.211 However, the majority of the evidence we have seen to date does not indicate that any expected or foreseeable market developments in relation to AI are likely to affect Microsoft's market power in Security Software in the next five years.

A.212 Microsoft is already making investments in AI in relation to its Security Software, and these may help it to build on its existing advantages including integration and interoperability between Microsoft's Security Software and other Microsoft products:

(a) Microsoft told us that it developed Security Copilot to enhance existing security functionality.[436] By lowering the skills level required to perform complex security tasks, Microsoft told us that Security Copilot should enable customers to make more active use of the capabilities they already have access to. It also told us that, as the product develops, its ability to reason across multiple products and data sources may further support customer adoption of Microsoft's broader security portfolio.[437]

(b) Microsoft also submitted that – as AI systems, agents, models, and AI-enabled applications become more prevalent – it is investing in capabilities to help customers secure AI assets, including AI security posture management, AI governance, securing agent lifecycles, securing AI-generated code, and protections for AI workload.[438]

(c) Microsoft's internal documents also indicate that AI is a key part of Microsoft's strategic direction within security, and that Microsoft's scale means it is well placed to develop its AI offering:

[433] Note of call with [✂] on [✂].
[434] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[435] [✂] response dated [✂] to section 69 notice dated [✂].
[436] Microsoft's response dated [✂] to section 69 notice dated [✂].
[437] Microsoft's response dated [✂] to section 69 notice dated [✂].
[438] Microsoft's response dated [✂] to section 69 notice dated [✂].

(i) [✂].[439]

(ii) [✂].[440]

(iii) Microsoft's internal documents also indicate that it has the [✂].[441]

A.213 Alternative providers of Security Software told us that they did not expect to be able to compete more strongly with Microsoft over the next five years, given the existing barriers to effective competition:

(a) A number of alternative providers submitted that Microsoft's competitive advantages, including bundling practices and technical integration across its broader software stack, would be likely to remain (or even strengthen) in the face of AI related market developments.[442] One alternative provider submitted that interoperability will become more complex and costly as Microsoft adds AI-security driven layers.[443]

(b) Alternative providers also told us that organisations may default to Microsoft's bundled offering, and expressed particular concern that Microsoft can embed AI security features into existing M365/E5 licences at what is perceived by customers to be low or zero cost.[444]

(c) One alternative provider told us that Microsoft would be well placed to manage the compute requirements associated with AI,[445] with another highlighting that Microsoft's scale means it can train AI models on signals from 'billions of endpoints – a dataset advantage that is genuinely difficult to replicate'.[446]

(d) Customers told us that they required an AI based data loss prevention tool, such as Purview, to be in place before they roll out Copilot so that they can prevent identifiable information from being added to AI interfaces.[447] An alternative provider also raised concerns over the impact of close integration between Purview, Microsoft 365 Copilot and Agent 365.[448]

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[439] Microsoft's internal document, response to [✂] to section 69 notice dated [✂].
[440] Microsoft's internal document, response to [✂] to section 69 notice dated [✂].
[441] Microsoft's internal document, response to [✂] to section 69 notice dated [✂].
[442] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[443] [✂] response dated [✂] to section 69 notice dated [✂].
[444] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[445] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂].
[446] [✂] response dated [✂] to section 69 notice dated [✂].
[447] Note of call with [✂] on [✂]. Note of call with [✂] on [✂].
[448] [✂] response dated [✂] to section 69 notice dated [✂],

A.214 In addition, the majority of the evidence we have seen to date does not indicate that any expected or foreseeable market developments in relation to the growth of cloud services are likely to affect Microsoft's market power in Security Software in the next five years:

(a) One alternative provider submitted that it planned to continue to invest heavily in cloud security, as it felt it had competitive advantages over Microsoft in this area.[449] Another alternative provider told us that it expects the ability to secure heterogeneous environments – including organisations operating across multiple cloud providers and operating systems – to become increasingly important and this could favour their offering.[450]

(b) In our customer research, customers said that their reliance on Entra ID had increased as their workloads moved onto the cloud, and specifically onto Azure.[451]

(c) An alternative provider submitted that it was particularly difficult to compete when customers migrated from on premises to the cloud because the adoption of Entra ID facilitates the adoption of the rest of Microsoft's security stack,[452] and there is price asymmetry between its standalone prices and Microsoft's 'free' alternative.[453]

(d) Microsoft's internal documents also indicate that Microsoft's strengths include [✂].[454]

[449] [✂] response dated [✂] to section 69 notice dated [✂]
[450] [✂] response dated [✂] to section 69 notice dated [✂]
[451] Jigsaw Customer Research, 28 September 2026, page 68, paragraph 256.
[452] [✂] response dated [✂] to section 69 notice dated [✂].
[453] [✂] response dated [✂] to section 69 notice dated [✂].
[454] Microsoft's internal document, response to [✂] to section 69 notice dated [✂].

Market power assessment - Server OS

A.215 We have considered Microsoft's market power in Server OS by considering evidence on:

(a) Shares of supply;

(b) Competition for existing workloads;

(c) Competition for new workloads;

(d) Competition between Microsoft and alternative providers of Server OS; and

(e) The impact of expected and foreseeable developments on Microsoft's market position in Server OS.

A.216 As set out in Chapter 4 of this report, Microsoft's Server OS offering is Windows Server. Windows Server can be used across the cloud, on premises or in hybrid environments.

A.217 The evidence we have seen to date suggests that Windows Server is an important part of Microsoft's Business Software Ecosystem.

(a) Windows Server is an important revenue driver for Microsoft in the UK, with revenues of approximately [✂] [$0.5-1 billion] in 2025 and accounting for [✂]% of UK revenue from its Business Software Ecosystem.[455] UK revenues for Windows Server on Azure cloud increased by [✂] between 2020 and 2025.[456]

(b) In a 2024 global technology conference, the Microsoft Chief Commercial Officer stated that 'there is an awful lot of money yet to be had in migrating SQL Server, Windows Server, [and] VMware'.[457]

A.218 The choice of Server OS is made at the workload level (ie the same customer may choose different Server OSs for different workloads). A workload is a collection of

[455] CMA calculations based on Microsoft's response dated [✂] to follow up questions dated [✂] to section 69 notice dated [✂] and Microsoft's response dated [✂] to section 69 notice dated [✂]. [However, as described in further detail in the 'Shares of supply estimates' section below, this figure is based on data that includes a suggested workaround by Microsoft in an attempt to remove virtual machine consumption revenues on Azure (ie revenues related to infrastructure costs) from Windows Server revenues. Using revenue figures without Microsoft's suggested workaround, Windows Server revenues in the UK come to approximately [✂] in 2025 (note this revenue includes underlying virtual machine consumption charges). CMA calculations based on Microsoft's response dated [✂] to section 69 notice dated [✂].
[456] From approximately [✂] million in 2020 to approximately [✂] million in 2025. CMA calculations based on Microsoft's response dated [✂] to follow up questions dated [✂] to section 69 notice dated [✂]. Without Microsoft's workaround, revenues for Windows Server on Azure cloud increased by [✂] between 2020 and 2025, from approximately [✂] million in 2020 to approximately [✂] million in 2025. CMA calculations based on Microsoft's response dated [✂] to section 69 notice dated [✂].
[457] UBS Global Technology Conference, accessed by the CMA 17 September 2026.

IT components[458] that support one or more business processes.[459] Individual workloads within an organisation are established to run on a particular Server OS, and additional workloads can be established using the same or different Server OS without necessarily impacting on existing workloads.[460]

A.219 The main Server OSs are Microsoft Windows Server and Linux-based Server OSs. There are multiple Linux-based providers, some of which charge for the software and others do not.[461] Microsoft's Azure and AWS offer their own Linux products primarily on their own cloud platforms.[462] Of the paid-for Linux-based Server OSs, Red Hat is the biggest.[463]

A.220 Linux has historically been used for cloud-based workloads. AWS was the first cloud provider, and when AWS began, Windows Server was not available on AWS.[464] This allowed Linux usage to grow on the cloud. Windows Server is now available on all the major cloud providers and its usage has been growing in absolute terms on almost all cloud providers.[465]

A.221 Overall cloud usage has grown over time. For example, Server OS usage on Azure has risen by over [✂]% between 2020 and 2025 in the UK.[466] This is for two reasons: first, new workloads have been initiated on the cloud; and second, workloads which were deployed on premises have migrated to the cloud. We anticipate that the trend towards cloud migration and cloud deployment will continue, although based on the evidence we have seen to date, a significant proportion of Server OS workloads will remain on premises, and there is mixed evidence on the degree and speed of cloud growth.[467]

A.222 As we discuss further below, the evidence we have seen to date from customers and Server OS providers shows that customers evaluate their Server OS requirements when establishing a new Server OS workload, for example when they purchase or create a new application. Once a workload is embedded in a customer's IT environment, it can be very difficult to switch Server OS provider.[468] As a result, competition between Server OS providers tends to happen for new workloads rather than existing ones and to reflect this, we have considered new

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[458] Such as servers, virtual machines (VMs), cloud services, applications, code, data, or appliances.
[459] Discover your existing workload inventory - Cloud Adoption Framework | Microsoft Learn, accessed by the CMA 15 September 2026.
[460] See sections below on 'Barriers to switching for existing Server OS workloads' and 'Competition for new workloads'.
[461] See section below on 'Competition between Microsoft and alternative providers of Server OS'.
[462] See section below on 'Competition between Microsoft and alternative providers of Server OS'.
[463] See section below on 'Revenue-based shares of supply'.
[464] One Server OS provider stated that 'simplest explanation' for Linux-based OSs having a higher prevalence on cloud than Windows Server is that AWS and Google, as early cloud entrants, entered with Linux-based servers. [✂] response dated [✂] to section 69 notice dated [✂].
[465] See section below on 'Usage-based shares of supply'.
[466] See section below on 'Usage-based shares of supply'. This only includes IaaS Server OS usage on Azure (in normalised vcore hours).
[467] See sections below on 'Importance of new workloads relative to existing workloads' and 'Evidence on the effect of cloud adoption on competition for Server OS'.
[468] See section below on 'Barriers to switching for existing Server OS workloads'.

and existing workloads separately. We have also considered any differences between on-premises workloads and cloud workloads, and whether migration of a workload from on-premises deployment to the cloud is a point at which a customer is likely to change the underlying Server OS.[469]

Shares of supply estimates

Microsoft's submissions on shares of supply

A.223 Microsoft stated that Windows Server's market share is declining over time, with Linux being the OS for the vast majority of servers sold globally since 2017,[470] and it has provided various metrics which it said supported this, for example IDC data which stated that Linux-based Server OS shares of new server units sold were 81% in Q1 2026, with a compound annual growth rate of 11% between Q1 2018 and Q1 2026.[471] In comparison, Microsoft said that Windows Server's share of new servers sold has continuously declined since Q1 2019.[472]

A.224 Microsoft submitted that the open-source nature of Linux-based Server OS means revenue-based shares of supply 'overestimate the share of Windows Server'.[473] This is because there are no direct revenues for free open-source software.

A.225 Finally, Microsoft stated that, in contrast to the CMA's previous SMS designations where shares of supply were higher for the designated firms (either individually or in combination), Microsoft holds a 'minority share' behind Linux-based Server OS and has seen a persistent drop in market share over time.[474]

Our shares of supply analysis

A.226 This section outlines our shares of supply analysis based on the following metrics:

(a) Revenue-based shares of supply by Server OS for all deployment types, that is not split by on-premises and cloud deployments; and

(b) Usage-based shares of supply by Server OS on the main cloud platforms based on vcore hours of usage.

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[469] See section below on 'Ability to switch at transition from on premises to cloud'.

[470] Microsoft's submission to the CMA dated [✂].

[471] It also submitted that:

- the CMA's Cloud Services Market Investigation found that in 2020 Linux-based Server OS had between 70-80% share of supply of global Server OS shipments, with Windows Server at 20-30%.
- Windows Server virtual machines relative spend has '[✂]', from [✂]% of UK Windows Server customers' overall Azure spend in May-December 2022 to around [✂]% in the first half of 2025.

Microsoft's submission to the CMA dated [✂].

[472] Microsoft's submission to the CMA dated [✂].

[473] Microsoft's submission to the CMA dated [✂].

[474] Microsoft's submission to the CMA dated [✂].

A.227 These shares of supply give an overview of the usage of Server OS and long-term trends in Server OS usage. Data limitations from providers, including Microsoft, mean we have been unable to construct separate shares of supply for on-premises and cloud deployments, or to create volume-based shares by installed base or shipments of Server OS. The Cloud Services Market Investigation used a different data source to estimate these shares of supply. While those shares of supply indicate usage patterns, we consider that the shares of supply set out below are more suited for our purpose. This is because we have gathered data directly from Server OS providers.

A.228 The Cloud Services Market Investigation found that Windows Server had higher volume shares on premises relative to on the cloud.[475] Although we have been unable to construct separate shares of supply for on-premises and cloud deployments using data from providers, other evidence outlined below[476] is consistent with this finding.

Revenue-based shares of supply

A.229 We recognise that our revenue-based shares of supply do not fully reflect usage of open-source products (such as Debian) that are free for customers to use. However, we consider that revenue-based shares of supply are nevertheless a valuable piece of evidence to understand Server OS, including indicating trends over time. Additionally, revenue-based shares are informative in that they reflect customers' willingness to pay when a free product is available, indicating significant differentiation between products. We consider the extent to which the suppliers captured in our shares of supply are exerting a competitive constraint on Microsoft in our wider assessment below.

A.230 Our UK revenue shares of supply estimates in Table A.3 below show that Microsoft was the largest Server OS provider by a significant margin, followed by Red Hat (an IBM subsidiary) while other providers were significantly smaller with shares of supply below 5%. Microsoft's share saw a moderate drop between 2020 and 2025. In the same timeframe, Red Hat's share of supply increased to [20-30]% in 2025 while the remaining players' shares of supply were broadly stable.

A.231 The global patterns for revenue shares of supply are set out in Appendix C: Market outcomes.[477] The broad patterns are similar, but Microsoft's share of supply was more stable, only falling slightly over the period.

[475] Cloud Infrastructure Services, Final decision report, Appendix R: Market power – supplementary framework and evidence, 31 July 2025, paragraph R.3.
[476] Including the usage-based shares of supply which show that Linux is used more than Windows Server on cloud providers.
[477] Sub-section 'Revenue-based shares of supply' in section 'Server OS' of Appendix C.

Table A.3: UK Server OS shares of supply (revenue, 2020-2025), all deployment types

	2020	*2021*	*2022*	*2023*	*2024*	*2025*
Microsoft's Windows Server	**80-90]%**	**[80-90]%**	**[80-90]%**	**[70-80]%**	**[70-80]%**	**[70-80]%**
Linux-based Server OS	[10-20]%	[10-20]%	[10-20]%	[20-30]%	[20-30]%	[20-30]%
IBM / Red Hat	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[20-30]%
Canonical	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
SUSE	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Oracle	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%

Sources: Microsoft's response dated [≫] to section 69 notice dated [≫] ; Microsoft's response dated [≫] to follow up questions dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫].; [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫].
Notes: Microsoft submitted that Windows Server revenues include both software charges (ie for Windows Server intellectual property) and infrastructure charges (ie for the underlying virtual machine). Microsoft suggested the following workaround which has been implemented and reflected in the figures above: 'the most accurate way would be to take Windows vCore hours and apply the licensing fee that is charged to Amazon and Google for that IP (an input they may of course choose to discount); that would represent a reasonable proxy for the fair market value of Windows. The product of that calculation would be Windows value and the rest would be allocated to compute.' Additionally, regarding Azure data, Microsoft stated that where the operating system cannot be distinguished between Windows Server and Windows Client (see below), it is included as Windows Server. Where the operating system cannot be identified as 'Windows' in Azure data, it is excluded.[478]
Red Hat is owned by IBM, but these figures solely cover Red Hat (ie exclude IBM-branded Server OSs that only run on IBM servers which cannot run Windows Server). Importantly, Red Hat figures represent Annual Contract Value plus Consumption (instead of revenue) as Red Hat does not hold revenue information on a by-product and by-country basis. Red Hat figures include Red Hat Enterprise Linux, OpenShift and AI Platforms in line with Red Hat's Server OS product mapping. Red Hat revenues do not include values related to services provided. Canonical revenues reflect [≫]. SUSE stated that its [≫]. [≫].

Usage-based shares of supply

A.232 We have usage data provided by Microsoft and other cloud providers to estimate usage of Server OSs in the cloud. We present the evidence for each cloud provider individually because differences in how cloud providers record usage of Server OSs mean it is not possible to compare absolute usage between different cloud providers.

A.233 The cloud usage data for Server OS shows higher shares of supply for Linux than the revenue-based shares of supply. This is because:

(a) The usage data covers cloud usage only and we understand that Windows Server has a particularly strong presence on premises.

(b) Usage of free open-source software is not reflected in the revenue shares.

A.234 Overall, the data below shows that:

(a) Relative usage of Windows Server is higher on Azure than other cloud providers – in the UK in 2025 Windows Server was [30-40]% of usage on

[478] Microsoft's response dated [≫] to section 69 notice dated [≫]; Microsoft's response dated [≫] to section 69 notice dated [≫].

Azure compared to [✂]% on Google Cloud, [✂]% on Amazon's EC2 and [0-5]% on Oracle Cloud.

(b) For [✂] cloud providers [✂], usage of Windows Server was higher in the UK than globally.

(c) Although UK relative usage of Windows Server on [✂] cloud providers has fallen over the past few years (and relative Linux use has grown), absolute Windows Server usage has increased year on year for [✂] cloud providers.

Microsoft Azure

A.235 Table A.4 below shows the share of Azure virtual machines usage by Windows Server and Linux-based Server OS between 2020 and 2025 based on vcore hours. The data shows that the share of UK use of Linux-based Server OS and Windows Server usage on Azure [✂], but in recent years [✂].

A.236 In terms of absolute UK Server OS usage on Azure virtual machines, Windows Server grew substantially, at an average annual growth rate of [✂] between 2020 and 2025. Linux-based Server OS grew even faster at a [✂] average annual growth rate.[479]

A.237 The global patterns for Azure usage are set out in Appendix C: Market outcomes.[480] The broad patterns [✂], but Windows Server share of usage on Azure [✂] in the UK than globally.

Table A.4 Relative and absolute UK Server OS usage on Azure virtual machines (IaaS, million normalised vcore hours), 2020-2025

Relative Server OS usage (normalised vcore hours)						
	2020	*2021*	*2022*	*2023*	*2024*	*2025*
Microsoft's Windows Server	**[50-60]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[30-40]%**	**[30-40]%**
Windows Client*	-	[5-10]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Linux-based Server OS	[40-50]%	[40-50]%	[40-50]%	[40-50]%	[40-50]%	[40-50]%
Absolute Server OS usage (million normalised vcore hours)						
	2020	*2021*	*2022*	*2023*	*2024*	*2025*
Microsoft's Windows Server	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Windows Client*	-	[✂]	[✂]	[✂]	[✂]	[✂]
Linux-based Server OS	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: CMA analysis of Microsoft's response dated [✂] to section 69 notice dated [✂].

Notes: Data reflects Azure Active customers only, with customers meeting defined activity thresholds of more than $1,000 in Azure revenue in any fiscal year from FY20–FY25 or more than $500 in the first six months of FY26, and with greater than $0 revenue in a given calendar year for relevant Digital Activity products. The data excludes a 'limited number' of customers that are not monitored in

[479] CMA analysis of Microsoft's response dated [✂] to section 69 notice dated [✂]. We note that these figures are Compound Annual Growth Rates (CAGR).
[480] Sub-section 'Cloud platform usage analysis' in section 'Server OS' of Appendix C.

Azure consumptive revenue data but Microsoft stated that these are not UK customers and they 'do not materially consume' Windows Server, Windows Client or SQL Server. Units are normalised vcore hours and cover IaaS deployments. Where Microsoft is unsure whether the operating system is 'Non-Windows or Windows', the data is classified as 'Non-Windows'. Where Microsoft is unsure whether the operating system is Windows Server or Windows Client, the data is classified as Windows Server.
** Windows Client is Windows PC OS being used in the cloud. CMA analysis of Microsoft's response dated [✂] to section 69 notice dated [✂].*

Google Cloud

A.238 Table A.5 below shows the share of UK usage of Google Cloud virtual machines by Server OS providers between 2022 and 2025 based on vcore hours.[481] Relative usage of Windows Server on Google Cloud was low, having fallen significantly over the period, while Linux-based Server OS providers grew in aggregate. The Linux community distribution Debian was the largest Server OS provider on Google cloud by relative usage, having grown rapidly between 2022 and 2025.[482] Other significant Server OS providers included Canonical and COS.

A.239 In terms of absolute Server OS usage on Google Cloud in the UK, Table A.5 below shows that Windows Server's absolute usage [declined] between 2022 and 2025 ([✂][483]). Over the same period, Linux-based Server OS absolute usage [increased], primarily led by large growth in usage of Debian and Canonical. Linux-based Server OS [✂] between 2022 and 2025.[484]

A.240 Windows Server share of usage on Google Cloud was [higher] in the UK than globally (see Appendix C: Market outcomes). Global usage of Windows Server was stable.

Table A.5: Relative and absolute UK Server OS usage on Google Cloud virtual machines (million vcore hours), 2022-2025

Relative Server OS usage

	2022	*2023*	*2024*	*2025*
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]

[481] CMA analysis of Google's response dated [✂] to section 69 notice dated [✂]. Google explained [✂] that vcore hour usage data is only available from 2022 onwards. Google's response dated [✂] to section 69 notice dated [✂].
[482] We note that CentOS usage has declined over the same period. We understand that after 30 June 2024 the CentOS Project discontinued all updates and releases of CentOS Linux. Updates for CentOS Linux 8 ended in December 2021, and updates for CentOS Linux 7 ended on 30 June 2024. (What is CentOS?, accessed by the CMA 16 September 2026) This may account for the decline in usage in CentOS.
[483] CMA analysis of Google's response dated [✂] to section 69 notice dated [✂]. We note that [✂].
[484] CMA analysis of Google's response dated [✂] to section 69 notice dated [✂]. We note that [✂].

[✂][485]	[✂]	[✂]	[✂]	[✂]

Absolute Server OS usage

	2022	*2023*	*2024*	*2025*
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂]	[✂]	[✂]	[✂]	[✂]
[✂][486]	[✂]	[✂]	[✂]	[✂]

Source: CMA analysis of Google's response dated [✂] to section 69 notice dated [✂].
Notes: [✂][487]*). [✂].*[488] *[✂].*[489]

Amazon Cloud

A.241 Amazon provided its cloud (EC2) Server OS usage figures based on normalised instance hours (NIH).[490] The data shows that relative Windows Server usage in the UK was [✂] on EC2 and almost [✂] between 2020 and 2025, with [✂] relative usage of Linux-based Server OS on EC2 (Table A.6 below).

A.242 Nevertheless, Table A.6 also shows that absolute Windows Server UK usage on EC2 [✂][491] between 2020 and 2025, while Linux-based Server OS usage also [✂][492].

A.243 The global patterns for EC2 usage were [✂] (see Appendix C: Market outcomes), but Windows Server share of usage on EC2 was [✂] in the UK than globally.

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[485] [✂].
[486] [✂].
[487] [✂].
[488] [✂].
[489] Google's response dated [✂] to section 69 notice dated [✂].
[490] Amazon's response dated [✂] to section 69 notice dated [✂].
Amazon stated that 'NIH is a standardised metric used to compare EC2 instances of different sizes on a common scale. It enables consistent comparisons across instance types by converting actual usage into a normalised unit based on instance size. NIH is calculated using the following formula: NIH = Number of Instances × Normalisation Factor × Hours Run. AWS assigns a normalisation factor to each instance size, using the small instance size as the baseline unit (normalisation factor = 1).' Amazon pointed to the following online resources for further information on normalisation factors: How Reserved Instance discounts are applied - Amazon Elastic Compute Cloud and Amazon EC2 FAQs – AWS.
Amazon's response dated [✂] to section 69 notice dated [✂]. We further note that Amazon stated that its answers to the CMA's information requests cover both organisational and personal customers, as it does not distinguish between the two types of customers. However, we consider that the majority of Amazon's Server OS customers will be organisations because elsewhere Amazon stated that 'the typical customers for Amazon Linux, RDBMS and Security Services […] tend to be sophisticated businesses.' Amazon's response dated [✂] to section 69 notice dated [✂]. Amazon's response dated [✂] to section 69 notice dated [✂].
[491] Amazon's response dated [✂] to section 69 notice dated [✂]. We note that [✂].
[492] Amazon's response dated [✂] to section 69 notice dated [✂]. We note that [✂].

Table A.6: Relative and absolute UK Server OS usage on EC2 virtual machines (million NIH), 2020-2025

Relative Server OS usage						
	2020	*2021*	*2022*	*2023*	*2024*	*2025*
Microsoft's Windows Server	[≫]	[≫]	[≫]	[≫]	[≫]	[≫]
Linux-based Server OS	[≫]	[≫]	[≫]	[≫]	[≫]	[≫]
Absolute Server OS usage						
	2020	*2021*	*2022*	*2023*	*2024*	*2025*
Microsoft's Windows Server	[≫]	[≫]	[≫]	[≫]	[≫]	[≫]
Linux-based Server OS	[≫]	[≫]	[≫]	[≫]	[≫]	[≫]

Source: CMA analysis of Amazon's response dated [≫] to section 69 notice dated [≫].

Oracle Cloud

A.244 Table A.7 below shows UK usage on Oracle Cloud virtual machines of (i) Windows Server and (ii) other Server OS. This is based on Oracle Cloud CPU hours (OCPU) between 2020 and 2025.[493] Relative Windows Server usage on Oracle Cloud dropped substantially between 2020 and 2025.

A.245 Absolute usage of Windows Server on Oracle Cloud in the UK increased strongly ([≫][494]), as did usage of other Server OSs ([≫][495]).

A.246 The global patterns for Oracle Cloud usage were broadly similar (see Appendix C: Market outcomes), but Windows Server share of usage on Oracle Cloud was higher in the UK than globally.

Table A.7: Relative and absolute UK Server OS usage on Oracle cloud virtual machines (million OCPU), 2020-2025

Relative Server OS usage						
	2020	*2021*	*2022*	*2023*	*2024*	*2025*
Windows Server	**[10-20]%**	**[10-20]%**	**[10-20]%**	**[10-20]%**	**[5-10]%**	**[0-5]%**
Other Server OS	[80-90]%	[80-90]%	[80-90]%	[80-90]%	[90-100]%	[90-100]%
Absolute Server OS usage						
	2020	*2021*	*2022*	*2023*	*2024*	*2025*
Windows Server	[≫]	[≫]	[≫]	[≫]	[≫]	[≫]
Other Server OS	[≫]	[≫]	[≫]	[≫]	[≫]	[≫]

Source: CMA analysis of Oracle's response dated [≫] to section 69 notice dated [≫].
Notes: [≫].

[493] CMA analysis of Oracle's response dated [≫] to section 69 notice dated [≫]. [≫].
[494] CMA analysis of Oracle's response dated [≫] to section 69 notice dated [≫]. We note that [≫].
[495] CMA analysis of Oracle's response dated [≫] to section 69 notice dated [≫]. We note that [≫].

Summary of shares of supply

A.247 In summary, these shares of supply indicate that Microsoft has been the largest provider of Server OS in the UK by revenue for at least the last six years. Microsoft's revenue share of supply was [70-80]% for 2025 – including both on-premises and cloud deployments. Linux distributions are the main alternatives to Windows Server, though their open source nature implies that their revenue share underestimates their relative usage. Linux-based workloads are particularly prevalent on cloud deployments, where they are by far the main Server OS by volume. Windows Server's share has fallen moderately by revenue and more rapidly for cloud usage, which is likely to reflect differentiation, in that customers are willing to pay for Windows Server and it has a more significant presence on premises. We have considered the implications of these shares of supply, and in particular what can be concluded from the relative growth of Linux, elsewhere in this appendix and in Chapter 5 of our report.

Competition for existing workloads

A.248 As outlined above, once a workload has been deployed, and especially once it becomes embedded into a customer's IT environment, it can be very difficult to switch Server OS. Therefore, we explore here the particular dynamics in competition for existing workloads.

Microsoft's submissions

A.249 Microsoft submitted that most applications run on both Linux and Windows Server.[496] Microsoft has submitted that Windows Server faces significant competition from Linux-based Server OS, and Windows Server use has been steadily declining.[497]

A.250 Regarding barriers to switching for existing workloads, Microsoft said that it is customers' IT design choices and engineering strategy (eg applications' architecture and what dependencies exist) that determine the effort associated with switching Server OS, as Microsoft has not imposed any technical impediments to switching Server OS.[498]

A.251 Microsoft submitted that there is little value in purely lifting and shifting on-premises workloads to the cloud as the 'associated efficiency losses [of using

[496] Microsoft's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[497] Microsoft's submission to the CMA dated [✂].
[498] [✂] response dated [✂] to section 69 notice dated [✂].

Windows Server on the cloud] create strong incentives to modernise on-premises workloads rehosted in a public cloud'.[499]

A.252 Microsoft said that generative AI tools are 'rapidly' reducing any complexity which customers historically faced in moving applications between Server OSs.[500] It said that these tools 'automate much of the re-platforming process'.[501] Microsoft said that AI tools are accelerating customer switching away from Windows Server.[502] It gave examples of these tools[503] and the impact they are having in terms of easier, cheaper and quicker switching between Server OSs.[504]

Barriers to switching for existing Server OS workloads

A.253 The evidence we have seen to date strongly suggests that customers rarely switch existing workloads from one Server OS to another, as there are challenges in doing this. As a result, customers do not frequently review their Server OS options once a workload has become embedded in their IT infrastructure, and therefore these workloads may remain in place for a substantial period of time before being reconsidered. Furthermore, as shown by the scale of Microsoft's current revenues, many existing workloads are on Windows Server.

(a) Our customer research found that many businesses saw Windows Server as a 'default and not really something they could contemplate switching away from'.[505] Windows Server was so embedded in customers' infrastructure that 'to entertain the alternative(s) was close to unthinkable'. There was a feeling of being locked into Windows Server and customers described their dependency on Windows Server as being very hard to unwind.[506] It found that there was 'almost no desire' from Microsoft customers to consider wholesale switching away from Windows Server.[507]

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[499] Microsoft's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[500] Microsoft's response dated [✂] to section 69 notice dated [✂]. Microsoft stated that, in the past, migrating workloads required 'detailed planning, with significant engineering effort devoted to dependency mapping, migration planning and application refactoring.' Microsoft's submission to the CMA dated [✂].
[501] Microsoft's response dated [✂] to section 69 notice dated [✂].
[502] Microsoft's submission to the CMA dated [✂].
[503] Microsoft's GitHub Copilot; Amazon's Q Developer; AWS Transform; Google's Jules; Google's Gemini Code Assist, IBM's watsonx Code Assistant; and 'a widening field of independent and open-source tools'. Microsoft's response dated [✂] to section 69 notice dated [✂]. Microsoft's submission to the CMA dated [✂].
[504] Microsoft submitted that customers of Microsoft's GitHub Copilot, such as Ford China, have reported c.70% reduction in software modernisation effort. Microsoft's response dated [✂] to section 69 notice dated [✂].
Microsoft pointed to Amazon claims that Amazon's Q Developer and AWS Transform can replatform applications up to four times faster and reduce associated costs by up to 40%, with a customer reporting that work scoped to take six to eight months was completed in 'a few days'. Microsoft's response dated [✂] to section 69 notice dated [✂].
Microsoft also said Thomson Reuters used AWS Transform to move applications from Windows Server to Linux-based Server OS, at c.30% lower costs and taking two weeks rather than 'months'. Microsoft's response dated [✂] to section 69 notice dated [✂].
[505] Jigsaw Customer Research, 28 September 2026, page 81, paragraph 300.
[506] Jigsaw Customer Research, 28 September 2026, page 81, 'summary box' at 3.6.3; and page 83, paragraph 309.
[507] Jigsaw Customer Research, 28 September 2026, page 85, paragraph 315.

(b) Customers said they would not move away from Windows Server in response to a significant price rise. Six out of nine of the customers we asked stated that they would be 'unlikely' to switch away from Windows Server on the public cloud in response to a 5% price increase.[508]

(c) Evidence from alternative Server OS providers indicates that there is limited switching of Server OS for existing workloads.[509] For example, one of these providers stated that it is 'not aware of meaningful switching from Windows Server to Linux-based OS products unless rearchitecting an application'.[510]

(d) Two cloud providers gave examples of limited success in switching, despite significant investment in doing so, which is discussed in more detail below.[511]

(e) Some resellers implied that customers infrequently consider switching Server OS as it is usually only done in the context of wider organisational changes. One reseller said that the choice of Server OS is re-evaluated at infrastructure refresh, datacentre exit or cloud-migration events and at licensing renewals; otherwise, it is stable over multi-year periods.[512] Another reseller said that choice of Server OS is typically assessed during infrastructure refresh, private cloud, hybrid cloud, application modernisation or 'support lifecycle events'.[513]

A.254 There are a number of reasons why there are significant barriers to switching away from Windows Server to another Server OS and, for certain workloads, Windows Server is considered to be the only viable option. These reasons mean that switching Server OS would incur significant engineering time and cost and create operational risks. These reasons are explained in more detail below:

(a) Windows Server is the only or best suited option for some workloads;

(b) Switching Server OS is a highly complex and risky process involving multiple stages and high costs;

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[508] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂].

[509] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].

[510] [✂] response dated [✂] to section 69 notice dated [✂].

[511] See section 'Ability to switch at transition from on premises to cloud' below.

[512] [✂] response dated [✂] to voluntary request for information dated [✂]. In contrast to these submissions, another reseller submitted that customers generally re-evaluate their Server OS purchases every 12 months or whenever newer software licensing is released. [✂] response dated [✂] to voluntary request for information dated [✂].

[513] [✂] response dated [✂] to voluntary request for information dated [✂].

(c) Customers have skills for Windows Server, but lack Linux skills;

(d) Technical interoperability and integration between Windows Server and other Microsoft products; and

(e) Commercial linkages between Windows Server and Microsoft's wider Business Software Ecosystem.

A.255 Windows Server is the only or best suited option for some workloads:

(a) Many commercial off-the-shelf (COTS) applications are only available for Windows Server.[514] Customers using COTS applications are tied to the specific Server OS for which they were written, and customers do not have the source code necessary to re-write the application to work on a different Server OS.[515]

(b) Some Microsoft applications are not available on Linux,[516] such as

(i) Active Directory,[517] Exchange Server,[518] SharePoint Server[519] and System Center[520] which all require Windows Server to operate and form Microsoft's core enterprise ecosystem.[521]

(ii) Visual Studio, which is Microsoft's specialised tool for developers to build software applications. Visual Studio 2022 is supported on Windows 11 and Windows Server.[522]

(iii) Microsoft's .NET Framework is a Windows-only technology and requires a compatible Windows OS. Applications which depend on the .NET

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[514] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; Note of call with [✂]; Note of call with [✂].

[515] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]. One customer stated that COTS applications designed to run on Windows Server generally remain on Windows Server. Note of call with [✂]. Another customer stated a lot of applications it uses, particularly legacy ones, are based on Microsoft technology and dependent on Windows Server. Where these applications cannot run on a different environment, searching for alternative applications comes with 'transformative work' as the customer built processes around existing applications. Note of call with [✂]; Note of call with [✂].

[516] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions.

[517] Active Directory Domain Services - Training | Microsoft Learn, accessed by the CMA 28 July 2026.

[518] Exchange Server supportability matrix | Microsoft Learn, accessed by the CMA 28 July 2026.

[519] System requirements for SharePoint Server Subscription Edition - SharePoint Server | Microsoft Learn, accessed by the CMA 28 July 2026.

[520] System requirements for System Center Operations Manager | Microsoft Learn, accessed by the CMA 28 July 2026.

[521] One cloud provider told us that Microsoft 365 applications are not natively available on Linux-based Server OS, with only web-based versions available that have limited functionality compared to desktop versions. [✂] response dated [✂] to section 69 notice dated [✂]. However, a Server OS provider stated that 'most' Microsoft productivity software operates as software as a service on Azure such that the underlying Server OS is no longer a choice that customers make, adding that technical or business linkages and leverages with productivity applications no longer drive Server OS choice. [✂] response dated [✂] to section 69 notice dated [✂].

[522] Visual Studio 2022 System Requirements | Microsoft Learn, accessed by the CMA 6 October 2026.

Framework, which may be created using Visual Studio, can only be run on a compatible Windows OS, including Windows Server.[523]

(c) One cloud provider stated that even where COTS applications support both Linux-based Server OS and Windows Server, customers may still choose Windows Server as there are extensive connections between COTS applications and customers' corporate networks, almost always written using Windows-native tools, that need to be rewritten to switch away from Windows Server.[524]

(d) Additionally, the same cloud provider said that its 'traditional enterprise' customers rely on Windows Server for new workloads that heavily interact with existing Windows Server workloads.[525]

A.256 Evidence from customers and Server OS providers shows that even where applications can be adapted for alternative Server OS, switching Server OS is a complex and risky process, involving multiple stages and high costs.[526]

(a) For instance, one of these customers stated that 'switching away from Windows Server would be an extensive process. It […] would take years and be a significant effort with significant outlays.'[527] A cloud provider submitted that 'migrating workloads to Linux requires a ground-up architectural rebuild rather than a simple data transfer'.[528]

(b) Switching can require products to be run in parallel. Our customer research found that switching away from Microsoft products generally could require running both environments in parallel to avoid service interruption[529] and add administrative time.[530] The same cloud provider as in (a) above stated that to 'mitigate the high risk of operational downtime', customers are 'forced' to run

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[523] Install .NET Framework on Windows - .NET Framework | Microsoft Learn, accessed by the CMA 6 October 2026.
[524] [✂] submitted that, for large enterprises, there can be 'thousands of lines' of custom code which connect the application to the corporate network. [✂] response dated [✂] to section 69 notice dated [✂].
[525] [✂] response [✂] to section 69 notice dated [✂]. Similarly, a Server OS provider said that Linux can be attractive to customers as it 'provides a level of flexibility over Windows unless there is some type of compatibility or interface with installed Windows applications.' [✂] response dated [✂] to section 69 notice dated [✂].
[526] Note of call with [✂]; Note of call with [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; IBM's response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].
[527] Note of call with [✂].
[528] [✂] response dated [✂] to section 69 notice dated [✂].
[529] Jigsaw Customer Research, 28 September 2026, page 34, paragraph 157.
[530] For example, extra logins, duplicated provisioning and governance, reworking permissions etc. Jigsaw Customer Research, 28 September 2026, page 33, paragraph 153.

Windows Server and Linux simultaneously for several months, 'forcing the organisation to pay double infrastructure and licensing fees'.[531]

(c) The risks associated with switching mean some customers are reluctant to switch. One customer told us that due to its activity in a regulated industry, it is hesitant to adopt open-source Server OS solutions from a 'risk-mitigation approach'. It said that well-known and established technology stacks 'tend to be more readily recognised and accepted by regulators' leading to a 'more seamless auditing process'.[532] Additionally, our customer research found that migrating an Azure-Windows software estate to an Azure-Linux software estate risks breaking connections for what customers perceived to be 'minimal or no business benefit'.[533]

A.257 Customers' IT teams often have skills in Windows Server and would need to develop new skills to use an alternative Server OS.[534] Our customer research found that many businesses only had Microsoft-based in-house knowledge and were not willing to contemplate retraining and upskilling IT teams as switching away from Windows Server is perceived to have 'very little or no upside'.[535] A customer stated that it does 'not have the skills to support open source or consider a migration'.[536] In addition, one COTS software provider using Windows Server said that a barrier to using Linux is that its current IT team cannot support it.[537]

A.258 There is strong evidence that actual or perceived technical interoperability and integration between Windows Server and other Microsoft products influences customers' choice of Server OS and can create barriers to switching.

(a) Many customers (and resellers on behalf of their customers) chose Windows Server because of its integration with other Microsoft products such as Azure, SQL Server and security products. For example:

(i) Our customer research found that many customers regarded Windows Server as the 'default choice' as it aligned well with the wider Microsoft

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[531] [✂] response dated [✂] to section 69 notice dated [✂].

[532] Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions.

[533] Jigsaw Customer Research, 28 September 2026, page 84, paragraph 314. Regarding Microsoft's wider Business Software Ecosystem, our customer research further shows that some customers have to use Microsoft due to parent company requirements or because they operate under regulatory or sector policies that mandated Microsoft tools (eg public sector procurement frameworks). Additionally, our customer research found that boards and leadership were sometimes described as 'risk-averse and reluctant to accept upheaval without a clear return on investment'. Jigsaw Customer Research, 28 September 2026, page 21 paragraphs 90; and page 33 paragraph 152.

[534] One cloud provider stated that 'an IT department deeply trained in Windows-centric technologies (such as IIS, PowerShell, and Active Directory) cannot safely operate a Linux architecture without extensive retraining. Forcing teams to rapidly adopt entirely different frameworks (such as Bash scripting and Linux package management) introduces a critical skills gap, significantly elevating the risk of human error, configuration drift, and security vulnerabilities'. [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; Note of call with [✂].

[535] Jigsaw Customer Research, 28 September 2026, page 81, paragraph 301; and page 84 paragraph 312.

[536] [✂] response dated [✂] to voluntary request for information dated [✂].

[537] Note of call with [✂].

environment.[538] Our customer research found that customers thought retaining Windows Server made the migration to Azure and subsequent management of the IT estate easier.[539] A small number of respondents reported Microsoft Defender not interoperating with Linux Server OS.[540]

(ii) Integration with a broad range of Microsoft products was important for some customers. Our customer research found that customers often cited Windows Server's ability to seamlessly integrate with the wider Microsoft ecosystem, including Microsoft 365 applications, SQL Server, Active Directory and Microsoft's Identity and Access Management products as its 'key benefit.'[541] A customer stated that due to its reliance on Azure and its broader use of the Microsoft ecosystem, there are 'realistically no viable alternatives for Windows Server'.[542] Another customer said that the main technical benefit of using Windows Server was 'the end-to-end integration across Microsoft's ecosystem, including Windows Server, Active Directory/Entra ID, Microsoft 365, Intune, Teams, Exchange and SharePoint'.[543] Integration with specific products such as SQL Server,[544] Active Directory and Entra[545] was important for other customers and resellers.

(b) Submissions from Server OS providers suggest that integration with other Microsoft products is important to customers' choice of Server OS provider.

(i) One Server OS provider stated that competition for Server OS takes place through convincing enterprises and independent software vendors to develop their applications on [✂] platform and operating system, as opposed to on the Azure vertical stack.[546]

(ii) Another Server OS provider said that customers value interoperability and 'rarely' switch to an alternative Server OS, as this would mean

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[538] Jigsaw Customer Research, 28 September 2026, page 81, paragraph 299.
[539] Jigsaw Customer Research, 28 September 2026, page 81, paragraph 303.
[540] Jigsaw Customer Research, 28 September 2026, page 72, paragraph 275.
[541] Jigsaw Customer Research, 28 September 2026, page 81, paragraph 299.
[542] Note of call with [✂].
[543] [✂] response dated [✂] to questions in lieu of a call dated [✂].
[544] One customer stated that it uses Windows Server on Azure to run SQL Server, adding that while SQL Server can run on Linux-based Server OS, it is 'not as well supported as the Windows variant.' Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions.
[545] A customer said it uses Windows Server extensively, in part due to its integration with the Microsoft stack, including applications that require Windows Server. It said that Active Directory (which is one such application) is 'foundational' and tightly tied to the Microsoft ecosystem, and replacing it would require 'extensive transformation work and investment'. Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions. However, this customer also said that other than the link via identity services, it did not view Windows Server as being 'strongly integrated' with the wider Microsoft ecosystem. Note of call with [✂].
A reseller identified 'integration with Active Directory/Entra and Azure' as a reason why its customers chose Windows Server. [✂] response dated [✂] to voluntary request for information dated [✂].
Another reseller cited 'existing Microsoft estate and Active Directory dependencies' as a reason behind customers' choice of Windows Server. [✂] response dated [✂] to voluntary request for information dated [✂].
[546] [✂] response dated [✂] to section 69 notice dated [✂].

losing equivalent ecosystem integration. The provider added that Microsoft ecosystem compatibility heavily drives customer decisions.[547]

A.259 We have seen some evidence that commercial linkages between Windows Server and Microsoft's wider Business Software Ecosystem may influence customer choice of Server OS and can create barriers to switching.

(a) Evidence from customers and resellers suggests that some customers prefer to consolidate their software purchases, using a single provider for several product categories, which often benefits Microsoft[548] Reasons for this approach include that it can reduce complexity,[549] and allow customers to benefit from greater interoperability, [550] while potentially obtaining a better overall price for their software purchases.[551]

(b) Larger Microsoft customers (by revenue) buy Windows Server together with other Microsoft products,[552] and Windows Server can form part of a customer's wider Enterprise Agreement with Microsoft.

(c) One customer told us that, by purchasing Windows Server alongside SQL Server and Microsoft's productivity software, it secured larger Enterprise Agreement discounts.[553] Another customer said that using Windows Server with other Microsoft products leads to 'better value from the Microsoft Enterprise or CSP Agreement, through licence consolidation, and stronger leverage in EA negotiations'.[554] Other customers mentioned commercial benefits of using Windows Server alongside other Microsoft products.[555] A Server OS provider said that volume licensing discounts through multi-year Enterprise Agreements 'influences customer choices'.[556]

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[547] [✂] response dated [✂] to section 69 notice dated [✂].

[548] Note of call with [✂]; Note of call with [✂]; Note of call with [✂]; Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions and the note has been transferred to the case file for this investigation; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].

[549] Note of call with [✂].

[550] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to questions in lieu of a call dated [✂].

[551] [✂] response dated [✂], updating its previous response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

[552] UK customers who buy Windows Server together with products from all of the other four digital activities account for [80-90]% of all of Microsoft's UK revenue from Business Software Ecosystem (those who buy both SQL Server and Windows Server account for [80-90]% of Business Software Ecosystem revenues). See Appendix B: Customer data analysis.

[553] Note of call with [✂].

[554] [✂] response dated [✂] to questions in lieu of a call dated [✂].

[555] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].

[556] [✂] response dated [✂] to section 69 notice dated [✂].

A.260 Evidence we have seen to date did not show a material difference in switching barriers on the cloud versus on premises, with the determining factor of switching effort being an existing workload's characteristics.

(a) Our customer research found that the cost of migrating from Windows Server to Linux on Azure may be 'seen as prohibitive, given the amount of downtime during what would be a technically complex migration'.[557] Additionally, our customer research found that customers thought any such migration exercise risked breaking connections for what was perceived to be 'minimal or no business benefit'.[558]

(b) Some third parties said that there were no major differences between switching workloads on premises versus switching on the cloud.[559]

(c) Some third parties said that some aspects of switching might be easier in the cloud, but material barriers to switching remain. A cloud provider stated that the difficulty of switching Server OS provider for an existing workload mainly depends on the workload's characteristics as opposed to its location.[560] It said that, while cloud infrastructure may make some aspects of switching easier (eg customers may set up temporary Linux environments or adjust infrastructure capacity without procuring additional hardware), the key switching costs originate in the application layer, which applies to both cloud and on-premises environments.[561] A Server OS provider said that switching cloud workloads from Windows Server to Linux can be easier because it is possible to test separate Linux virtual servers without buying hardware, but the difficulty in switching depends on the workload's 'Windows-specific dependencies, application architecture, and testing requirements'.[562] Another Server OS provider said that, while from an infrastructure perspective it may be easier to switch Server OS on the cloud, the required effort at the application layer remains 'equally difficult regardless of environment'.[563]

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[557] Jigsaw Customer Research, 28 September 2026, page 84, paragraph 314.
[558] Jigsaw Customer Research, 28 September 2026, page 84, paragraph 314.
[559] One cloud provider stated that there are 'no major differences' in effort between switching from Windows Server to Linux-based Server OS on premises or in the cloud. It added that switching to Linux is 'simply not possible' for workloads which only run on Windows Server. [✂] response dated [✂] to section 69 notice dated [✂].
A Server OS provider stated that the ease or difficulty of switching Server OS for an existing workload depends on the application and the proposed benefit of the switch as opposed to the deployment type. [✂] response dated [✂] to section 69 notice dated [✂]. The provider stated that 'fundamentally, a cloud workload should be similar in terms of the development, testing and roll out'. It added that Microsoft making the 'language and .COM libraries' available for Linux makes a Server OS switch possible on premises as well as on the cloud. [✂] response dated [✂] to section 69 notice dated [✂].
[560] [✂] response dated [✂] to section 69 notice dated [✂]. [✂]; [✂] response dated [✂] to section 69 notice dated [✂].
[561] [✂] response dated [✂] to section 69 notice dated [✂].
[562] [✂] response dated [✂] to section 69 notice dated [✂]. The provider further stated that once customers have 'committed to the Microsoft platform and Windows operating system, transitioning to Linux can be challenging'.
[563] [✂] response dated [✂] to section 69 notice dated [✂].

A.261 Overall, the evidence we have seen to date shows that Windows Server customers face significant barriers to switching existing workloads to an alternative Server OS both on premises and in the cloud.

Ability to switch at transition from on premises to cloud

A.262 Workloads can be 'modernised', which means shifting from traditional deployment options, such as running a workload within a virtual machine, to more cloud native components, such as services offering 'platform as a service', and other cloud architecture components.[564] When workloads are modernised, various changes are made to how the workload is run, which may include changing the underlying Server OS.

A.263 Customers do not have to modernise existing workloads when migrating them to the cloud – the two are not synonymous. As on-premises workloads are migrated to the cloud, some are modernised and some are lifted and shifted (that is moved with only minimal edits to the underlying application code) to reduce risk and costs. Workloads can be moved to the cloud without modernising and can also be modernised while on premises or once on the cloud. As set out in more detail below, it is modernisation, as opposed to migration, which has the potential to trigger switching Server OS for customers when providing a meaningful opportunity to reduce application dependencies.

A.264 This section considers the extent to which customers migrating workloads to the cloud (and any related modernisation) is likely to lead to a switch in Server OS provider.

A.265 A substantial proportion of workloads are still done on premises. The estimates we received are mixed, ranging from 21% to 70% of workloads being on premises, but collectively they suggest that on-premises usage is over one-third of total usage but could be much higher.[565]

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[564] Overview of Azure Workload Modernization | Microsoft Community Hub, accessed 11 September 2026.

[565] We received the following estimates:

- Microsoft submitted data from a 'recent' IDC report that [✂] of Server OS deployments were on premises. It cited another IDC report on Linux cloud migrations that estimates that the cloud share of the total server vCPU installed base was approximately [✂] in 2024 and continued to increase thereafter". (Microsoft's response [✂] to section 69 notice dated [✂].
- A cloud provider cited a 2024 industry report showing that globally, approximately 70% of all IT workloads are run on premises as only 30% of workloads have moved to the cloud. ([✂] response dated [✂] to section 69 notice dated [✂], citing Cloud revenues poised to reach $2 trillion by 2030 amid AI rollout | Goldman Sachs.
- Another cloud provider said that Gartner has estimated that the global ratio of on-premises to cloud deployments of compute stood at 40:60 respectively in 2024. ([✂] response dated [✂] to section 69 notice dated [✂].
- A Server OS provider said that it estimated approximately 35-45% of total Server OS volume was on premises, with the remainder on the cloud. ([✂] response dated [✂] to section 69 notice dated [✂].

A.266 The evidence we have seen to date shows that Microsoft is encouraging Windows Server customers to migrate to Azure cloud, that new Azure customers use Windows Server and on-premises licences have been transferred to Azure cloud.

(a) A Microsoft internal document states that '[✂]'.[566] Another internal document states that Microsoft is '[✂]'. [567]

(b) New customers to Azure tend to use Windows Server. In 2025, [✂] from [✂] Azure customers in the UK ([✂] by revenue) came from those who used Windows Server in their first year on Azure. For new Azure customers that use Windows Server, Windows Server spend accounted for [✂] of their total spend in their first year on Azure, and Windows Server accounted for [✂] of all Server OS-related vcore hour usage for these customers.[568]

(c) Azure Hybrid Benefit is used [✂] on Azure, which suggests that Windows Server licences have been transferred from on premises to Azure cloud. In 2025, [✂] of UK Azure revenues were generated by customers who used Azure Hybrid Benefit for Windows Server, [✂] were generated by customers using either Azure Hybrid Benefit or pay as you go licences for Windows Server.[569]

A.267 When customers migrate workloads to the cloud, the evidence we have seen to date indicates that lift and shift migrations are common for many customers to minimise the risks and costs of such migrations:

(a) A customer stated that, when it migrated the majority of its workloads to the cloud, it adopted a lift and shift approach, mostly retaining the same Server OS to minimise any migration risks.[570] More broadly, our customer research found that many Microsoft customers who migrated to Azure retained Windows Server for integration and ease of migration purposes.[571] Indeed, our customer research found that when migrating, Windows Server was the 'default choice' to ensure smooth migration and ongoing management.[572]

(b) One cloud provider stated that while many customers undertake some modernisation as part of their cloud migration, the 'most popular method' of cloud migration is currently 'lift-and-shift', where the customer generally

[566] Microsoft, Internal document, response to section 69 notice dated [✂].
[567] Microsoft, Internal document, response to section 69 notice dated [✂].
[568] Microsoft's response [✂] to section 69 notice [✂].
[569] Microsoft's response dated [✂] to section 69 notice dated [✂]
[570] Note of call with [✂] on [✂].
[571] Jigsaw Customer Research, 28 September 2026, page 80, paragraph 297.
[572] Note that this finding was in the context of many businesses deciding to go with Azure when migrating to the cloud. Jigsaw Customer Research, 28 September 2026, page 79, paragraph 291.

retains the same software it was running on premises.[573] It also submitted that it had invested significant efforts in modernising customer workloads to make them less dependent on Microsoft software, with 'limited success'. For example, it submitted that between 2023 and 2024, [✂] of Windows usage on [✂] was eliminated as a result of modernisation efforts, representing a [✂] in [✂] customers' estimated [✂] on Microsoft licencing costs on [✂].[574] The cloud provider stated that this was driven by the critical nature of Microsoft's productivity software and due to Linux-based Server OS not meeting all of the customers' use cases.[575]

(c) Another cloud provider stated that 'traditional enterprises predominantly employ a lift and shift approach' for reasons including business continuity, minimising associated disruption, downtime and financial losses, avoiding risk and complexity as well as optimising resource allocation.[576]

(d) A Server OS provider said that cloud migrations are 'heavily dominated' by lift and shift strategies to minimise risks, costs and migration-time, with only a 'critical subset of high-value, business-critical' workloads modernised during initial migration. Though, once in the cloud, it said modernisation happens 'over time' and increases the likelihood of switching from Windows Server to Linux, but some legacy systems, such as COTS applications, cannot easily be modernised.[577]

(e) Another Server OS provider stated that 'it depends on the customer's objectives' whether a workload is modernised at the point of the cloud migration or once it is already on the cloud, and that there is no 'predictable pattern' of lifting-and-shifting or modernising when moving workloads to the cloud. However, the Server OS provider also stated that, if customers are 'moving their data center wholesale to the cloud, they are more likely to lift and shift existing applications.'[578]

A.268 However, we also note that one Server OS provider stated that modernisation of applications migrating to the cloud is 'common but not universal', with its prevalence depending on a customer's migration strategy.[579] The provider

[573] [✂] response dated [✂] to section 69 notice dated [✂].
[574] [✂] response dated [✂] to section 69 notice dated [✂].
[575] [✂] response dated [✂] to section 69 notice dated [✂].
[576] [✂] response dated [✂] to section 69 notice dated [✂].
[577] [✂] response dated [✂] to section 69 notice dated [✂].
[578] [✂] response dated [✂] to section 69 notice dated [✂]. We note that the Server OS provider also stated that where customers are planning to modernise an application, undertaking the modernisation as part of the cloud migration provides savings from having to go through the testing and rollout cycle twice. However, we also note that the same Server OS provider stated in relation to RDBMS that in its experience, 'customers are generally more likely to undertake substantial application modernisation after they have established workloads in the cloud rather than as part of the initial migration.' [✂] response dated [✂] to section 69 notice dated [✂].
[579] [✂] response dated [✂] to section 69 notice dated [✂].

explained that, while some prefer to migrate workloads with limited changes, others may modernise applications as part of their migration to the cloud or after the workload has been migrated to the cloud.[580]

A.269 Evidence we have seen to date shows that modernising workloads can be highly complex, costly and time-consuming:

(a) One cloud provider said that examples of modernisation projects are 'rare', because it is extremely time-consuming (often lasting a number of years), costly, and complex.[581] Modernisation required 'significant investment' in rewriting code, adjusting architecture, ensuring data portability and retraining IT staff.[582] The cloud provider further stated that activities associated with modernisation can create 'substantial risks to the continuity and performance of business-critical applications'.[583]

(b) A customer said that it is hard to modernise individual elements in the stack due to the dependencies between the layers. It gave the example that modernising an operating system can be slow owing to its hard dependencies on the application layer.[584]

A.270 For customers that do modernise workloads, some do switch the underlying Server OS. For example, one Server OS provider submitted that modernisation 'significantly increases the likelihood of switching from Windows Server to Linux'[585] as it removes underlying operating system dependencies and customers want to eliminate Windows licencing costs and standardise their open-source cloud infrastructure.[586] However when a customer is modernising, the original Server OS still has an advantage, for instance due to preferences for the Microsoft ecosystem:

(a) A customer that seeks to modernise as it migrates workloads to the cloud stated that it 'could not think of a situation where workloads have moved to a non-Microsoft product when migrating from on premises to cloud'.[587] It said that it was working with Microsoft to simplify and modernise its IT estate.[588]

(b) Another customer, which said that it prefers to modernise and move away from Windows Server as it migrates workloads to the cloud, noted that some

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[580] [✂] response dated [✂] to section 69 notice dated [✂].
[581] [✂] response dated [✂] to section 69 notice dated [✂].
[582] [✂] response dated [✂] to section 69 notice dated [✂].
[583] [✂] response dated [✂] to section 69 notice dated [✂].
[584] Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions.
[585] We note that the significant barriers to switching described above mean that any increase is from very low initial levels of switching.
[586] [✂] response dated [✂] to section 69 notice dated [✂]. The Server OS provider also stated that 'some' customers retain Windows Server post-modernisation.
[587] Note of call with [✂].
[588] Note of call with [✂].

Windows Server workloads will remain longer term due to application compatibility and the availability of alternatives.[589] It said that its 'technology modernisation journey'[590] reduces dependency on the Windows ecosystem 'over time' and that its 'long-term' direction of travel is away from Windows Server.[591] This customer said that currently the majority of its server estate (approximately two-thirds) runs on Windows Server with the remainder on Linux.[592]

(c) One cloud provider stated that modernisation efforts are 'unlikely' to result in a customer 'completely' switching from Windows Server to Linux.[593] It also said modernisation often focuses on 'right-sizing' underutilised resources (eg ensuring customers do not pay for licences they are not utilising) rather than moving customers away from Microsoft.[594]

(d) Another cloud provider said that 'many' customers keep Windows Server post-modernisation.[595] The cloud provider stated that while modernisation can create an opportunity to switch, switching adds a distinct layer to an already complicated and resource-intensive exercise.[596] Customers may thus seek to modernise within the Windows environment. The cloud provider further added that modernisation across an IT estate can take many years.[597]

(e) A Server OS provider stated that, even when customers modernise and upgrade applications, the existing Server OS has an advantage as components can be more readily reused.[598] This implies that it may be easier to continue to use Windows Server despite modernisation.

A.271 In addition, we currently consider that Microsoft's licensing terms for existing Windows Server users who are moving Windows Server workloads to AWS and Google Cloud reflect that Microsoft considers customers have strong reasons to use Windows Server over Linux. Competing cloud providers and a Server OS provider have submitted that Microsoft's licensing practices mean it is significantly more expensive to use Windows Server on some competing clouds relative to

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[589] Note of call with [✂].
[590] Where applications move from Windows to technologies that support Linux and then to containerised or serverless architectures.
[591] Note of call [✂].
[592] Note of call with [✂].
[593] [✂] response dated [✂] to section 69 notice dated [✂].
[594] [✂] response dated [✂] to section 69 notice [✂].
[595] [✂] response dated [✂] to section 69 notice dated [✂]. We asked the cloud provider 'How likely modernisation is to result in the organisational customer switching Server OS from Windows Server to Linux' and gave following options to choose from: (i) 'Most keep Windows Server', (ii) 'Many keep Windows Server', (iii) 'Some keep Windows Server' and (iv) 'Few keep Windows Server'.
[596] [✂] response dated [✂] to section 69 notice dated [✂]. The cloud provider added that a switch to Linux-based Server OS requires the modernisation project to remove or replace an application's individual Windows-specific dependencies which is a non-trivial multi-step process. Where an application has deep or numerous Windows-specific dependencies, a switch to Linux-based Server OS 'may effectively require a near-complete rewrite.'
[597] [✂] response dated [✂] to section 69 notice dated [✂].
[598] [✂] response dated [✂] to section 69 notice dated [✂].

Azure,[599] this is in line with the CMA's findings in the Cloud Services Market Investigation.[600] We consider that this price differential is evidence that Microsoft's existing customers have limited ability to switch since Microsoft could only sustain higher prices for Windows Server on AWS and Google Cloud if it was confident that customers would not simply switch to an alternative Server OS provider.

A.272 This was supported by the notes section of a Microsoft presentation [✂], which said:

[✂].[601]

A.273 Therefore, the evidence we have seen to date shows that generally customers do not consider switching from Windows Server to Linux for many on-premises workloads that are migrated to the cloud.

The impact of AI on barriers to switching

A.274 There are several AI-powered migration tools, including Microsoft's GitHub Copilot, Amazon's Q Developer, AWS Transform, Google's Jules, Google's Gemini Code Assist and IBM's watsonx Code.[602] These are intended to make it easier for customers to switch workloads to alternative Server OSs.

A.275 We have seen little evidence to date that these tools have thus far been successful in migrating customers away from Windows Server.

(a) A cloud provider said that while modernisation tools make switching 'easier, faster, and more accessible for customers of all sizes', barriers such as Microsoft's licencing restrictions and customers' reliance on key Microsoft software will continue to limit switching.[603] The cloud provider submitted that, despite sustained investments in modernisation including through AI tools and dedicated staff, there has been minimal reduction in Microsoft related workloads on its cloud.[604]

(b) Another cloud provider submitted that while AI tools reduce time and effort required for 'discrete elements' of the modernisation process (eg rewriting portions of the source code), they do not make modernisation straightforward or remove key challenges faced by customers.[605] The cloud provider stated

[599] [✂] Response to DMU Remedies Call Follow-up Questions of [✂] in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. This Server OS provider referred to the CMA's Cloud Infrastructure Services Market Investigation findings in its response.
[600] Cloud Infrastructure Services, Final decision report, 31 July 2025, paragraph 7.604.
[601] Microsoft, [✂], response to section 69 notice dated [✂].
[602] Microsoft's response dated [✂] to section 69 notice dated [✂].
[603] [✂] response dated [✂] to section 69 notice dated [✂].
[604] [✂] response dated [✂] to section 69 notice dated [✂].
[605] [✂] response dated [✂] to section 69 notice dated [✂]. [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

that customer uptake of AI-assisted code modernisation has been extremely limited to date.[606] It further stated that these tools should be seen as 'assistive and accelerative at best'.[607]

(c) As noted above in the section on 'Barriers to switching for existing Server OS workloads', customers using COTS applications do not have access to the source code necessary to re-write the application to work on a different Server OS. This barrier cannot be overcome by AI-powered tools.

(d) No customers we spoke to reported having direct experience using AI-powered modernisation tools.

A.276 Therefore, while AI-powered tools have the capability to reduce the cost of switching to a degree, evidence we have seen to date shows that overall barriers remain significant.

Summary of competition for existing workloads

A.277 Overall, our provisional view is that Windows Server customers face significant barriers to changing Server OS for existing workloads, meaning they are locked into their choice of Windows Server for the lifetime of these workloads which is typically for multiple years. As a result, a large fraction of Microsoft's annual revenues from Windows Server will relate to workloads for which it faces very limited competition.

Competition for new workloads

A.278 Linux-based Server OS usage is growing, particularly its on-cloud usage (see shares of supply estimates). As set out above, there is limited switching of existing workloads from Windows Server to Linux-based Server OS, even at the point of migrating workloads to the cloud. Therefore, the growth in Linux usage is likely to be driven by Linux winning new workloads that did not exist before - either on premises or in the cloud.

A.279 We have considered the extent to which Linux and Windows Server are competing for these new workloads. The evidence set out in this section suggests while Linux is the leading Server OS for workloads in the cloud, this reflects the growth of cloud-native and AI workloads for which Linux is typically better suited than Windows OS. However, strong product differentiation means that Linux poses only a limited constraint for new Server OS workloads that are well-suited to Windows Server.

[606] [✂] response dated [✂] to section 69 notice dated [✂].
[607] [✂] response dated [✂] to section 69 notice dated [✂].

Microsoft's submissions

A.280 Microsoft has submitted 'Linux is now the default platform for modern server and cloud deployments' and 'cloud native workloads are overwhelmingly Linux-based and containerized'.[608] Microsoft said that 'in the era of cloud computing and AI', the relevance of Windows Server is 'set to decline' while new workloads are 'increasingly dominated' by Linux.[609] Microsoft also submitted that 'modern AI workloads overwhelmingly rely on Linux-based infrastructure, containers, open-source frameworks, GPU-accelerated computing, and cloud-native development environments'.[610] It also said that the preference for Linux reflects its 'advantages in efficiency, portability across cloud platforms, and the breadth of tools and developer expertise available to support it'.[611]

The drivers of Server OS growth

A.281 In order to understand the drivers behind the growth of Linux, we gathered evidence on the nature of workloads that drive Server OS growth more generally.

A.282 The evidence we have seen to date suggests that Server OS is growing steadily. Using the data we gathered to estimate the shares of supply discussed above, overall Server OS revenues have grown at an average annual rate of 8.6% globally, and 5.8% in the UK, between 2020 and 2025.[612]

A.283 However, some of this growth may come from customers expanding existing workloads rather than new workloads, ie workloads that did not exist before (on cloud or on premises) being added. This growth rate also reflects any price increases relating to existing workloads. It is therefore not possible to quantify the size of the 'flow' of new workloads.

A.284 The qualitative evidence we have seen to date is somewhat mixed on whether current cloud workloads are primarily cloud native (that is, new workloads) or have migrated from on premises (that is, existing workloads).

(a) A Server OS provider stated that 'a majority' of new Server OS cloud workloads will be cloud-native while 'a minority' will be migrations.[613]

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[608] Microsoft's submission to the CMA dated [✂].
[609] Microsoft's submission to the CMA dated [✂].
[610] Microsoft's submission to the CMA dated [✂].
[611] Microsoft's submission to the CMA dated [✂].
[612] CMA calculations based on data submitted by Server OS providers in response to multiple section 69 notices. We note that these figures are CAGRs.
[613] [✂] response dated [✂] to section 69 notice dated [✂]. The Server OS provider stated that new software today is built in the cloud using technologies that favour Linux-based Server OS. However, a 'smaller but substantial portion of newly deployed cloud workloads stems from ongoing data center consolidations, hybrid expansions, and legacy migration initiatives'.

(b) Another Server OS provider stated that 'many' new Server OS cloud workloads will be cloud-native.[614]

(c) One cloud provider stated that 'some' new Server OS cloud workloads will be cloud-native.[615] It stated that it is 'reasonable to estimate that "many" or "most" new Server OS cloud workloads are migrated workloads, and only "few" or "some" are cloud-native'.[616] It also stated that the migration will be an important driver of future cloud growth.[617] The cloud provider noted Microsoft's statement that '[t]he market opportunity for suppliers to convert on-premises IT workloads to inaugural or 'first time in the cloud' workloads is huge and dwarfs the size of the current cloud market.[…]'.[618]

A.285 The evidence indicates that workloads can be in place for substantial periods of time, or adapted from legacy workloads, and therefore that there will continue to be a balance of new and existing workloads.[619] Of course, as 'new' workloads become existing workloads they will face the barriers to switching detailed above.

Contestability of new workloads between Windows and Linux

A.286 The nature of new workloads will determine whether they are contestable by both Windows Server and Linux or if one or the other is more suitable.

A.287 [✂]. It said that enterprises 'are increasingly focused on unlocking innovation, reducing costs, and modernizing applications to stay competitive. Central to that shift is the deployment of AI-enabled workloads.'[620]

A.288 New cloud workloads, particularly cloud-native and AI workloads, are often deployed using containers, which package an application with the software it needs to run, making it easier to deploy consistently across different computing environments. Kubernetes is commonly used to manage these containers at scale.

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[614] [✂] response dated [✂] to section 69 notice dated [✂]. We asked the Server OS provider the following question: 'Of new Server OS cloud workloads, please tell us what proportion (in your view) of these workloads are 'cloud-native' compared to migrations from on-premises.' The question also included a table with the following options to choose from: 'All', 'Most', 'Many', 'Some', 'Few' and 'None'.

[615] [✂] response dated [✂] to section 69 notice dated [✂]. We asked the cloud provider the following question: 'Of new Server OS cloud workloads, please tell us what proportion (in your view) of these workloads are 'cloud-native' compared to migrations from on-premises.' The question also included a table with the following options to choose from: 'All', 'Most', 'Many', 'Some', 'Few' and 'None'.

[616] [✂] response dated [✂] to section 69 notice dated [✂]. The cloud provider used the share of digital natives and traditional enterprises to proxy these estimates. It cited a Gartner market report that found that in 2024, 9% of the total addressable market in the UK was digital natives, with the rest traditional enterprises. The cloud provider said that as digital native customers typically do not have an on-premises IT estate, 'materially all of their workloads are cloud-native workloads'. Conversely, the 'the vast majority of traditional enterprises' Server OS cloud workloads will be migrated workloads.' [✂] response dated [✂] to section 69 notice dated [✂].

[617] [✂] response dated [✂] to section 69 notice dated [✂].

[618] [✂] response dated [✂] to section 69 notice dated [✂].

[619] As discussed above in 'Competition for existing workloads', there is evidence that customers do not frequently review their Server OS options once a workload has become embedded in their IT infrastructure and therefore these workloads may remain in place for a substantial period of time before being reconsidered.

[620] [✂] submission to the CMA dated [✂].

One Server OS provider said that it expects Linux's position to strengthen over the next five years due to growth in Kubernetes, containers and especially AI infrastructure.[621]

A.289 Evidence we have seen to date suggests that customers use Windows Server and Linux-based Server OS for specific use cases. While Windows Server is required for specific Microsoft-related workloads, Linux-based Server OS is used for specific cloud deployments.

A.290 Microsoft offers Linux-based Server OS on Azure. A Microsoft internal document says that '[✂]'.[622]

A.291 As noted above (section on 'Barriers to switching for existing Server OS workloads'), actual or perceived technical interoperability and integration between Windows Server and other Microsoft products and commercial linkages with other Microsoft products can influence customers' choice of Server OS. This will apply to new workloads, not just existing ones.

A.292 Evidence we have seen to date suggests that there are some new workloads where Windows Server is best suited and Linux is not well-suited. This is generally due to application dependency, network effects or interlinkages with the wider Microsoft Business Software Ecosystem.

(a) Evidence from a cloud provider and a Server OS provider suggests that Windows Server is the only viable or best suited Server OS choice for certain new workloads. [✂].[623] Many applications have historically been developed for Windows Server because it is a long-established Server OS, which has led to network effects. The same cloud provider said that Microsoft's 'third-party ecosystem' of applications 'significantly exceeds' the number built for other Server OSs. It said that many of the largest legacy as well as modern enterprise applications were 'built natively' for Windows Server. It said that this is mainly driven by Microsoft's 'historical and ongoing market power and powerful indirect network effects'. It said that historically developers prioritised applications for Windows Server because it was the only viable route to market, creating vast libraries of Windows Server applications and perpetuating the attractiveness of Windows Server for developers.[624]

(b) Where customers prefer Microsoft products or Windows Server specifically, they are likely to choose Windows Server for new workloads. For example, a Server OS provider said that customers which have invested into the Windows Server ecosystem and are running a Microsoft application stack are

[621] [✂] response dated [✂] to section 69 notice dated [✂].
[622] [✂], response to section 69 notice dated [✂].
[623] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].
[624] [✂] response [✂] to section 69 notice dated [✂]. [✂].

likely to favour Windows Server for new cloud-native workloads.[625] A customer said that Windows Server is its primary choice and it uses Linux for workloads which are not well-suited to Windows Server.[626] Our customer research found that where the IT team was heavily (or entirely) Microsoft trained and comfortable, it drove organisations to stick with Windows in order to make management of their IT estate as efficient and effective as possible.[627] Our customer research also found that for the majority of organisations using Windows Server, its use was 'never questioned' within the organisation, it was simply the 'default, status quo operating system'.[628] Our customer research also found that some customers felt that 'running alternative or additional non-Microsoft servers would add a layer of complexity to being able to maintain a secure environment' which would introduce risk without a clear benefit.[629] One participant in our customer research said that it uses Windows Server on premises because 'it's the de facto leader in what we do… everybody looks at Microsoft and goes; we offer an application that sits on it… But most of it out of the box works with Windows Server'.[630]

(c) The cloud provider cited in (a) above also said that for most cloud-native Server OS workloads where a customer might consider using Windows Server, Linux is a weak competitor, and that this is a 'large portion of Server OS workloads'.[631] However, two Server OS providers, and consistent with Microsoft's submission that cloud native workloads are 'overwhelmingly' Linux-based,[632] thought there were 'few' new cloud-native workloads where Windows Server was the most suitable provider for customers' needs. Rather both Server OS providers said Microsoft would be a strong competitor for specific Microsoft-related workloads.[633]

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[625] [✂] response dated [✂] to section 69 notice dated [✂].
[626] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[627] Jigsaw Customer Research, 28 September 2026, page 78, paragraph 287.
[628] Jigsaw Customer Research, 28 September 2026, page 79, paragraph 294.
[629] Jigsaw Customer Research, 28 September 2026, page 82, paragraph 304.
[630] Jigsaw Customer Research, 28 September 2026, page 82.
[631] [✂] response dated [✂] to section 69 notice dated [✂]. The cloud provider stated that this is particularly the case for business-critical cloud-native workloads (eg business applications, email and collaboration platforms).
[632] Microsoft's submission to the CMA dated [✂].
[633] We asked the Server OS providers to set out their view of competition for new Server OS cloud-native workloads in a table, noting whether 'all', 'most', 'many', 'some', 'few' or 'none' applied to the following: (a) 'Share of Server OS workloads where both Linux and Windows Server compete strongly with each other (ie both are suitable for customers' needs and customers consider them both as strong options)', (b) 'Share of Server OS workloads where Linux is a weak competitor to Windows Server (ie Windows Server is most suitable for customers' needs and customers do not consider Linux as a strong option)' and (c) 'Share of Server OS workloads where Windows Server is a weak competitor to Linux (ie Linux is most suitable for customers' needs and customers do not consider Windows Server as a strong option)'. One of these providers said that Windows Server is a strong competitor where customers are already running a Microsoft application stack. ([✂] response dated [✂] to section 69 notice dated [✂]. The other confirmed that Linux is a weak competitor to Windows Server (ie Windows Server is most suitable for customers' needs and customers do not consider Linux as a strong option) when wider Microsoft dependencies exist. ([✂] response dated [✂] to section 69 notice dated [✂].

A.293 For many new workloads, especially cloud-native and AI workloads, Linux-based Server OS will be the required or best suited Server OS choice. Furthermore, the development of tools and expertise in Linux has led to the creation of network effects for certain workloads which means that initial use of Linux for cloud-native workloads has become self-sustaining and increasingly difficult to dislodge.

(a) As noted above, AWS was the first cloud provider. When AWS and GCP were first established, they both used Linux-based Server OS.[634] For this reason, Linux was widely used for cloud-native workloads as Windows Server was not an option.

(b) Linux appears to be particularly suited for certain workloads, particularly cloud-native and AI workloads.

(i) In line with Microsoft's submission that managed Kubernetes services are typically Linux-first,[635] some alternative Server OS providers stated that certain workloads, such as cloud-native applications, containers and Kubernetes, are designed for Linux by default.[636] Consistent with this, a customer said that Linux is required to run the control plane for the Kubernetes technology it deploys for containerisation.[637]

(ii) Another customer said that Linux-based Server OS offers technical advantages in some environments (eg resource efficiency and hardware utilisation) and has traditionally been easier to manage at scale.[638] Moreover, our customer research shows that Linux is seen by some as 'the best choice' for certain workloads, including web hosting, web development and certain niche applications.[639]

(iii) According to one Server OS provider, customers and other third parties have a broader choice of cloud providers available to them if they develop applications on Linux.[640]

(iv) Our customer research also found that the decision to use Linux was often driven by developer teams who were comfortable in a Linux

[634] One alternative Server OS provider stated that the 'simplest explanation' for Linux-based OSs having a higher prevalence on the cloud than Windows Server is that AWS and Google, as early cloud entrants, entered with Linux-based servers. [✂] response dated [✂] to section 69 notice dated [✂].
[635] Microsoft's submission to the CMA dated [✂].
[636] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].
[637] Note of call with [✂].
[638] Note of call with [✂].However, the customer also noted that Windows Server has improved in this regard over time.
[639] Jigsaw Customer Research, 28 September 2026, paragraph 316.
[640] [✂] response dated [✂] to section 69 notice dated [✂].

environment (as well as being comfortable in a Windows environment[641]).[642]

(v) Two Server OS providers considered that Linux-based Server OS is likely to be chosen for new cloud-native Server OS workloads,[643] with another Server OS provider considering that Linux-based Server OS will be the most suitable for customers' needs for 'some' workloads.[644]

(vi) One cloud provider stated that Linux-based Server OS competes strongly for a 'narrower subset of workloads', including digital native customers' workloads and workloads such as data analytics, AI and containerisation.[645]

(c) Linux may be lower cost than Windows Server.

(i) One cloud provider said that technology companies and startups tend to use Linux-based Server OSs due to their lower cost and higher security.[646]

(ii) A Server OS provider said Microsoft's licencing practices create an incentive for customers to use Linux outside of Microsoft Azure as they make Windows Server more expensive to run on rival clouds.[647]

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[641] Conversely, regarding Windows Server, our customer research found that many of the IT teams' skillsets were purely Microsoft based and using an alternative, such as Linux, would require retraining. Jigsaw Customer Research, 28 September 2026, page 81, paragraph 301.
[642] Jigsaw Customer Research, 28 September 2026, page 85, paragraph 316.
[643] We asked one Server OS provider to set out their view of competition for new Server OS cloud-native workloads in a table, noting whether 'all', 'most', 'many', 'some', 'few' or 'none' applied to the following: (a) 'Share of Server OS workloads where Linux competes strongly with Windows Server', (b) 'Share of Server OS workloads where Linux is a weak competitor to Windows Server' and (c) 'Share of Server OS workloads where Windows Server is a weak competitor to Linux'. For other Server OS providers, we provided a variation of these categories as a clarification to the question: (a) 'Share of Server OS workloads where both Linux and Windows Server compete strongly with each other (ie both are suitable for customers' needs and customers consider them both as strong options)', (b) 'Share of Server OS workloads where Linux is a weak competitor to Windows Server (ie Windows Server is most suitable for customers' needs and customers do not consider Linux as a strong option)' and (c) 'Share of Server OS workloads where Windows Server is a weak competitor to Linux (ie Linux is most suitable for customers' needs and customers do not consider Windows Server as a strong option)'. One Server OS provider confirmed that Windows Server is a weak competitor to Linux (ie Linux is most suitable for customers' needs and customers do not consider Windows Server as a strong option) for 'most' new cloud-native Server OS workloads. This includes Kubernetes, containers and open-source infrastructure. [✂] response dated [✂] to section 69 notice dated [✂]. Another stated that customers would 'likely choose' Linux-based Server OS providers over Windows Server for its higher flexibility, unless there are specific Microsoft dependencies or purchase agreements. [✂] response dated [✂] to section 69 notice dated [✂].
[644] The Server OS provider confirmed that Windows Server is a weak competitor to Linux (ie Linux is most suitable for customers' needs and customers do not consider Windows Server as a strong option) for 'some' new cloud native workloads. The Server OS provider added that this will be particularly the case where customers are not comprehensively using Microsoft solutions and have invested in alternative systems. [✂] response dated [✂] to section 69 notice dated [✂].
[645] [✂] response dated [✂] to section 69 notice dated [✂].
[646] [✂] response dated [✂] to section 69 notice dated [✂].
[647] [✂] response dated [✂] to section 69 notice dated [✂]. This Server OS provider referred to the CMA's Cloud Infrastructure Services Market Investigation findings in its response. The Server OS provider further stated that 'new workloads skew Linux'.

(iii) Particularly in the cloud, Linux-based Server OSs can incur lower costs compared to Windows Server as adding Linux virtual machines does not lead to additional licencing costs only the additional compute costs.[648]

(d) As there are benefits to using Linux and it was initially the only option when developers started creating cloud workloads, network effects for these workloads developed; leading to developer expertise and tools built for Linux on cloud. For example:

(i) One Server OS provider said that developers may choose its open-source Linux product because it is 'open source, widely available across public clouds, commonly used in development environments, and supported by a large ecosystem of open-source frameworks and tools'.[649]

(ii) One respondent quoted in our customer research said that Linux has a 'massive community' and 'if you had an issue, it's probably very well documented out there and other people can basically chip in and help on online communities'.[650]

(e) The existence of network effects for certain workloads associated with Linux-based Server OS is consistent with:

(i) Microsoft's submissions above that it considers that open-source frameworks, and the breadth of tools and developer expertise to support Linux, are advantages to using Linux; and

(ii) Findings showing a well-established pattern of outcomes in operating systems markets more generally, including those set out in a US federal District Court's findings of fact in U.S v Microsoft in 1999,[651] in the CMA's Final Decision Reports in its SMS investigations into Apple and Google's mobile platforms (and in particular the findings on mobile operating systems),[652] and earlier in this document in relation to our proposed view on Microsoft's market power in PC OS.[653]

A.294 We asked third parties about the total magnitude of the new workloads for which both Windows Server and Linux-based Server OS are well-placed to compete.

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[648] Jigsaw Customer Research, 28 September 2026, page 85, paragraph 317. We note that this may only apply to free open-source Linux-based Server OS.
[649] [✂] response dated [✂] to section 69 notice dated [✂].
[650] Jigsaw Customer Research, 28 September 2026, page 86.
[651] Antitrust Division | U.S. V. Microsoft: Court's Findings Of Fact, paragraph 39, accessed by the CMA 21 September 2026.
[652] Strategic Market Status Investigation into Google's Mobile Platform, Final Decision, 22 October 2025, page 164. Strategic Market Status Investigation into Apple's Mobile Platform, Final Decision, 22 October 2025, page 133.
[653] See sub-section 'Competition in PC OS', in Chapter 5 'SEMP assessment'.

Third parties were unable to provide information on the total magnitude of these workloads.

A.295 However, our provisional view is that taking the evidence we have seen to date in the round, Windows Server and Linux do not directly compete for a large proportion of new cloud-native Server OS workloads. Rather, Linux is best suited for modern cloud-native deployments where Windows Server is not considered a close alternative. Windows Server is best suited for other new deployments, for example where there are important dependencies to other Microsoft products or where customers have skills and expertise in Windows Server.

(a) A cloud provider stated that Linux-based Server OS and Windows Server directly compete for 'very few' cloud-native Server OS workloads, adding that they operate 'largely as complementary products' serving different customer segments and use cases as opposed to being direct substitutes.[654]

(b) Two Server OS providers confirmed that Windows Server and Linux-based Server OS only compete strongly with each other for 'some' new cloud-native Server OS workloads.[655] One of these said that the Server OSs compete for 'standard enterprise workloads' which are not bound to a specific Server OS.[656] The other said that that customers are likely to favour Windows Server where they are 'invested' in Active Directory/Windows identity and 'other portions' of the Windows Server ecosystem.[657] It said that the two Server OSs compete most strongly for workloads in sophisticated enterprises which have substantial footprints in both Server OSs.[658]

(c) Another Server OS provider stated that for its customers' new Server OS cloud native workloads, it does not consider Windows Server to be a

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[654] [✂] response dated [✂] to section 69 notice dated [✂]. The cloud provider also stated that in its experience, traditional enterprise customers typically choose Windows Server for 'most of their business-critical cloud-native workloads', eg business applications, email and collaboration platforms. These customers will 'in most cases' continue to select Windows Server when setting up similar cloud-native workloads to their on-premises Windows Sever workloads, and may choose Linux-based Server OS as a complement for 'secondary workloads' that do not need integration with Microsoft software. Conversely, it said that digital native customers typically have a 'high proportion' of their IT estate operating on Linux-based Server OS. [✂] response dated [✂] to section 69 notice dated [✂].

[655] We asked the Server OS providers to set out their view of competition for new Server OS cloud-native workloads in a table, noting whether 'all', 'most', 'many', 'some', 'few' or 'none' applied to the following: (a) 'Share of Server OS workloads where both Linux and Windows Server compete strongly with each other (ie both are suitable for customers' needs and customers consider them both as strong options)', (b) 'Share of Server OS workloads where Linux is a weak competitor to Windows Server (ie Windows Server is most suitable for customers' needs and customers do not consider Linux as a strong option)' and (c) 'Share of Server OS workloads where Windows Server is a weak competitor to Linux (ie Linux is most suitable for customers' needs and customers do not consider Windows Server as a strong option)'. These Server OS providers confirmed that Linux competes strongly with Windows Server (ie both are suitable for customers' needs and customers consider them both as strong options) for 'some' new cloud-native Server OS workloads. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. This Server OS provider also stated that Linux-based Server OSs are the 'predominant platform' for cloud-native workloads and expects this position to strengthen over the next five years. However, it stated that Windows Server 'will remain important'.

[656] [✂] response dated [✂] to section 69 notice dated [✂].

[657] [✂] response dated [✂] to section 69 notice dated [✂].

[658] [✂] response dated [✂] to section 69 notice dated [✂].

‘meaningful competitive factor’. It said that customers would likely choose Linux-based Server OS for new or modernised workloads unless there are compatibility considerations regarding installed Windows applications or purchasing agreements where it is of advantage to the customer to continue using Windows Server.[659]

(d) A customer, which is increasing its use of containerisation, said that an increasing number of its use cases are more suitable for a Linux or containerised environment, as opposed to Windows Server.[660]

(e) Another customer said that it is seeing greater ability to deploy Linux, rather than Windows Server. It said that there are ‘rare’ occurrences where application architecture depends on Windows Server and there is the potential for new workloads to require Windows Server. It said that technical constraints mean some of its workloads can only run on Linux (such as a Kubernetes control plane).[661]

A.296 Consistent with Windows Server and Linux being suited for different workloads and not competing closely, it is common for customers to use both. Although our customer research found that there can be some challenges to using both Linux and Windows Server,[662] the evidence we have seen to date suggests that where customers use Linux, they typically also use Windows Server because it is necessary for some workloads:[663]

(a) Our customer research found that Linux was deployed alongside Windows Server for specific functions and workloads, such as web hosting/website workloads and was ‘not seriously considered’ as a wholesale replacement for Windows Server.[664]

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[659] [✂] response dated [✂] to section 69 notice dated [✂].
[660] Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions.
[661] Note of call with [✂].
[662] Our customer research found that customers using the cloud thought it was easier to roll out security patches to Windows Server in one go compared to maintaining a secure environment with multiple Server OSs. Jigsaw Customer Research, 28 September 2026, page 82, paragraph 304.
[663] A 2024 third-party market report stated that while Linux-based Server OS are ‘undoubtedly leading the market’ and are growing by adoption rates, Windows Server workloads still play a ‘critical role’ in the wider enterprise IT landscape. The report stated that Windows Server continues to be popular among customers for Microsoft-specific workloads and ‘more established’ workloads such as business application and infrastructure workloads, and that Windows Server usage will be sticky. The report also mentioned that Linux-based Server OS workloads are expected to grow at a ‘far more rapid pace’ than Windows Server workloads, driven in part by AI workloads and technical applications. The report also noted a preference for Linux-based Server OS by customers for certain modern workloads and development activities. [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[664] Jigsaw Customer Research, 28 September 2026, page 78, paragraph 288; page 80, paragraph 295; and page 85, paragraphs 315-316.

(b) Several customers told us that they use Linux-based Server OS alongside Windows Server.[665]

(c) Evidence from resellers also suggests that customers use Linux-based Server OS alongside Windows Server, and that this will continue to be the case over the next five years and may become more common.[666] One reseller said that increased cloud usage and containerisation will increase Linux use for new workloads while Windows Server will remain for 'existing estates'.[667] Another reseller said that customers would use both Linux and Windows Server based on 'application and operational requirements'.[668]

(d) Some Server OS providers confirmed that customers use Linux-based Server OS and Windows Server alongside each other,[669] which one of these Server OS providers described as 'the most common pattern'.[670]

A.297 As an overarching point, the fact that paid Server OSs, such as Windows Server, remain in widespread use despite the presence of free open-source alternatives indicates there is sufficient differentiation in capability or support provision that leads many customers to consider free open source alternatives poor substitutes for paid Server OS products.

A.298 In any event, evidence we have seen to date suggests that Microsoft can discriminate pricing between customers that are more locked-into their choice of Server OS using customer specific discounting. As such, while Linux may be a closer constraint for some new workloads, this does not diminish Microsoft's market power over those customers who have more limited options.

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[665] Note of call with [✂]; Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions. Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions. Note of call with [✂]; Note of call with [✂]; Note of call with [✂]; Note of call with [✂]; Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions. Note of call with [✂]. The call took place in the context of the CMA deciding whether to exercise its digital markets functions.

[666] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].

[667] [✂] response dated [✂] to voluntary request for information dated [✂].

[668] [✂] response dated [✂] to voluntary request for information [✂].

[669] We asked Server OS providers 'We would like to understand the extent to which organisational customers use your Server OS products alongside Windows Server (eg where an organisational customer uses both Windows Server and third-party server products). In relation to this: (a) Please explain why organisational customers may take this approach; and (b) Please explain what proportion of your Server OS customers also use Microsoft's Windows Server in a complementary manner.' [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]. This Server OS provider [✂] also stated that 'many enterprise customers' use both Linux-based Server OS and Windows Server in their operations. [✂] response dated [✂] to section 69 notice dated [✂]. This Server OS provider [✂] was asked 'We would like to understand the extent to which organisational customers use your Server OS product(s) in combination with Windows Server: (a) Please explain why organisational customers may prefer using your Server OS product(s): (i) alongside (or as a complement to) Windows Server; and (ii) in place of (or as an alternative to) Windows Server. (b) Please explain to what extent the use of products from multiple providers differs by the type of organisational customer (for example, based on customer size, industry, geographic location, or whether customers are cloud native or legacy organisations).'

[670] [✂] response dated [✂] to section 69 notice dated [✂].

A.299 If Microsoft can identify the workloads for which it faces more competition (eg some new, on-cloud workloads) and it can offer preferential terms for these workloads relative to those facing less competition, Microsoft can exercise its market power over customers with fewer alternative options while still winning new workloads.

A.300 This is because Enterprise Agreements for larger customers are individually negotiated, giving an understanding of the customer's business, and the scope for price discrimination.[671] Microsoft also submitted that it provided price discounts in response to competitive pressure from alternative providers.[672]

Summary of evidence on competition for new workloads

A.301 While Linux OSs are the leading Server OSs for workloads in the cloud, this reflects the growth of cloud-native and AI workloads for which Linux is typically better suited than Windows OS. This is because Linux was the original Server OS on cloud, and it has benefited from network effects as developers have built a range of tools to support cloud-native workloads (such as containerised/Kubernetes workloads) that are optimised for Linux. As Microsoft has submitted, 'Linux is now the default platform for modern server and cloud deployments' and 'cloud native workloads are overwhelmingly Linux-based and containerized'.[673] Windows Server is not considered a close alternative for many of these workloads because it is less suitable for managing workloads at scale and can be more expensive. Consequently, we do not consider that there is significant competition between Windows Server and Linux for such workloads, so that the growth of Linux in cloud does not impose a material competitive constraint on Windows Server.

A.302 Overall our provisional view is that the fundamental differences between Windows Server and Linux mean that they largely are suited for different use cases – and it is therefore common for the same customer to use both Windows Server and Linux for different Server OS workloads. Linux OS is particularly suited for cloud-native and AI workloads. In contrast, Windows Server is best suited for workloads which run applications built for the Microsoft environment and workloads which are closely integrated with a customer's existing Microsoft business software. As a result, Linux poses a limited constraint for new Server OS workloads that are well-suited to Windows Server, and vice versa.

[671] See further details in Chapter 4, sub-section 'Securing discounts and making full use of bundles'.
[672] Microsoft's response dated [✂] to section 69 notice dated [✂].
[673] Microsoft's submission to the CMA dated [✂].

Competition between Microsoft and alternative providers of Server OS

A.303 We have described above the competition faced by Microsoft for existing and new workloads in general, including the overall competitive constraint from Linux. In this section we present evidence, which is more specific to individual, alternative providers of Server OS, noting that, in light of the evidence above, competition between these providers for existing workloads is very limited so that competition will be focussed on the subset of new workloads.

A.304 As outlined above, Microsoft submitted that Windows Server faces significant competition from Linux-based Server OS, and Windows Server use has been steadily declining over time.[674]

A.305 A Microsoft internal document states that Windows Server is a [✂].[675]

Linux-based providers

A.306 Although there are multiple Linux Server OS providers, market participants, including Microsoft, tend to refer to 'Linux' as the main alternative to Windows Server. The overall constraint from Linux is assessed in the sections above. This section briefly considers more specific evidence relating to the main Linux-based Server OS providers and their offerings.

A.307 Linux-based Server OS distributions all draw from and contribute to various upstream projects to create an operating system based on the Linux project that is sponsored by the Linux Foundation.[676] Almost all commercial distributions of Linux-based Server OS are based on 'community distributions', for instance:

(a) Fedora-based distributions, such as Red Hat Enterprise Linux, Amazon Linux and Azure Linux;[677]

(b) Debian-based distributions, such as Canonical's Ubuntu;[678] and

(c) SUSE which is based on its own community distribution.[679]

A.308 However, all Linux-based Server OS use the same underlying technology and provide, according to a cloud provider, 'broadly comparable core server functionality and support substantially the same types of applications and workloads'.[680] This provider added that there are some differences between the

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[674] Microsoft's submission to the CMA dated [✂].
[675] Microsoft, Internal document, response to section 69 notice dated [✂].
[676] [✂] response dated [✂] to section 69 notice dated [✂].
[677] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]. Red Hat Enterprise Linux is itself the basis for Oracle Linux.
[678] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂].
[679] [✂] response dated [✂] to section 69 notice dated [✂].
[680] [✂] response dated [✂] to section 69 notice dated [✂].

offerings of different providers but these generally relate to how the underlying Linux technology is 'packaged, maintained, and supported' as opposed to fundamental differences in what customers can do with them.[681] These include differences in:[682]

(a) Commercial support and lifecycle management (eg varying service levels, frequency of new version releases and updates);

(b) Differences in configuration and service packaging (eg some Linux-based Server OS providers pre-configure, bundle or support particular tools for certain workloads); and

(c) Community and commercially supported distributions (eg community Linux distributions where customers rely on community support, internal IT teams or a third-party provider for support and maintenance, compared to commercial support and assurance obtained through subscription-based Linux versions).

A.309 The cloud provider said that the above factors may influence customers' Server OS decisions based on, for example, their technical expertise or support preferences, but do not affect what the server environment can do or where it needs to be deployed.[683]

Red Hat

A.310 IBM's Red Hat Enterprise Linux is provided through a subscription model for both the software and support.[684]

A.311 Red Hat said that it distinguishes itself from other Linux providers through its certifications (government, industry, and ISV certifications), predictable lifecycle (for example major releases approximately every three years, minor releases every six months) and long-term support (14 years or more). Red Hat said that its customers value aspects of its offering including its security and compliance expertise, hybrid cloud flexibility and an extensive partner ecosystem.[685]

A.312 The evidence we have seen to date suggests that Red Hat may be the strongest paid-for Linux-based Server OS provider. Revenue-based shares of supply outlined above show Red Hat is the second largest Server OS provider behind

[681] [✂] response dated [✂] to section 69 notice dated [✂].
[682] [✂] response dated [✂] to section 69 notice dated [✂].
[683] [✂] response dated [✂] to section 69 notice dated 27 August 2026, question 2, paragraph 3.
[684] IBM's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]. [✂]. IBM's response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂]; IBM's response dated [✂] to section 69 notice dated [✂].
[685] IBM's response dated [✂] to section 69 notice dated [✂].

Windows Server, UK and globally, with its share growing. Moreover, one Server OS provider described Red Hat as holding 'the dominant position' in the open-source Server OS space.[686]

Other Linux-based providers

A.313 Other Linux-based Server OS providers include:

(a) Amazon Linux is available to customers for free, but the underlying compute on EC2 is paid for.[687]

(b) Canonical's Ubuntu is a free Server OS, while its enhanced Ubuntu Pro version is available on a subscription and offers extended security, compliance features and support.[688] Ubuntu and Ubuntu Pro are targeted [✂].[689]

(c) Debian is a free, open-source Server OS.[690]

(d) Oracle Linux is a free Server OS, but it offers a subscription for additional support services.[691]

(e) SUSE Linux Enterprise is provided through a subscription model for its software and can be bundled with other solutions. It is sold directly, indirectly through resellers and distributors, and through public cloud marketplaces where customers can choose pay-as-you-go or annual subscriptions. It is targeted at different organisations including medium-to-large enterprises, global banking and financial operations and telecommunication networks.[692]

Expected and foreseeable developments in Server OS

A.314 As we have described above, Microsoft's Windows Server faces limited constraints from rival Server OS providers, and its revenue share has remained high, only moderately declining over time, while there are also significant barriers to competition which reinforce Microsoft's position. We have considered the foreseeable developments which may affect Microsoft's conduct and future competition with other Server OS providers over the next five years.

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[686] [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[687] Amazon Linux 2023 FAQs, accessed by the CMA 9 September 2026. [✂].
[688] Ubuntu Pro - FAQ - Project Discussion / Ubuntu Pro - Ubuntu Discourse, accessed 9 October 2023. [✂]
[689] [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].
[690] Debian -- Reasons to use Debian accessed by the CMA 18 September 2026.
[691] Linux | Oracle United Kingdom, accessed by the CMA 9 October 2026. [✂].
[692] SUSE's response dated [✂] to section 69 notice dated [✂].

A.315 With regard to future competition and emerging trends in Server OS, including AI, as set out above, Microsoft submitted that:

(a) New workloads are 'increasingly dominated' by Linux-based Server OS.[693] Relatedly, Microsoft said that the proportion of UK Azure customers that consume Azure AI services has increased, indicating that new workloads being deployed are the ones that Linux-based Server OS are preferred for.[694]

(b) Cloud-native adoption is reducing the importance of Server OS.[695]

(c) The rapid growth of AI-powered migration and modernisation tools are increasing competition and are accelerating customers switching away from Windows Server.[696]

A.316 We have therefore examined whether the growth of cloud workloads and developments in AI will impact the ability of rivals to compete with Microsoft in Server OS.

Evidence on the effect of cloud adoption on competition for Server OS

A.317 The evidence we have seen to date supports our provisional view that some workloads will continue to transition from on premises to the public cloud, though this is likely to happen gradually and on-premises workloads are likely to continue to be important over the next five years, including to meet regulatory requirements.

(a) Customers have different plans for migrating existing workloads to the cloud: some are not planning to migrate to the cloud;[697] but where customers plan to move workloads to the cloud, they typically expect to retain some on premises, often for latency or cost reasons.[698]

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[693] Microsoft's submission to the CMA dated [✂].
[694] Microsoft's submission to the CMA dated [✂].
[695] Microsoft's submission to the CMA dated [✂].
[696] Microsoft's submission to the CMA dated [✂].
[697] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].
[698] Note of call with [✂]. The customer [✂] said it may become more attractive to run consumption-intensive workloads on premises if 'cloud economics worsen' (ie if prices rise); Note of call with [✂]; Note of call with [✂]. The customer [✂] further stated that it anticipates hosting proportionally more AI functionality on premises for cost reasons. Note of call with [✂]; Note of call with [✂]. The customer [✂] said that its on-premises workloads will shrink to only those that 'will probably always be on-premises' such as office building software and that this would happen over a timeframe of 20 years. However, the customer also stated that the majority of its workloads are already on the cloud. Note of call with [✂]. Another customer is aiming to move over to the cloud 'as much as possible'. Note of call with [✂]. Separately, we note that a 2024 third-party industry report submitted by a Server OS provider stated that 80% of the respondents when surveyed on repatriation said that they will repatriate 'at least some workloads in the coming year' back on premises from the cloud. These workloads included AI and database-focused workloads, where data sensitivity considerations make on-premises deployments attractive. The report further stated that this trend will 'undoubtedly' lead more organisations towards Linux-based Server OS, given their greater adaptability between different environments compared to Windows Server. [✂] response dated [✂] to section 69 notice under DMCCA in the context of the CMA deciding whether to exercise its digital markets functions dated [✂].

(b) A cloud provider cited a Gartner estimate which showed cloud deployments increasing from 60% of deployments in 2024 to 75% in 2030.[699] The cloud provider stated that cloud migration will be an important source of future cloud growth, with growth of new on-premises deployments slowing down.[700]

(c) Another cloud provider stated that 'the vast majority' of total IT workloads are on premises and it expects on-premises Server OS usage to be 'at least proportionally similar' to, if not larger than this.[701]

(d) A Server OS provider stated that 'cloud usage is growing rapidly, but many organisations retain significant on-premises estates' for several reasons including legacy applications and regulatory or data-residency requirements.[702]

(e) Another Server OS provider stated that migration would be 'selective' as it expects customers to continue deploying 'substantial on-premises workloads' over the next five years and for on-premises usage to increase, due to digital sovereignty requirements and increasing regulatory pressure.[703] Another Server OS provider echoed this, citing similar drivers for on-premises retention, adding that hybrid IT environments will be the 'realistic approach'.[704]

A.318 Additionally, as described above, the prevalence of 'lift and shift' migration means that customers using Windows Server on premises are likely to continue using Windows Server when they migrate to the cloud. Where customers do seek to switch, the evidence above suggests that this can be complex and is not guaranteed to be successful. There will also be growth in new cloud-native workloads, which, as discussed above, are often best suited to Linux-based Server OS and where competition between Microsoft and Linux will be limited. We have seen no evidence that this dynamic is likely to change in the next five years.

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[699] [✂] response dated [✂] to section 69 notice dated [✂]. It said that Gartner has estimated that the global ratio of on premises to cloud deployments of compute is expected to move from 40:60 in 2024 to 25:75 in cloud's favour by 2030.

[700] [✂] response dated [✂] to section 69 notice dated [✂]. It further noted third-party research that estimates an increase in the cloud Total Addressable Market growth rate from 15% in 2025 to 20% in 2030, compared to a drop from 8% to 3% for on-premises workloads over the same years. The cloud provider stated that this is in line with third-party estimates of Server OS shipments, which are estimated to grow on a 1% Compound Annual Growth Rate between 2024 and 2030 compared to 14% for cloud shipments.

[701] [✂] response dated [✂] to section 69 notice dated [✂]. It added that Microsoft's licencing restrictions lead to cloud migration being 'economically unfeasible or irrational' for customers unless they migrate to Azure, which may lead to an increase in on-premises usage compared to the cloud.

[702] [✂] response dated [✂] to section 69 notice dated [✂].

[703] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]. It said that this will be particularly the case for regulated, sovereign, latency-sensitive, data-intensive, operational technology workloads as well as instances where existing technology remains economical and reliable. Cloud migrations will, as a result, be 'selective rather than uniform'. [✂] response dated [✂] to section 69 notice dated [✂].

[704] [✂] response dated [✂] to section 69 notice dated [✂]. The provider said that on-premises deployments will continue going forward for regulated, latency-sensitive and sovereignty-bound use, with migration to the cloud being gradual and workload-dependent. It added that a 'wholesale shift' to the cloud is unlikely within five years, with hybrid (ie both on cloud and on premises) IT environments being the 'realistic' approach.

A.319 We also observe that Microsoft has been able to retain a strong position across Server OS as UK organisations built-out their cloud usage over the last ten years, supported by its leading position in cloud via its Azure platform. We therefore do not consider that cloud is likely to disrupt Microsoft's position in Server OS.

Evidence on the effectiveness of AI modernisation tools and the importance of AI features and functionality on competition for Server OS

A.320 As outlined above, AI-powered modernisation tools have the potential to mitigate some barriers to switching around the recoding/refactoring of applications. However, the evidence we have seen to date suggests that they have thus far had a limited impact on reducing barriers to switching for existing workloads.

A.321 We have seen limited evidence to date on the degree to which this may change in the next five years, but most of the evidence we have seen anticipates a relatively limited impact:

(a) One cloud provider said that it does not anticipate any developments in its own products that would make it easier for customers to switch away from Microsoft's Windows Server.[705]

A Server OS provider said that AI-powered modernisation tools may over time incrementally assist certain software refactoring workflows, though their overall impact on server migration might remain context-dependent.[706] Similarly, another Server OS provider stated that AI-powered modernisation tools 'potentially could' make switching Server OS easier.[707]

(b) No customers we spoke to reported having direct experience using AI-powered modernisation tools. Some customers who commented on the potential of these tools suggested that they may become more effective in the future,[708] but most of those customers also said that other barriers to switching, such as concerns about costs, validation, skills gaps, service risks and application dependencies, would persist.[709]

(c) One alternative Server OS provider stated that AI-powered modernisation tools 'will likely impact these [modernisation] processes substantially going forward'. It said that the code rewriting capabilities of these tools should

[705] [✂] response dated [✂] to section 69 notice dated [✂].
[706] [✂] response dated [✂] to section 69 notice dated [✂].
[707] [✂] response dated [✂] to section 69 notice dated [✂].
[708] Note of call with [✂]. While the customer submitted this in relation to RDBMS, we consider that the points it raises also apply to Server OS due to the similar barriers to switching for Server OS and RDBMS. Note of call with [✂]; Note of call with [✂]; Note of call with [✂]; Note of call with [✂]; Note of call with [✂].
[709] Note of call with [✂]. While the customer submitted this in relation to RDBMS, we consider that the points it raises also apply to Server OS due to the similar barriers to switching for Server OS and RDBMS. Note of call with [✂]; Note of call with [✂]; Note of call with [✂].

substantially ease the burden of 'some' switches 'where existing dependencies can be replaced with equivalents on a new OS'.[710]

A.322 Furthermore, the evidence we have seen to date illustrates that even in a scenario where AI-powered tools led to a significant reduction in the technical barriers to switching for existing workloads, we provisionally consider that other substantial barriers to switching would remain, which would limit the overall impact on the ease of switching for existing workloads.

A.323 We have also not seen evidence to date that development of AI features within Server OS is likely to make a significant difference to future competition. While we have limited evidence, this is not an area that providers or customers have focused on.

(a) We asked resellers which factors they considered were important for customers' choice of Server OS, they did not rank AI features and functionalities highly compared to other factors.[711]

(b) Only one customer stated that they view AI features and functionalities as 'very important' for its choice of Server OS,[712] with the three other customers answering this question stating that these are either 'somewhat unimportant' or 'very unimportant'.[713]

Therefore, we do not expect the development of AI features within Server OS to significantly change the extent of competition faced by Microsoft in Server OS.

[710] [✂] response dated [✂] to section 69 notice dated [✂].
[711] We asked six resellers to rank the following factors from 1 (very unimportant) to 5 (very important). Of these, four resellers provided responses. The factors were: Price, quality of the product, track record of the provider, breadth of other products offered, interoperability with Microsoft products, interoperability with non-Microsoft products, ongoing product support, security and compliance, AI features and functionalities, breadth of industry adoption, regulatory compliance, user familiarity/internal skills base, and pre-installation on hardware. AI features and functionalities were rated on average at 2 out of 5, while seven other factors received average ratings of 4 or higher. Four responses to voluntary request for information dated [✂]. [✂].
[712] [✂] response dated [✂] to voluntary request for information dated [✂].
[713] [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].

Market power assessment - RDBMS

A.324 We have considered Microsoft's market power in RDBMS by considering evidence on:

(a) Shares of supply;

(b) Competition for existing workloads;

(c) Competition for new workloads;

(d) Competition between Microsoft and alternative providers of RDBMS; and

(e) The impact of expected and foreseeable developments on Microsoft's market position in RDBMS.

A.325 Microsoft's RDBMS offering is the Microsoft SQL Server family of products. SQL Server can be used across cloud, on premises, and in hybrid environments.[714] SQL Server can also be consumed as part of a managed public cloud PaaS (rather than IaaS) offering, which provides the same core RDBMS functionalities[715] without requiring customers' involvement in regular performance monitoring, upgrades and other maintenance tasks.[716]

A.326 SQL Server is an important part of Microsoft's Business Software Ecosystem.

(a) SQL Server is an important revenue driver for Microsoft in the UK, with revenues of [✂] [$1-2 billion] USD in 2025 accounting for [✂] of UK revenue from its BSE.[717] UK revenues for SQL Server increased by [✂] between 2020 and 2025.[718]

(b) In a 2024 global technology conference, the Microsoft Chief Commercial Officer stated that 'there is an awful lot of money yet to be had in migrating SQL Server, Windows Server, [and] VMware.'[719]

A.327 The choice of RDBMS is made at the workload level (ie the same customer may choose different RDBMS for different workloads). Individual workloads within an organisation are established to run on a particular RDBMS, and additional

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[714] For more information on the various editions of SQL Server 2025, see Editions and Supported Features of SQL Server 2025 - SQL Server | Microsoft Learn, accessed by the CMA on 13 July 2026. SQL Server 2025 also includes AI-enabled features such as vector search (see Editions and Supported Features of SQL Server 2025 - SQL Server | Microsoft Learn, accessed by the CMA on 13 July 2026).

[715] More specifically, these functionalities are delivered by the SQL Server Database engine. See SQL Database Engine - Microsoft SQL | Microsoft Learn accessed by the CMA on 28 June 2026.

[716] SQL Database Engine - Microsoft SQL | Microsoft Learn, accessed on 13 July 2026.

[717] CMA calculations based on Microsoft's response dated [✂] to section 69 notice dated [✂]. For more information on Microsoft's revenues from its BSE, see Appendix B: Customer data analysis

[718] CMA calculations based on Microsoft's response dated [✂] to section 69 notice dated [✂]. As discussed below, SQL Server IaaS revenues [✂] over this time period.

[719] UBS Global Technology Conference, accessed by the CMA on 17 September 2026.

workloads can be established using the same or different RDBMS without necessarily impacting on existing workloads. The evidence we have seen to date shows that it is common for companies (particularly larger companies) to run multiple RDBMS, although stakeholders differ in the degree to which they state this is the case.[720,721]

A.328 Traditionally RDBMS was used on-premises, but over time the cloud has become increasingly important, and with it, IaaS and PaaS deployments. This change comes alongside the growth of open-source software and cloud providers developing their own RDBMS products. We anticipate that the trend towards cloud migration and cloud deployment will continue, as discussed below. However, it is our understanding that a significant proportion of RDBMS workloads are likely to remain on premises, and there is mixed evidence on the degree and speed of cloud growth.

A.329 The evidence we have seen to date from customers and RDBMS providers shows that customers evaluate their RDBMS requirements at the point of establishing a new RDBMS workload, for example when they purchase or create a new application. Once a workload has become embedded into a customer's IT environment, it can be very difficult to switch RDBMS provider. Therefore, we have considered evidence relating to new and existing workloads separately. We have also considered any differences between on-premises workloads and cloud workloads and whether migration of a workload from on-premises to the cloud is a point at which a customer is likely to change the underlying RDBMS.

Shares of supply estimates

Microsoft's submissions on shares of supply

A.330 Microsoft made the following submissions related to the shares of supply:

(a) Monetisation models for open-source RDBMS offerings are different from the monetisation models for proprietary RDBMS offerings and revenue-based comparisons will, therefore, tend to overestimate the share of supply of proprietary RDBMS like SQL Server, compared with measures based on usage.[722]

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[720] Microsoft submitted industry reports suggesting up to 84% of businesses use at least two different database platforms. Microsoft's response dated [✂] to section 69 notice dated [✂]. Similarly, Google submitted that most large RDBMS enterprise customers on GCP use multiple RDBMS products. Google's response dated [✂] to section 69 notice [✂]. Amazon submitted that a significant minority [✂] of AWS customers globally used multiple RDBMS within AWS in 2025. Amazon's response dated [✂] section 69 notice dated [✂].

[721] Respondents also noted that customers' past merger activity could create a heterogeneous internal IT environment. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice [✂].

[722] Microsoft's submission to the CMA dated [✂].

(b) The benefits of usage-based estimates, noting that WordPress (which powers approximately 40% of internet websites globally) is underpinned by open-source RDBMS, and cited customer surveys on customer preferences.[723]

(c) It cited revenue-based shares, stating that 'even on this measure, Microsoft faces substantial competition.'[724] Similarly, it highlighted the high annual growth rates of some smaller RDBMS providers.[725]

(d) SQL Server spend has fallen as a proportion of total spend on Azure.[726]

Our shares of supply analysis

A.331 We gathered revenue data from nine providers of RDBMS.[727] Due to data limitations across providers, it has not been possible to construct separate shares of supply for on-premises and cloud deployments, or to create volume-based shares. As a result, we present below revenue shares of supply across all deployment types. We attributed some revenue to open-source providers where we were able to do so, to better represent their position in the market (discussed further below).

A.332 Our analysis[728] indicates that Microsoft has been the largest provider of RDBMS in the UK by revenue for at least the last six years. In 2020, Microsoft and Oracle had approximately equal market share [✂] [40-50]% and [✂] [40-50]% respectively).

A.333 While both shares have fallen over the period to 2025, Oracle's share has declined significantly to [✂] [30-40]%, while Microsoft's share has declined only slightly to [✂] [40-50]%.[729]

A.334 In addition, Microsoft's SQL Server is the largest individual RDBMS by revenue, as Oracle's revenues account for both its proprietary RDBMS, Oracle AI Database[730] [✂] [20-30]% share and its open-source offering, MySQL [✂] [5-10]% share.

Table A.8: UK RDBMS shares of supply by revenue, all deployment types[i]

	2020	*2021*	*2022*	*2023*	*2024*	*2025*

[723] Microsoft's submission to the CMA dated [✂].
[724] Microsoft's submission to the CMA dated [✂].
[725] Microsoft submitted that competitors such as Tencent, Snowflake and Cockroach Labs have consistently grown at annual rates far surpassing Microsoft's. Microsoft's submission to the CMA dated [✂].
[726] Falling from [✂] of Azure spend in 2023 to [✂] in 2025. Microsoft's submission to the CMA dated [✂].
[727] Microsoft, Oracle, IBM, Amazon, Google, Canonical, SAP, Teradata, Snowflake.
[728] This analysis is described in more detail in sub-section 'Relational Database Management Systems' of 'Appendix C: Market Outcomes'
[729] We note that some of the decline in share of supply which occurred between 2020 and 2021 may be the result of data limitations which meant that some providers were unable to provide data prior to 2021.
[730] We note that Oracle AI Database was previously known as Oracle Database, and this is the name used in our evidence gathering.

Microsoft - SQL Server	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**	**[40-50]%**
Oracle – All RDBMS	[40-50]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
Proprietary – Oracle AI Database	[40-50]%	[30-40]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Open source – MySQL	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Open Source - PostgreSQL	[5-10]%	[5-10]%	[5-10]%	[10-20]%	[10-20]%	[10-20]%
Snowflake	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[5-10]%
IBM - Db2	N/A	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Teradata	N/A	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Other	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%

Sources: Microsoft's response dated [≫] to section 69 notice dated [≫]. Oracle's response dated [≫] to section 69 notice dated [≫]. Snowflake's response dated [≫] to section 69 notice dated [≫]. IBM's response dated [≫] to section 69 notice dated [≫]. Amazon's response dated [≫] to section 69 notice dated [≫] and follow up questions dated [≫]. Canonical's response dated [≫] to section 69 notice dated [≫]. Google's response dated [≫] to section 69 notice dated [≫]. Teradata's response dated [≫] to section 69 notice dated [≫]. SAP's response dated [≫] to section 69 notice dated [≫].
Notes: 'Other' includes reported revenues concerning Apache Cassandra, AlloyDB, MariaDB, Aurora DSQL and Cloud Spanner engines. IBM, Teradata and Google did not provide data for 2020. Google provided SPLA (licence) revenues for SQL server from August 2021. Oracle revenues exclude Tier 6 products, such as Solaris and Linux, which are attributable to Server OS revenues. SAP and Canonical are excluded as they did not provide UK data for the period 2020-2025. We note that the revenue allocation approach used to construct these shares of supply (see Appendix C) has the effect of underestimating Microsoft's overall revenue related to RDBMS. This is because some open-source products such as PostgreSQL do not require Microsoft (and other cloud providers) to pay any licensing fees in order to offer managed services (ie PaaS products) based on these RDBMS. As such, any customers who switch from SQL Server to an open-source RDBMS on Azure PaaS, for example Azure Database for PostgreSQL, are not truly transferring revenue to a competitor, and Microsoft continues to generate some revenue from these customers albeit substantially less than it would if the customer continued to use SQL Server.

A.335 On a global basis, Oracle was the largest provider of RDBMS by revenue in 2025 across all deployment types with a [30-40]% share. Microsoft had a [30-40]% share of supply. Microsoft's SQL Server is the largest individual RDBMS by revenue, as Oracle's revenues account for both its proprietary RDBMS, Oracle AI Database ([30-40]% share), and its open-source offering, MySQL [5-10]% share).

A.336 PostgreSQL was the largest open-source RDBMS by revenue,[731] with a [10-20]% share of supply globally in 2025. Snowflake had a [5-10]% share in 2025, and IBM had a [5-10]% share of supply. All other RDBMS providers were significantly smaller.

Table A.9: Global RDBMS shares of supply by revenue, all deployment types[ii]

	2020	*2021*	*2022*	*2023*	*2024*	*2025*
Microsoft - SQL Server	**[30-40]%**	**[30-40]%**	**[30-40]%**	**[30-40]%**	**[30-40]%**	**[30-40]%**
Oracle – All RDBMS	[50-60]%	[40-50]%	[40-50]%	[40-50]%	[40-50]%	[30-40]%

[731] For the avoidance of doubt, PostgreSQL is an open-source RDBMS that can be downloaded at no cost to the user and as such does not directly generate revenue in the same way as a proprietary RDBMS such as SQL Server. However, as discussed below and in sub-section 'Relational Database Management Systems' of 'Appendix C: Market Outcomes', we have used the revenues associated with PostgreSQL deployed on PaaS to present a more representative view of PostgreSQL's popularity.

Proprietary – Oracle AI Database	[40-50]%	[40-50]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
Open source – MySQL	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Open Source - PostgreSQL	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[10-20]%	10-20]%
Snowflake	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[5-10]%
IBM - Db2	N/A	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Teradata	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Other	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%

Sources: Microsoft's response dated [✂] to section 69 notice dated [✂]; Oracle's response dated [✂] to section 69 notice dated [✂]. Snowflake's response dated [✂] to section 69 notice dated [✂]. IBM's response dated [✂] to section 69 notice dated [✂]. Amazon's response dated [✂] to section 69 notice dated [✂] and follow up questions dated [✂]. Canonical's response dated [✂] to section 69 notice dated [✂]. Google's response dated to section 69 notice dated [✂]. Teradata's response dated [✂] to section 69 notice dated [✂]. SAP's response dated [✂] to section 69 notice dated [✂].

Notes: Other includes reported revenues concerning Apache Cassandra, AlloyDB, MariaDB, Aurora DSQL and Cloud Spanner engines as well as aggregate revenues reported by Canonical and SAP. IBM and Google did not provide data for 2020. Google provided SPLA (licence) revenues for SQL Server from August 2021. Canonical provided revenues for the period 2023-2025. Oracle revenues excluded Tier 6 products, such as Solaris and Linux, which are attributable to Server OS revenues

A.337 The revenues associated with open-source software appear to have increased in recent years, with the market share of open-source products almost doubling from approximately [10-20]% in 2020 to approximately [20-30]% in 2025. This growth was primarily driven by PostgreSQL, and to a lesser extent MySQL. We also note that Snowflake has grown substantially over the period from [0-5]% in 2020 to [5-10]% in 2025. However, it remains significantly smaller than Microsoft and Oracle and, as discussed below, customers generally do not consider Snowflake as a traditional RDBMS, though it may be a viable alternative to SQL Server for some use cases.

A.338 Although our revenue-based shares of supply may not fully reflect usage of free open-source products,[732,733] our approach allows us to capture their scale to the

[732] With the exception of some revenue attributed to open-source RDBMS, as noted below. We requested usage data, but none of the major cloud providers were able to provide data with sufficient granularity to provide an understanding based on usage rather than revenue. We also requested data on vcore hours or comparable RDBMS usage metrics from a range of RDBMS providers to create volume-based shares of supply. However, Microsoft was unable to provide IaaS usage data for non-SQL Server RDBMS. [✂] Microsoft's response dated [✂] to section 69 notice dated [✂]. Google was unable to provide [✂]. Google's comments dated [✂] on the CMA's draft section 69 notice dated [✂]. Amazon submitted that it does not classify its services according to IaaS and PaaS. Additionally, it is unclear whether Amazon's submission includes both IaaS and PaaS products because it provided data on only a small number of RDBMS products, while we would expect that a very wide range of RDBMS products are deployed on AWS IaaS. Amazon's response dated [✂] to section 69 notice dated [✂].

[733] Similarly, Microsoft was unable to provide direct usage data on its non-SQL Server based PaaS products such as Azure Database for PostgreSQL. [✂]. Microsoft's response [✂] to section 69 notice dated [✂]. We note that Microsoft attempted, on a best-efforts basis, to use financial data to present Azure non-SQL RDBMS usage on a comparable vcore-equivalent basis. However, it did not provide a detailed methodology for this and given the challenges inherent in computing usage information from financial data (particularly when considering open-source products), we have not relied on this submission. Microsoft's response dated [✂] to follow up questions to section 69 notice dated [✂]. In addition, [✂] usage data did not include SQL Server or other proprietary RDBMS. While [✂] did provide usable usage data, we have not relied on this data as it represents only a small proportion of the overall RDBMS usage. In addition, while usage-based shares of supply have some advantages, they would exclude on-premises deployments, which the evidence we have gathered to date indicates remain an important part of the market

best of our ability.[734] Additionally, revenue-based shares are informative in that they reflect customers' willingness to pay when a free product is available, indicating significant differentiation between products. We consider the extent to which the suppliers captured in our shares of supply are exerting a competitive constraint on Microsoft in our wider assessment below.

A.339 The Cloud Services Market Investigation used a different data source to estimate shares of supply and is therefore not directly comparable to our shares of supply which are based on data provided directly by Microsoft and other RDBMS providers. However, we consider our findings to be broadly consistent.[735]

A.340 As discussed above, Microsoft highlighted SQL Server's declining share of total usage on Azure as evidence of the competition faced by SQL Server. However, this is as a share of all cloud spend on Azure and reflects growing spend on services that are unrelated to RDBMS. Absolute usage of SQL Server on Azure IaaS grew [350-400]% globally between 2020 and 2025 (equivalent to a [30-40]% compound annual growth rate over the five year period).[736] Microsoft's global revenues from SQL Server[737] increased by [50-60]% over the same period.[738]

A.341 In summary, these shares of supply indicate that Microsoft is the largest supplier of RDBMS in the UK by revenue followed by Oracle (although its proprietary RDBMS is notably smaller than SQL Server). The shares of supply indicate growth in some open source RDBMS, including PostgreSQL.

Competition for existing workloads

A.342 As outlined above, once a workload has been deployed, and especially once it becomes embedded into a customer's IT environment, it can be very difficult to switch RDBMS provider. Therefore, we explore here the particular dynamics in competition for existing workloads.

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[734] We attempted to mitigate the limitations of revenue-based shares of supply in the way that we attribute revenue. Our calculation reallocates all revenues associated with these products (not just licensing revenue) to the underlying RDBMS, rather than, for example, to a cloud provider offering access to the RDBMS through a PaaS product. Therefore, these shares of supply more accurately reflect the use of open-source RDBMS such as PostgreSQL. This approach is discussed in more detail in Appendix C. We note that this approach only captures revenues associated with open-source RDBMS accessed through PaaS services and as such, open-source RDBMS deployed on IaaS is not captured by this methodology.

[735] We note that these shares of supply are broadly consistent with the trends that we observe in our analysis, where Microsoft is the largest provider of RDBMS followed closely by Oracle, and other providers are materially smaller. More information is available within Appendix R of the Cloud MI Final Report. Cloud MI Final Report, Appendix R, tables R.4 and R.5. Appendix R: Market power – supplementary framework and evidence

[736] CMA calculations based on information submitted in [✂] Microsoft's response dated [✂].

[737] Including on-premises, IaaS, and PaaS revenues.

[738] CMA calculations based on information submitted in [✂] Microsoft's response dated [✂].

Microsoft's submissions

A.343 Microsoft made the following submissions on switching for existing workloads, including those migrating to cloud:

(a) Barriers to switching and modernisation are reducing over time due to new tools, including AI coding agents as well as dedicated database migration tools, which can increasingly automate much of the switching process. Microsoft stated that this is materially reducing the time, cost and complexity historically associated with switching'.[739] Microsoft submitted that it is often easier to switch once on cloud compared to on-premises because on IaaS, the cloud provider supplies the infrastructure and migration tooling, removing the hardware element; and on PaaS, the provider also operates the underlying RDBMS.[740]

(b) Switching complexity depends 'on the customer's own engineering strategy — how portable it chose to make its software — rather than any lock-in imposed by SQL Server', and that 'Large enterprises and public-sector bodies with large, long-lived, mission-critical estates and many bespoke stored procedures will generally face more conversion work.'[741]

(c) There is an ongoing shift from on-premises deployments to the public cloud,[742] where there is a wider field of RDBMS options and lower switching barriers as the customer is provisioning fresh infrastructure rather than disturbing an established on-premises estate.[743]

(d) Migrating workloads to the cloud is a natural decision point for customers to review their software choices, including their RDBMS provider, because the customer is already re-examining the architecture, cost, and operating model of the workload.[744]

A.344 In the sections below we first discuss barriers to switching for existing workloads, before specifically considering the ability to switch RDBMS at transition from on-premises to the cloud. We then consider the impact of AI on barriers to switching existing workloads.

Barriers to switching for existing RDBMS workloads

A.345 For workloads that are currently on SQL Server, either on premises or on the cloud, the extent of barriers to switching are key in the degree of competition that

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[739] Microsoft's submission to the CMA dated [✂].
[740] Microsoft's response dated [✂] to section 69 notice dated [✂].
[741] Microsoft's response dated [✂] to section 69 notice dated [✂].
[742] Microsoft's response dated [✂] to section 69 notice dated [✂].
[743] Microsoft's response dated [✂]to section 69 notice dated [✂].
[744] Microsoft's response dated [✂] to section 69 notice dated [✂].

Microsoft faces, for example at contract negotiation. The evidence we have seen to date suggests that there is very little switching of existing workloads from one RDBMS provider to another.

A.346 Third parties highlighted the challenges of switching RDBMS providers for existing workloads with few customers giving examples of successfully switching RDBMS provider.

(a) Customers said they would not move away from SQL Server in response to a significant price rise. None of the customers we asked told us that they were likely to switch away from SQL Server on the public cloud in response to a 5% price increase.[745] These customers provided a variety of reasons for choosing and retaining SQL Server, including application dependencies,[746] existing staff skillsets or preferences,[747] the high cost or effort of switching,[748] continuity of on-premises services,[749] the cost of alternatives,[750] use of other Microsoft products,[751] challenges with security, scalability, support when using open-source alternatives,[752] and the feature set or support offered for SQL Server.[753] These barriers will be explored in more depth below.

(b) A Microsoft internal document from January 2025 describes customer research conducted with [✂] 'database decision makers'.[754] [✂].[755] [✂].[756]

(c) Likewise, as discussed below, some RDBMS providers' growth strategies are not focused on winning existing workloads. Instead, providers generally focus

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[745] We asked customers contacted during the CMA's Cloud Market Investigation to update the evidence they previously provided on this point. In response, we received 12 submissions. Of these, seven customers indicated that they were unlikely to switch their existing workloads away from SQL Server following a 5% price rise. The remaining five customers provided responses which did not clearly explain whether they were likely or unlikely to switch in response to a potential price rise. Unlikely to switch: Multiple response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; and [✂] response dated [✂] under the Enterprise Act, [✂]. Unclear whether would or would not switch: Multiple response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; and [✂] response dated [✂] under the Enterprise Act, [✂].

[746] Multiple response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; and [✂] response dated [✂] section 174 notice under the Enterprise Act, [✂].

[747] Multiple response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂]; [✂]; [✂]; [✂]; [✂]; [✂].

[748] Multiple response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]; [✂]; [✂; and [✂] response dated [✂] to section 174 notice under the Enterprise Act, [✂].

[749] [✂] response [✂] under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

[750] [✂] response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. This comment was made in reference to Oracle AI Database.

[751] Multiple responses to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂], [✂]. [✂], [✂].

[752] [✂] response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

[753] [✂] response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

[754] We note that [✂].

[755] Microsoft's internal document, [✂].

[756] Microsoft's internal document, [✂]. Microsoft submitted that it has not increased the price of SQL Server since January 2025 (the date of the internal document). Microsoft's response dated [✂] to section 69 notice dated. [✂]

on winning new or modernised workloads as this segment is seen as more easily contestable.[757]

(d) Another RDBMS provider submitted that competition is less direct and less frequent for existing workloads compared to new workloads because switching costs, application dependencies, and operational risks constrain customers.[758]

(e) None of the RDBMS providers we asked systematically track switching from SQL Server to their RDBMS products, but some told us that they expect switching has been limited.[759]

A.347 Although one RDBMS reseller submitted that customers generally re-evaluate their RDBMS purchases every 12 months or whenever newer software licensing is released,[760] evidence from customers and resellers indicates that in general customers re-evaluate their RDBMS requirements infrequently, and often choose not to switch when doing so.

(a) One RDBMS reseller submitted that customers' choice of RDBMS is re-evaluated less frequently than other Business Software Ecosystem products, and most often evaluated when deciding to consolidate, migrate, or modernise a workload, or at 'support lifecycle events'.[761] Similarly, another reseller told us that customers re-evaluate their RDBMS choices mainly when choosing to launch, re-platform or modernise an application, or at major licensing renewal, and that RDBMS is rarely changed for existing applications due to migration cost and risk.[762]

(b) Some customers told us that they had not actively considered switching from Microsoft to other providers of RDBMS (in whole or in part) in the past three years.[763] One customer told us that it would not change RDBMS providers unless a real need arises that outweighed business risks.[764] Another customer explained that many of its database technology choices reflect historical decisions and that there is often limited commercial justification for switching.[765] Our customer research found that many SQL Server-based workloads had been deployed for some time and due to a lack of a business

[757] See section 'Competition for new workloads' below.
[758] [✂] response dated [✂] to section 69 notice [✂].
[759] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[760] [✂] response dated [✂] to voluntary request for information dated [✂].
[761] [✂] response dated [✂] to voluntary request for information dated [✂].
[762] [✂] response dated [✂] to voluntary request for information dated [✂].
[763] [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂].
[764] Note of call [✂] on [✂].
[765] Note of call [✂] on [✂].

case for switching, there was no impetus within the organisation to review this part of their IT infrastructure.[766]

(c) One RDBMS reseller submitted that while larger and regulated customers re-evaluate their options more formally and consider alternatives more actively, smaller customers tend to review with minimal re-evaluation and rely on partner recommendations.[767]

A.348 When customers do actively consider switching the RDBMS used with an existing workload, evidence we have seen to date indicates that they face significant switching barriers, primarily arising from application dependencies. Customers use applications that need to be compatible with RDBMS software – customers can either purchase existing commercial off-the-shelf (COTS) applications, or they can develop or procure custom applications. Applications are often designed for a specific RDBMS and we consider there are indirect network effects at play which would mean more applications are available on the most popular and long-standing RDBMS. The evidence we have seen to date indicates that application compatibility is an important point of differentiation between RDBMS products.

(a) Our customer research found that '[a]cross all RDBMS solutions mentioned, the key factor driving choice [an 'overriding theme'] was almost always compatibility with the specific application that was running on the server in question.'[768] As a result of this, businesses did not always feel they had actively 'chosen' SQL Server.[769]

(b) Customers and RDBMS resellers told us that customers' choice of RDBMS was determined or significantly influenced by the applications they used within their businesses.[770] Some RDBMS providers similarly submitted that application dependencies impact customers' willingness or ability to switch.[771]

A.349 Customers using COTS applications cannot themselves modify the application to work with a new RDBMS without input from the software vendor due to constraints

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[766] Jigsaw Customer Research, 28 September 2026, page 92, paragraph 339.

[767] [✂] response dated [✂] to voluntary request for information dated [✂].

[768] This research found that 'There were also other factors at play, such as technical skills and cost, but compatibility was the key consideration.' Jigsaw Customer Research, 28 September 2026, summary box under section 3.7.1, page 89.

[769] Jigsaw Customer Research, 28 September 2026, page 90, paragraph 328.

[770] [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. Note of call [✂]. Note of call [✂]. [✂] response [✂] to voluntary request for information dated[✂]. Note of call [✂]. Note of call [✂]. Note of call [✂].

[771][✂] response dated to section 69 notice dated [✂]. [✂] response dated [✂]to section 69 notice dated [✂]. One RDBMS provider submitted that application dependencies were a factor that customers considered when deciding whether to switch but did not explicitly state that they influence a customers' willingness to switch. [✂] response dated [✂] to section 69 notice dated [✂].

including a lack of source-code access.[772] Any change of RDBMS compatibility would need to be implemented by the application developer and therefore, customers with COTS applications dependent on SQL Server would need to purchase different applications if they wanted to switch RDBMS.[773]

A.350 Often, COTS applications are designed to operate with a specific RDBMS, including applications which can only operate using SQL Server (although two customers indicated that, in their experience, COTS applications are compatible with multiple database engines[774]). For example, we are aware of several applications which are only compatible with SQL Server when used on premises.

(a) Established accounting software: SAGE 200[775] and IRIS Accountancy Suite.[776]

(b) Applications to manage CAD files in manufacturing/engineering businesses: SolidWorks[777] and Autodesk Vault.[778]

(c) Blackbaud: primarily used by charities/non-profits for managing fundraising, with millions of users.[779]

A.351 Issues with application compatibility also apply to the developers of these COTS applications, and to custom applications designed by customers' in-house IT teams. While these developers and in-house IT teams may be able to adapt application code and switch RDBMS, some RDBMS providers submitted that this process of application redesign can involve significant time cost, and risk, particularly if these applications are dependent on the proprietary features of an RDBMS, such as those offered within SQL Server's proprietary T-SQL dialect, as alternative RDBMS may not offer equivalent functionality.[780]

A.352 Furthermore, even for existing workloads where application compatibility is not a material constraint, there remain substantial barriers to switching for customers,

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[772] [✂] submitted that customers must own the source code that they wish to rewrite, which 'rules out' rewriting COTS applications away from SQL Server. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[773] The extent to which an application is compatible with multiple RDBMS systems depends on whether it utilises any proprietary RDBMS software features and which SQL 'dialect' it is coded to understand. One customer indicated that 'legacy' applications were more likely to require a specific database, whereas more modern applications tend to provide more choice. One RDBMS provider similarly told us that applications tied to a specific database are more likely to be legacy applications. Note of call [✂] on [✂]. Note of call [✂].

[774] Note of call [✂]. Note of call [✂] on [✂].

[775] Sage 200 Professional - Compatibility Checker for Sage 200 Suite, accessed by the CMA on 28 September 2026; Sage Accounting | Sage UK, accessed by the CMA on 28 September 2026.

[776] AS Downloads | IRIS Accountancy Suite Support | IRIS, accessed by the CMA on 28 September 2026;

[777] Listing of PDM Server Components - 2026 - SOLIDWORKS Design Help, accessed by the CMA on 28 September 2026

[778] System requirements for Autodesk Vault 2026 products, accessed by the CMA on 28 September 2026

[779] Raiser's Edge 7 SQL System Requirements - Blackbaud, accessed by the CMA on 28 September 2026; Leading Software for Nonprofits and Education | Blackbaud, accessed by the CMA on 28 September 2026

[780] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

such as engineering time and cost of moving data, re-connecting dependent applications, re-applying security policies and re-connecting other infrastructure. Some RDBMS providers submitted that while switching is technically possible, it is a complex, multi-step process with significant challenges or risks.[781]

(a) One RDBMS provider submitted that all database migrations away from SQL Server are fundamentally hard. Switching from SQL Server to alternative RDBMS (a 'heterogeneous migration') is complex, requiring significant effort and resources to assess and plan for a change, refactor (re-engineer) existing database schema and applications, manage data migration, test the new system, and eventually deploy it.[782]

(b) Some customers and resellers indicated that customers' IT teams are often specialised in a specific RDBMS and would need to develop new skills to switch to a new RDBMS[783] and only a small number of customers told us that skill gaps were not a significant barrier to switching RDBMS.[784] While it is common for customers (particularly larger customers) to operate multiple RDBMS (a non-consolidated estate), and customers would have a mix of skills in-house, some retraining may still be required to change the balance of staff skills for any significant change in infrastructure, or to introduce a new RDBMS not currently in use.[785]

(c) Some customers and RDBMS providers indicated that switching RDBMS would require substantial effort in terms of testing and validation.[786] Customers and RDBMS providers highlighted that switching creates service delivery or operational risks,[787] with some customers noting the need to run

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[781] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. One RDBMS provider submitted that switching is primarily a data, schema, and application compatibility exercise which often requires converting SQL Server code, stored procedures and integrations. It further submitted that larger or more complex customers face significantly greater switching costs than smaller organisations with less customised environments. [✂] response dated [✂] section 69 notice dated [✂].

[782] [✂] response dated [✂] to section 69 notice dated [✂].

[783] Jigsaw Customer Research, 28 September 2026, page 92, paragraph 338. Note of call [✂] on [✂]. Note of call [✂] on [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂]. Similarly, one RDBMS provider also highlighted that IT team knowledge gaps can make switching more difficult. [✂] response dated [✂]to section 69 notice dated [✂]. Only a small number of customers told us that skill gaps were not a significant barrier to switching RDBMS. Note of call [✂] on [✂]. Note of call [✂] on [✂].

[784] Note of call [✂]. Note of call [✂] on [✂]. However, one of these customers also said that many staff in operational and development roles have qualifications and experience in SQL Server, and that this existing expertise influences technology choices. Note of call [✂].

[785] For example, some customers told us that they use multiple RDBMS within their organisations, but that employee talent or skillsets remains an important consideration when switching RDBMS. Note of call [✂] on [✂]. Note of call [✂] on [✂]. Note of call [✂] on [✂]. Note of call [✂] on [✂].

[786] [✂] response [✂] to section 69 notice dated [✂]; [✂] response dated [✂] to section 69 notice dated [✂]; Note of call with [✂] on [✂].

[787] Note of call with [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂]. Note of call [✂].

both old and new RDBMS in parallel to mitigate the risk of service disruption or downtime during the switching process.[788]

(d) As discussed further below, some resellers and RDBMS providers indicated that competition for RDBMS workloads, particularly cloud-based workloads, increasingly takes place at an ecosystem level, with actual or perceived technical interoperability and commercial practices giving advantages to Microsoft products over non-Microsoft alternatives, and discounts available for some customers.[789] This may further reduce the likelihood of switching away from SQL Server, which some customers perceive as benefiting from seamless integration with Microsoft's broader product ecosystem, including Azure.[790]

A.353 For these reasons, some customers submitted that there is often little commercial incentive to switch relative to the significant costs and risks of doing so.[791]

Ability to switch at transition from on premises to the cloud

A.354 Workloads can be 'modernised' which means shifting from traditional deployment options, such as running a workload within a virtual machine, to more cloud native components, such as platform as a service, and other cloud architecture components.[792] When workloads are modernised, various changes are made to how the workload is run which may include changing the underlying RDBMS.

A.355 Customers do not have to modernise existing workloads when migrating them to the cloud – the two are not synonymous.[793] As on-premises workloads are migrated to the cloud, some are modernised and some are lifted and shifted (that is moved with only minimal edits to the underlying application code) to reduce risk

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[788] Note of call with [✂] on [✂]. Note of call [✂] on [✂]. Microsoft similarly submitted that when a customer is switching a workload from one RDBMS to another, both databases are 'routinely run in parallel for a defined period (often months) for validation, fall back and cutover risk management'. Microsoft's response dated [✂] to section 69 notice dated [✂].
[789] This is discussed in more detail in its influence on the choice of RDBMS when setting up a new workload, but these factors will remain an influence on decision making once the workloads are established. See section 'The contestability of new workloads' below.
[790] Jigsaw Customer Research, 28 September 2026, pages 89-90, paragraphs 324, 329, and 331.
[791] Jigsaw Customer Research, 28 September 2026, page 92, paragraph 339. Note of call [✂] on [✂]. [✂] response [✂] under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[792] 'Modernisation' means shifting from traditional deployment options, such as running a workload on premises or within a virtual machine, to more cloud native components such as PaaS services, and other cloud architecture components (Overview of Azure Workload Modernization | Microsoft Community Hub, accessed by the CMA on 11 September 2026). As discussed below, when workloads are modernised various changes are made to how the workload is run which can include changing the underlying RDBMS, but this is not inevitable.
[793] For example, one RDBMS provider submitted a list of several differences between a homogeneous migration (moving to cloud or to another cloud provider while maintaining SQL Server) and a heterogeneous migration (changing RDBMS provider, which often requires some level of modernisation). [✂] response dated [✂] to section 69 notice dated [✂]. One RDBMS provider indicated that migrating to the cloud can involve only backing up database and restoring it on a cloud server, while switching RDBMS is substantially more difficult. Note of call [✂] on[✂].

and costs. Workloads can be moved to the cloud without modernising and can also be modernised while on premises or once on the cloud.[794] As set out in more detail below, it is modernisation, as opposed to migration, which has the potential to trigger switching RDBMS for customers when providing a meaningful opportunity to reduce application dependencies.

A.356 This section considers the extent to which customers migrating workloads to the cloud (and any related modernisation) is likely to lead to a switch in RDBMS provider.

A.357 There is some evidence that customers may choose to re-evaluate their RDBMS requirements when migrating a workload to the cloud or when modernising a workload:

(a) Some customers submitted that while they were unlikely to switch existing workloads away from SQL Server in the short term, they would consider alternative RDBMS when migrating to the cloud or undertaking modernisation.[795]

(b) Some RDBMS providers submitted that there is greater competition for workloads following modernisation,[796] and that customers may reassess their RDBMS needs at the point of cloud migration or modernisation.[797]

(c) Some resellers submitted that customers may re-evaluate their RDBMS requirements when modernising or re-platforming a workload or application.[798]

A.358 However, the evidence from customers and RDBMS providers below indicates that 'homogenous' or lift and shift migrations, where a customer migrates to cloud without significantly modifying its software applications or changing software

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[794] For example, one RDBMS provider submitted that modernisation is common when migrating to the cloud, though the extent of modernisation varies significantly by workload and industry. [✂] response dated [✂] to section 69 notice dated [✂]. AWS stated that a wide variety of factors may influence a customer's choice of when to modernise a given workload, and the timing (ie on-premises, during migration, or after migration) varies. Amazon's response dated [✂] to section 69 notice dated [✂]. A Microsoft solutions partner's guide to SQL Server modernisation states that 'Modernization does not automatically mean replacing SQL Server or moving every workload to the cloud. Depending on the environment, it may involve a version upgrade, infrastructure refresh, SQL Server consolidation, cloud migration, high availability redesign, performance optimization or a broader replatforming project.' SQL Server Modernization: Strategy, Options & Roadmap | Aryasoft, accessed by the CMA on 8 October 2026.

[795] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]. One customer submitted that it has greater flexibility for modernised workloads but limited practical switching capability for legacy workloads unless they are rearchitected. Note of call [✂] on [✂].

[796] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. A cloud provider submitted that its RDBMS products ([✂]) compete primarily for 'net-new workloads or as medium- to long-term modernisation alternatives.' [✂] response dated [✂] to section 69 notice dated [✂].

[797] [✂] response dated [✂] to section 69 notice dated [✂].

[798] [✂] response dated [✂] to voluntary request for information dated [✂]. [✂] response dated [✂] to voluntary request for information dated [✂].

vendor, are common for many customers and in these circumstances switching will typically continue to be constrained by the factors described above.

(a) One RDBMS provider submitted that customers may prefer to continue using the same RDBMS in the cloud to leverage existing skills, applications, database architectures, operational processes, and investments in database technologies.[799] Similarly, another RDBMS provider submitted that customers are likely to stay with the same RDBMS vendor after transitioning to cloud to avoid disruption.[800] A third provider submitted that the prevalence of SQL Server and Windows Server for existing on-premises customers 'definitely' influences the choice of RDBMS when migrating to the cloud.[801]

(b) One RDBMS provider submitted that customers are generally more likely to undertake modernisation after they have established workloads in the cloud rather than as part of the initial migration because initial migrations are frequently focused on reducing risk, maintaining business continuity, and achieving infrastructure objectives.[802] Similarly, another RDBMS provider submitted that customers typically migrate their existing workloads substantially in their current form (ie lift and shift) and treat modernisation as a separate and subsequent activity.[803]

(c) One customer told us that it chose to migrate its workloads to the cloud (retaining the same software vendors) and only later modernise.[804]

(d) Almost all of the customers we asked who currently used SQL Server on public cloud had also previously used it on private cloud or on-premises.[805]

A.359 For customers that do choose to modernise, the evidence we have seen to date suggests that they do not necessarily consider switching RDBMS as part of this modernisation, and if they do attempt to do so, this can be a complex process that is not guaranteed to be successful.

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[799] [✂] response dated to section 69 notice dated [✂].
[800] [✂] response dated [✂] to section 69 notice dated [✂].
[801] [✂] response dated [✂] to section 69 notice dated [✂].
[802] [✂] response dated [✂] to section 69 notice dated [✂].
[803] [✂] response dated [✂] to section 69 notice dated [✂]. This view was further supported by [✂] who told us that cloud migration and database migration (ie switching) are distinct activities. They said that moving a database to the cloud can be as simple as backing up the database and restoring it on a cloud server. Note of call [✂].
[804] While this was raised within the context of the customer's Server OS usage, we understand that this comment applies to its wider IT estate. Note of call [✂] on [✂].
[805] Response to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂].

(a) Some RDBMS providers submitted that many organisations that modernise workloads do not switch away from SQL Server, often because of application dependencies, existing operational expertise, tooling, and migration costs.[806]

(b) [✂] submitted that 'modernisation efforts are unlikely to result in a customer completely switching' away from SQL Server, and that 'most customers that are dependent on SQL Server remain dependent'.[807] [✂] also stated that it has invested significant efforts in modernising customer workloads to make them less dependent on Microsoft software, with 'limited success'. For example, between 2023 and 2024, only [✂][808] was eliminated as a result of modernisation efforts.[809,810]

(c) [✂] indicated that modernising an existing SQL Server workload, particularly where that modernisation involves switching to an alternative RDBMS, is a complex, resource-intensive, and frequently multi-year process. It submitted multiple examples [✂].[811] [✂] confirmed that, in its view, these examples are typical and representative of large-scale enterprise modernisation efforts.[812] For example:

(i) [✂].[813]

(ii) [✂].[814]

(d) One customer told us that it sought to modernise workloads when migrating to cloud but did not generally consider changing RDBMS when doing so because application dependencies meant it had no alternative choice of provider. This customer also said that, where possible, it tries to use Microsoft because it is 'easier'.[815]

A.360 As discussed above, the prevalence of 'lift and shift' migration means that customers using SQL Server on-premises are likely to continue using SQL Server when they migrate to the cloud. These customers may be more likely to move to

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[806] One provider submitted that customers typically switch to a more recent or cloud-based variant of SQL Server rather than switching to a different database altogether when modernising. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[807] [✂] response dated [✂] to section 69 notice dated [✂].
[808] [✂].
[809] [✂] response dated to section 69 notice dated [✂]. We asked [✂] to update this figure; however, it submitted that [✂]. Similarly, it submitted that [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[810] We note that while [✂] is not necessarily equivalent to SQL Server usage, [✂] submitted that customers who [✂] have traditionally been required to [✂]. Therefore, we consider that changes in [✂] are indicative of the success of SQL Server modernisation on [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[811] [✂] response dated [✂] to section 69 notice dated [✂].
[812] [✂] response dated [✂] to section 69 notice dated [✂].
[813] [✂] response dated [✂] to section 69 notice dated [✂].
[814] [✂] response dated[✂]to section 69 notice dated [✂].
[815] Note of call [✂] on [✂].

Microsoft cloud environments following migration due to historic dependencies or for cost reasons.[816,817] Once these customers have chosen to use SQL Server on Azure, they may subsequently find it harder to switch due to the integration and interoperability with other Microsoft products discussed below.

A.361 Finally, we have seen only a few examples where customers have modernised and successfully reduced their usage of SQL Server in favour of alternative, usually open-source, RDBMS.[818]

A.362 The evidence we have seen to date shows that when customers migrate existing workloads to the cloud, they continue to face significant switching barriers as set out above.

The impact of AI on barriers to switching

A.363 We have seen little evidence that AI-powered tools[819] have thus far been successful in allowing customers to switch away from SQL Server to a material extent. We consider that overall barriers to switching remain significant.

(a) [✂] stated that AI tools can make switching and multi-cloud strategies easier, faster, and more accessible by analysing application dependencies, identifying equivalent services across providers, and automating significant

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[816] One cloud provider stated that some SQL Server customers are more likely to choose Azure over competing cloud providers because Microsoft's hybrid deployment model allows it to take advantage of enterprise customers' historic on-premises dependencies. [✂] response dated [✂] to section 69 notice dated [✂]. Cost differences are described more fully in subsection 'Cloud Licensing' of 'Indicative roadmap for promoting competition in relation to business software'. There is evidence that customers increasingly prefer to adopt managed (PaaS) RDBMS offerings as they can provide greater convenience. However, one cloud provider indicated that it can be difficult for customers to transfer existing SQL Server licences to non-Azure managed RDBMS services. Note of call with [✂] on [✂]. Therefore, these customers may be more likely to choose an Azure PaaS product.

[817] We note that in 2025, most revenue from new Azure customers in the UK ([✂]) came from those customers who used SQL Server in their first year on Azure. For new Azure customers that use SQL Server, Microsoft submitted that SQL Server spend accounted for [✂] of their total spend in their first year on Azure, and SQL Server accounted for [✂] of all RDBMS-related vcore hour usage on Azure for these customers (that is, [✂] of vcore hours were related to rival RDBMS products). Microsoft's response dated [✂] to section 69 notice dated [✂]. We note that this usage data is based on Microsoft's best-efforts attempt to construct usage information using financial data, as discussed above.

[818] One customer submitted that Microsoft had historically been part of its enterprise data architecture but had been increasingly replaced by Snowflake and PostgreSQL Note of call [✂] on [✂]. Another customer submitted that it currently uses SQL Server for legacy workloads but that it continues to migrate databases to open-source and PaaS as support for these products grows. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated, [✂]. A third customer indicated that when there is an opportunity to modernise a workload, it makes efforts to migrate to non-SQL Server RDBMS where there is a cost and technology justification. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂], [✂].

[819] As discussed above, Microsoft submitted that AI-powered modernisation tools can increasingly automate parts of the switching process, reducing barriers to switching. Examples of these AI tools include AWS Transform which is an agentic AI-based service that supports migration from SQL Server environments to PostgreSQL. [✂] response dated [✂] to section 69 notice dated [✂]. AWS's Babelfish for PostgreSQL, which translates commands from apps written for SQL Server. This is designed for AWS's Aurora RDBMS and means that customers can continue to use their existing applications while they transition to a new PostgreSQL-based RBDMS. Babelfish for PostgreSQL is an open-source project and so can also be used to assist migrations to non-AWS PostgreSQL-based RBDMS. [✂] response dated [✂] to section 69 notice dated[✂]; and Google's Cloud Database Migration Service to help customers migrate to Cloud SQL and AlloyDB from competing RDBMS, including SQL Server. This tool includes automatic code conversion via its Gemini AI Database Migration Service | Google Cloud, accessed by the CMA on 12 October 2026.

elements of migration or modernisation work that historically required specialist expertise.[820] However, [✂] also submitted that these tools cannot make switching seamless from a technical perspective or make SQL Server workloads run identically on other RDBMS engines. It submitted that, because of this, it is 'simply not accurate' that AI alone will allow customers to switch more easily to a non-Microsoft product.[821]

(b) A cloud provider submitted that AI tools do not overcome switching barriers as they do not materially aid the modernisation process.[822] While AI coding tools can incrementally speed up the process of translating coding languages, it submitted that this is only possible for the most basic applications.[823] A cloud provider submitted that the process of modernisation remains extremely challenging, very expensive, and very slow, even with the most advanced AI coding tools available. For these reasons, the cloud provider's AI capabilities have not led to material numbers of customers switching away from SQL Server.[824]

(c) Another RDBMS provider submitted that while it expects AI-powered modernisation tools to lower certain technical barriers to switching, AI tools do not eliminate the need to address application dependencies, data models, operational processes, performance validation, regulatory requirements, and organisational skills.[825] Another RDBMS provider submitted that while AI tools do, in its view, make switching simpler, organisations are still generally 'conservative' when it comes to data.[826]

(d) No customers we spoke to reported having direct experience using AI-powered modernisation tools.

A.364 The evidence we have seen to date shows that while AI-powered tools can reduce the cost of switching to a degree, overall barriers remain significant.

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[820] [✂] response dated [✂] to section 69 notice dated [✂]. We note that this statement was given in the context of Server OS modernisation, but [✂] provided similar comments in the context of RDBMS. [✂] response dated [✂] to section 69 notice dated [✂].

[821] [✂] response dated [✂] to section 69 notice dated [✂]. As discussed above, [✂] submitted that, despite sustained investments in modernisation including through AI tools and dedicated staff, it had only achieved a minimal reduction in [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[822] [✂] response dated [✂] to section 69 notice dated [✂].

[823] [✂] also submitted that these tools require the organisation to own the application source code, and that the use of AI coding tools remains small-scale and uncertain. [✂] response dated [✂] to section 69 notice dated [✂].

[824] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] submitted that its [✂] tool has scanned [✂] SQL Server databases across [✂] SQL Server instances where the customer's goal was migration to a [✂] PostgreSQL offering. Of these, only [✂] have been, or are currently being, migrated. [✂] submitted that the remaining [✂] require extended planning to address a combination of individual system complexity and the customer's capacity to absorb operational changes needed for executing migrations at scale without business disruption. [✂] further submitted that only [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

[825] [✂] response dated [✂] to section 69 notice dated [✂].

[826] [✂] response dated [✂] to section 69 notice dated [✂].

Summary of competition for existing workloads

A.365 Overall, our provisional view is that SQL Server customers face significant barriers to changing RDBMS for existing workloads, meaning they are locked into their original choice for the lifetime of the workload, which typically last a number of years. As a result, a large fraction of Microsoft's annual revenue from SQL Server relates to workloads for which it faces very limited competition.

Competition for new workloads

A.366 As discussed above, switching existing RDBMS workloads is limited, even at the point of migrating workloads to the cloud. We have considered the extent to which there is greater competition for new workloads, as the workload has not yet become embedded in a customer's IT infrastructure.

Microsoft's submissions

A.367 Microsoft made a range of submissions related to new workloads and customer preferences, primarily focussing on the role of the move to the cloud.[827]

(a) While different customers have different IT needs, and the importance of on-premises RDBMS deployment over the next five years will vary by customer, the overall trajectory is that 'cloud migration has grown significantly and will continue to accelerate, progressively reducing the share of RDBMS workloads that customers choose to run on-premises.'[828]

(b) There is a wider range of RDBMS options a customer can actively consider on the cloud,[829] and SQL Server competes against a number of successful services, with rival RDBMS providers consistently growing at annual rates far surpassing Microsoft's.[830]

(c) Microsoft highlighted that it 'enables broad, standards-based interoperability between third-party RDBMS and the other Microsoft products' and that 'Customers also value having the choice to integrate SQL Server and other Microsoft products, not as a constraint, but as a convenience and source of efficiency.'[831]

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[827] Microsoft also briefly mentioned that non-relational or purpose-built databases may also impose a competitive constraint. Microsoft's submission to the CMA dated [✂]. In the Cloud MI, the CMA found evidence that alternative database management systems (including non-relational database management systems) were not effective demand-side substitutes for RDBMS. We have not seen any evidence that non-relational or purpose built databases impose a meaningful competitive constraint. Cloud Market Investigation, 31 July 2025, paragraph 7.146. Final decision report

[828] Microsoft's response dated [✂]to section 69 notice dated [✂].

[829] Microsoft's response dated [✂]to section 69 notice dated [✂].

[830] Microsoft's submission to the CMA dated [✂].

[831] Microsoft's response dated [✂]to section 69 notice dated [✂].

The contestability of new workloads

A.368 In line with the significant switching barriers and modernisation complexities outlined above, some alternative providers of RDBMS told us that they can compete more effectively with Microsoft for customers' new workloads than for existing workloads.[832] Reasons included:

(a) because customers select RDBMS for new workloads based on product features and capabilities rather than technical, commercial, and architectural constraints;[833]

(b) that customers' RDBMS choices for new workloads reflect a comparison of availability, price, functionality, and cost,[834] compared to application dependencies for existing RDBMS;[835] and

(c) because new workloads do not have legacy RDBMS or application dependency,[836] migration costs or SQL Server-specific requirements,[837] or existing technology investment constraints.[838]

A.369 Consistent with this, two RDBMS providers submitted that their growth strategies are focused on winning new workloads, as well as workloads that were being modernised (such as by helping customers modernise data-intensive applications,[839] or by competing to be a medium- to long-term alternative for customers following modernisation[840]). Two other providers stated that they compete for both new and existing RDBMS workloads,[841] although one of these providers submitted that new workloads are generally considered easier to win.[842]

A.370 Additionally, new workloads are often deployed on the cloud[843] and we have seen some evidence that the competitive landscape is different for on-premises and cloud RDBMS deployments, with potentially greater choice for some cloud-native RDBMS workloads.

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[832] [✂] response dated [✂]to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂]to section 69 notice dated [✂].
[833] [✂] response dated [✂] to section 69 notice dated [✂].
[834] [✂] response dated [✂] to section 69 notice dated [✂].
[835] [✂] response dated [✂] to section 69 notice dated [✂].
[836] [✂] response dated [✂] to section 69 notice dated [✂].
[837] [✂] response dated [✂] to section 69 notice dated [✂].
[838] [✂] response dated [✂] to section 69 notice dated [✂].
[839] [✂] response dated [✂] to section 69 notice dated [✂].
[840] [✂] response dated [✂] to section 69 notice dated [✂].
[841] [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].
[842] [✂] response dated [✂] to section 69 notice dated [✂].
[843] In addition to the evidence described below, we also requested the qualitative views of providers, and found that their views were mixed, with one saying that 'many' new workloads are cloud native, while another said that only 'some' new workloads are cloud native, and submitted estimates from Gartner that digital natives comprised just 9% of total addressable market in the UK in 2024. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] response dated [✂] to section 69 notice dated [✂].

(a) Some RDBMS products, including those offered by some large cloud providers, are only available on the cloud.[844]

(b) Evidence from some customers and RDBMS providers indicates that open-source RDBMS (often specifically PostgreSQL) may be seen as more viable for cloud workloads by some customers.

(i) One customer told us that it did not use PostgreSQL very much before migrating to the cloud because it was difficult to make resilient and production-like. However, it said that PostgreSQL has become easier to use since moving to cloud and is free, making it possible to have several PostgreSQL instances.[845] Similarly, another customer submitted that PostgreSQL is 'well suited' to cloud hosting.[846]

(ii) One customer who used RDBMS on public cloud submitted that, for new applications, its current strategy is to adopt PostgreSQL where feasible as it supports greater portability. However, it submitted that this is not always possible as many COTS applications rely on SQL Server.[847]

(iii) Another customer submitted that it encourages its IT team to not use commercial database software for new applications. This customer submitted that it is moving to open-source and PaaS RDBMS.[848]

(iv) One RDBMS provider submitted that open-source RDBMS products may be preferred where customers prioritise portability, alignment with open-source technology stacks, flexibility across deployment environments, or consistency with broader engineering standards. Such preferences may be more common in cloud-native development environments, organisations pursuing open technology strategies, or workloads designed to operate across multiple infrastructure environments.[849]

A.371 However, a range of stakeholders described differences in the RDBMS that are suitable for different workloads, including the limitations of open-source RDBMS

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[844] For example, Amazon's RDS, RDS Custom, Aurora, and Aurora DSQL RDBMS products are available to customers using AWS services. [✂] response dated [✂] to section 69 notice dated [✂]. [✂] submitted that its RDBMS products were primarily designed as fully-managed public cloud services, though it has since expanded these services to include on-premises and private cloud deployments. [✂] response dated [✂] to section 69 notice dated [✂].
[845] Note of call [✂] on [✂].
[846] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[847] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[848] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[849] [✂] response dated [✂]to section 69 notice dated [✂].

for some workloads. One cloud provider submitted that some open-source RDBMS primarily target smaller or web-scale workloads, while SQL Server is designed for handling the large, high-availability, online transaction processing (OLTP) workloads required by many large organisations.[850] Similarly, one customer submitted that it uses an open-source RDBMS particularly for less critical or lighter-weight applications that do not require the premium functionality of SQL Server,[851] and another customer submitted that open-source offerings can present security and scalability challenges with varying levels of support available.[852] These submissions are supportive of the view that the substantial price differential between some open-source RDBMS and SQL Server is indicative of differentiation.[853]

A.372 Overall, we consider that while there may be some cloud workloads that are particularly suitable for open-source RDBMS, differentiation can limit customer choice, such that open-source RDBMS may not be a good alternative for some workloads. Overall, customer willingness to pay for SQL Server when a free product is available is likely to indicate significant differentiation between products.

A.373 Application compatibility is the key driver of a customers' RDBMS choice. This has a similar impact for new workloads as discussed in detail above for existing workloads, where the choice of application drives the choice of RDBMS.[854]

A.374 Although new workloads do not rely on an incumbent RDBMS from which the customer would need to switch, this does not mean that the choice of RDBMS is made independently of the customer's existing IT environment. Existing applications, architecture, technical skills, tooling and platform standards may influence which RDBMS are viable or attractive for a new workload. In addition, existing IT skillsets can also restrict the number of viable alternative providers for a given new workload, similar to their impact for existing workloads.[855]

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[850] This cloud provider explained that MySQL is primarily aimed at web-scale deployments, and similarly MariaDB primarily targets smaller scale deployments. [✂] response dated [✂] to section 69 notice dated [✂]. OLTP workloads are explained in more detail here Online Transaction Processing (OLTP) - Azure Architecture Center | Microsoft Learn, accessed by the CMA on 28 September 2026.

[851] Note of call [✂] on [✂].

[852] [✂] response dated [✂]to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation [✂].

[853] This is especially so given our customer research found that price was the most significant drawback of SQL Server. These customers reported that SQL Server was 'expensive to run in the cloud', costs were 'exponential' and they were paying for unused features, with particular concern about the costs of adding additional licences. Customers however stated that they were 'locked-in' to these contracts, by application compatibility or the difficulty of migration. Jigsaw Customer Research, 28 September 2026, page 91, paragraph 333-334.

[854] As discussed above in the context of existing applications, COTS applications are generally developed for a single RDBMS, and discussed further below in the context of new workloads.

[855] As described in section 'Barriers to switching for existing RDBMS workloads', some customers and resellers indicated that customers' IT teams are often specialised in a specific RDBMS and would need to develop new skills to switch to a new RDBMS and that even where customers use multiple RDBMS, some retraining may still be required to change the balance of staff skills for any significant change in infrastructure, or to introduce a new RDBMS not currently in use. While this evidence was primarily provided in relation to switching, we consider that these submissions on the difficulty of adopting an unfamiliar RDBMS due to a lack of existing skills apply equally to new workloads.

A.375 Actual or perceived technical interoperability can also advantage Microsoft products over non-Microsoft alternatives. We see some evidence that technical interoperability and integration between SQL Server and other Microsoft products is less important than in some other digital activities. For example, one customer submitted that its use of SQL Server would not influence its decision to switch away from other Microsoft products as database choices are generally made independently according to application and data requirements.[856] And, while our customer research noted the benefits of SQL Server integration with other Microsoft products, it also shows that they are less relevant to decision making than application compatibility.[857]

A.376 However, the evidence we have seen to date shows that actual or perceived technical interoperability and integration between SQL Server and other Microsoft products can have an influence on customers' choice of RDBMS.

(a) Some customers submitted that they chose SQL Server over alternative RDBMS products for some new workloads because of its ability to integrate with other Microsoft products such as Azure, Windows Server, and data analytics tools.[858] For example:

(i) Customers in our customer research indicated that SQL Server integrates seamlessly with Microsoft products, including .NET, Power BI, Azure, and SharePoint, and others.[859]

(ii) One customer submitted that there was some increased functionality from running SQL Server on Windows Server versus running it on Linux (even though it can be run on Linux) that may have motivated the customer's initial decision to use SQL Server.[860] Similarly, another customer submitted that SQL Server integrates well with its Microsoft-based application and server stack.[861] Likewise, one customer noted that its use of SQL Server was usually driven in part by some applications which need to be hosted on Windows Server.[862]

[856] [✂] response dated [✂] to questions in lieu of a call dated [✂].
[857] Jigsaw Customer Research, 28 September 2026, summary box under section 3.7.2, page 89.
[858] Multiple responses to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]; [✂]; [✂]; [✂]; and [✂] response dated [✂] to section 174 notice under the Enterprise Act dated [✂]. Note of call [✂] on [✂].
[859] Jigsaw Customer Research, 28 September 2026, pages 90 and 92, paragraphs 329-331, and 337.
[860] Note of call [✂] on [✂].
[861] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[862] [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

(iii) One customer submitted that it chose SQL Server because its technology stack is designed to take maximum advantage of Azure.[863]

(b) Submissions from some RDBMS providers suggest that competition takes place at an ecosystem level due to integration and technical interdependencies between SQL Server and other aspects of a customer's IT stack.

(i) One RDBMS provider submitted that Microsoft-centric customers benefit from deep integration between SQL Server and the broader Microsoft ecosystem, which creates a strong incentive to extend Microsoft investments rather than adopt alternatives. This means that competitors must not only compete on database functionality but also overcome ecosystem-level advantages that favour SQL Server.[864]

(ii) Another RDBMS provider submitted that switching away from SQL Server often breaks existing native integrations with other Microsoft products such as Active Directory and Power BI, forcing customers to engineer complex workarounds and making switching prohibitively expensive.[865]

(iii) A third RDBMS provider submitted that Microsoft emphasises its broad cloud ecosystem and easier integration with Azure services when competing for RDBMS workloads.[866] It submitted that Microsoft's ability to offer a range of products in cloud and its Business Software Ecosystem naturally makes SQL Server the default choice for Microsoft customers, even for new workloads; although it also submitted that it can and does compete for such workloads.[867]

A.377 Findings from our customer research also suggest that some customers are consolidating several of their data-related services into a single 'data lake' or data platform solution which draws together data stored in SQL Server (or an alternative RDBMS), reported in Power BI, and integrated on Azure.[868] A substantial minority of customers in our research chose or were considering Microsoft Fabric as their data platform.[869] We provisionally consider that this consolidation of data-related services may increase use of SQL Server, due to Microsoft's breadth of data-related products relative to other RDBMS providers.

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[863] [✂] response dated [✂]to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[864] [✂] response dated [✂]to section 69 notice dated [✂].
[865] [✂] response dated [✂]to section 69 notice dated [✂].
[866] [✂] response dated [✂]to section 69 notice dated [✂].
[867] [✂] response dated [✂]to section 69 notice dated [✂].
[868] Jigsaw Customer Research, 28 September 2026, page 95, section 3.7.6.
[869] Jigsaw Customer Research, 28 September 2026, page 95, section 3.7.6.

A.378 In addition to technical interoperability, evidence we have seen to date from customers and resellers suggests that some customers prefer to consolidate their software purchases using a single provider for several product categories, as discussed in sub-section 'Limitations to technical integration and interoperability faced by alternative providers', of Chapter 5, 'Competition with Microsoft's Business Software Ecosystem'.[870,871] Large customers (who are likely to buy products from all five digital activities) can receive discounts via Enterprise Agreements. Where SQL Server is included in those agreements, switching to alternative RDBMS can be less attractive where this means a customer would forgo some of these discounts.[872,873]

A.379 The impacts of a range of factors on the choice of RDBMS for new workloads is consistent with the evidence which indicates that SQL Server remains well-positioned to win new workloads, including new workloads in the cloud.

(a) One RDBMS provider submitted that SQL Server faces only weak competition for new cloud-native workloads where customers have significant existing investments in Microsoft technologies, established operational expertise in SQL Server, application architectures designed around Microsoft tooling, or internal standards favouring Microsoft platforms, whereas SQL Server faces the strongest competition when it competes for cloud-native workloads where customers are undertaking a broad technology evaluation.[874] This provider also submitted that alternative RDBMS compete strongly with SQL Server when they are not materially constrained by existing database choices, application dependencies, or platform standards.[875]

(b) A cloud provider submitted that workloads where non-SQL Server RDBMS are weak competitors to SQL Server represent a 'large portion' of cloud-native RBDMS workloads. It submitted that this is because RDBMS tools are differentiated and customers will often use multiple RDBMS tools complementarily, with choice of software being shaped by the workload or

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[870] In addition to the broad preference to consolidate across the Microsoft Business Ecosystem, some customers discussed their preference to purchase Microsoft RDBMS alongside other Microsoft products. Note of call [✂]; Note of call [✂]; Multiple responses to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂] which have been transferred to the case file for this investigation, [✂]; [✂]; [✂]; [✂]; Note of call [✂].

[871] We note that a small number of customers did not consider there to be any commercial benefits to purchasing SQL Server alongside other products in Microsoft's Business Software Ecosystem, or were unsure of the commercial benefits. [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information dated [✂].

[872] UK customers who buy SQL Server together with products from all of the other four digital activities account for [80-90%] [✂] of all of Microsoft's UK revenue from Business Software Ecosystem (those who buy both SQL Server and Windows Server account for [80-90%] [✂] of Business Software Ecosystem revenues). See Appendix B - Customer Data Analysis.

[873] See further details in Chapter 4: Digital activities.

[874] [✂] response dated [✂]to section 69 notice dated [✂].

[875] [✂] response dated [✂]to section 69 notice dated [✂].

intended application in question.[876] It also submitted that customers somewhat prefer proprietary RDBMS over open-source RDBMS for their new cloud workloads, primarily because these enterprise customers were likely to already use proprietary RDBMS on-premises and would generally maintain the same RDBMS when they deploy on the cloud.[877]

(c) Another cloud provider stated that SQL Server competes strongly for new workloads, including cloud native workloads.[878] It submitted that SQL Server is a critical offering for most customers and, therefore, customers often choose to use SQL Server for 'many' different RDBMS workloads.[879]

(d) Our customer research found that IT teams' 'familiarity' with Microsoft products and 'in particular how they integrated with Azure, was a big driver of comfort with SQL Server'.[880]

A.380 As discussed above, as an overarching point, we consider that customers' willingness to pay for SQL Server when a free product is available is likely to indicate significant differentiation between products.

A.381 Lastly, we consider that Microsoft's licensing terms for SQL Server on AWS and Google Cloud reflect that Microsoft considers that cloud customers have a strong preference for SQL Server over competing products. Competing cloud providers have submitted that Microsoft's licensing practices mean it is significantly more expensive to use SQL Server on competing clouds relative to Azure[881] (this is in line with the CMA's findings in the Cloud market investigation).[882] We consider that Microsoft could only sustain higher prices for SQL Server on AWS and Google Cloud if it was confident that customers would not simply switch to an alternative RDBMS provider.

A.382 Given that there is greater competition for new workloads compared to existing workloads, we have sought to understand the relative size and importance of (eg revenues from) new workloads compared to existing workloads. It has not been possible to quantify the scale of new workloads; however, the evidence below gives indications on the likely importance of new workloads relative to existing workloads.

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[876] [✂] response dated [✂]to section 69 notice dated [✂].
[877] [✂] response dated [✂]to section 69 notice dated [✂].
[878] [✂] response dated [✂]to section 69 notice dated [✂].
[879] [✂] response dated [✂]to section 69 notice dated [✂].
[880] Jigsaw Customer Research, 28 September 2026, page 90, paragraph 330.
[881] One cloud provider submitted that Microsoft charges third-party providers a wholesale price for SQL Server licences that far exceeds the retail price it charges its own Azure customers. [✂] response dated [✂] to DMU Remedies Call Follow-up Questions in the context of the CMA deciding whether to exercise its digital markets functions dated [✂], [✂]. [✂] response dated [✂]to section 69 notice dated [✂].
[882] Cloud Infrastructure Services, Final decision report, 31 July 2025.

A.383 The evidence we have seen to date suggests that RDBMS revenues are growing steadily, and that cloud-based deployments are growing more rapidly than on-premises deployments. Overall RDBMS revenues have grown at an average annual rate of 12% globally, and 14% in the UK, between 2020 and 2025, although this includes expansion of existing workloads and price increases.[883] Cloud databases are estimated to dominate market growth, compared to on-premises, which has grown slowly while its overall share has declined.[884]

A.384 The evidence we have seen also suggests that workloads can be in place for substantial periods of time or adapted from legacy workloads.[885] This evidence suggests that there is a flow of new workloads, primarily on the cloud, but that there is a substantial body of existing workloads, including some that have been in place long term. Of course, as 'new' workloads become existing workloads they will in the future face the barriers to switching detailed above.

A.385 In any event, the evidence we have seen to date suggests that Microsoft can discriminate pricing between customers that are more locked-into their choice of RDBMS using customer specific discounting. As such, while there may be more choice for some new workloads, this does not diminish Microsoft's market power over those customers who have more limited options.

A.386 If Microsoft can identify the workloads for which it faces more competition (eg some new, on-cloud workloads) and it can offer preferential terms for these workloads relative to those facing less competition, Microsoft can exercise its market power over customers with fewer alternative options while still winning new workloads.

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[883] CMA calculations based on Microsoft's response dated [✂]to section 69 notice dated [✂]; Oracle's response dated [✂]to section 69 notice dated [✂]; Snowflake's response dated [✂]to section 69 notice dated [✂]; IBM's response dated [✂]to section 69 notice dated [✂]; Amazon's response dated [✂]to section 69 notice dated [✂] and follow up questions dated [✂]; Canonical's response dated [✂]to section 69 notice dated [✂]; Google's response dated [✂]to section 69 notice dated [✂] and follow up questions dated [✂]; Teradata's response dated [✂] to section 69 notice dated [✂]; SAP's response dated [✂]to section 69 notice dated [✂].

[884] A recent industry report estimated that cloud database PaaS accounted for 67% of worldwide spend on DBMS in 2025 and generated nearly 84% of the market's revenue growth. It also estimated that on-premises revenues continued to grow in absolute terms by 8% year on year, even as its share of the overall market declined. Relational DBMS, ie RBDMS, made up approximately 66% of the wider DBMS market in 2022 (Cloud MI Final Report, Appendix R, paragraph R56. Appendix R: Market power – supplementary framework and evidence). Industry report data comes from a recent Gartner industry report, submitted to us by Microsoft following our request to explain how, in its view, the scale of RDBMS usage on-premise compared to the scale of RDBMS usage currently in the cloud. Microsoft's response dated [✂] to section 69 notice dated [✂]. We note that another industry report from PW Consulting (which an RDBMS provider submitted to us) estimated that the global RDBMS market was valued at approximately $86 billion, of which approximately 35% of the market was on-premises and 65% was cloud-based. [✂] response dated [✂] to section 69 notice dated [✂].

[885] As discussed in section 'Barriers to switching for existing RDBMS workloads', there is evidence that customers do not frequently review their RDBMS options once a workload had become embedded in their IT infrastructure and therefore these workloads may remain in place for a substantial period of time before being reconsidered.

A.387 For larger customers, Enterprise Agreements are individually negotiated, giving an understanding of the customer's business, and the scope for price discrimination.[886] Microsoft also submitted that it [✂]. [887]

Summary of evidence on competition for new workloads

A.388 Overall, our provisional view is that while customers have more scope for choice when building new RDBMS workloads, product differentiation and ecosystem advantages mean that this choice is limited. Open-source RDBMS are less suited for large scale mission-critical workloads, limiting their competitive constraint on SQL Server. Competition is also limited for new workloads that are closely linked with Microsoft's Business Software Ecosystem (including those requiring COTS applications designed for SQL Server, or where it is favoured due to skills or integration advantages).

Competition between Microsoft and alternative providers of RDBMS

A.389 In the previous sections we have described the competition faced by Microsoft for existing and new workloads in general. In this section we present evidence specific to individual, alternative providers of RDBMS, noting that, in light of the evidence above, competition between these providers for existing workloads is very limited so that competition will be focussed on the subset of new workloads.

A.390 Microsoft submitted that SQL Server competes with a long list of RDBMS providers including open-source databases such as PostgreSQL and MySQL, proprietary commercial databases such as Oracle and IBM Db2, and cloud native offerings from AWS, Google Cloud, and others.[888]

A.391 The evidence we have seen to date indicates that Oracle AI Database, MySQL, PostgreSQL, and to a lesser extent IBM's Db2, are the main alternatives to Microsoft's SQL Server.[889] These alternative providers are a mix of proprietary and open-source RDBMS.[890] We consider that the fact that proprietary RDBMS remain in widespread use, including for new workloads, despite the presence of free open-source alternatives suggests there is sufficient differentiation in capability or support provision that some customers consider open-source alternatives to be poor substitutes for paid RDBMS products.

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[886] See Chapter 4: Digital activities

[887] Microsoft's response dated [✂]to section 69 notice dated [✂].

[888] Microsoft's response dated [✂]to invitation to comment dated [✂].

[889] Oracle AI Database, MySQL, and PostgreSQL were the three most commonly cited alternative RDBMS to SQL Server identified by the customers we engaged with. For example, customers identified these as alternative RDBMS in our customer research. Jigsaw Customer Research, 28 September 2026, pages 94-95.

[890] We note that when a RDBMS is free to download, there can be fees associated with PaaS compute costs or ongoing support. This is described in more detail in sub-section 'Relational Database Management Systems' of 'Appendix C: Market Outcomes'.

A.392 We reviewed a range of Microsoft internal documents at Board and senior management level and these documents showed little monitoring of competitors or responding to competitors. There were few documents that made any mention of RDBMS, although reporting at this senior level was generally aggregated for wider divisions.[891] These documents are discussed in more detail below but broadly suggest there is competition between Oracle and SQL Server, and that Microsoft's PostgreSQL PaaS offering is sufficiently differentiated from its existing RDBMS products to require a purchase of a start-up. However, these documents give limited evidence of Microsoft assessing or responding to competitors in RDBMS.

Oracle (Oracle AI Database and MySQL)

A.393 Oracle maintains two differentiated RDBMS products:

(a) a proprietary (paid) RDBMS product, Oracle AI Database; and

(b) an open-source (free) RDBMS product, MySQL, with some additional paid-for optional features.

A.394 Oracle submitted that it competes closely with Microsoft, which it sees as the market leader in RDBMS.[892]

A.395 Oracle submitted that Oracle AI Database is its current flagship RDBMS and that it is principally targeted at large enterprises and demanding workloads requiring very high availability, resilience, scalability, security, complex data management and extensive operational controls.[893] It submitted that it competes with SQL Server for large, complex, mission-critical and regulated organisational workloads. It offers enterprise-grade availability, security, scalability and administration capabilities comparable to those used in advanced SQL Server deployments. Additionally, it submitted that Oracle AI Database has now become multi-model, meaning it includes non-relational capabilities.[894]

A.396 Oracle AI Database was widely viewed by customers as one of the main alternatives to Microsoft's SQL Server.[895] Our customer research found that customers generally saw Oracle as a trusted provider and viewed Oracle AI

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[891] For example, a board memo from September 2025 discusses how Microsoft has moved from six 'customer solution areas' to three. Under these new areas, RDBMS is part of the wider "Cloud and AI platforms" business area. Microsoft's internal document, [✂]to section 69 notice dated [✂].

[892] Oracle submitted that its assessment was based on market share data from IDC which showed Microsoft as the largest provider of RDBMS globally by revenue in 2024 with a 31% market share. Oracle's response dated [✂] to section 69 notice dated [✂]; Oracle's response dated [✂]to section 69 notice dated [✂].

[893] Oracle's response dated [✂] to section 69 notice dated [✂].

[894] Oracle's response dated [✂] to section 69 notice dated [✂].

[895] Oracle AI Database was cited as a viable alternative to SQL Server by 9 of 13 customers we asked. Multiple responses to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; response to follow up questions dated [✂] [✂]; [✂] response dated [✂]to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂], [✂].

Database as both cheaper and faster than SQL Server. However, these customers also reported that it can be hard to find staff with the correct skillset to use Oracle AI Database and that software vendors are seen as moving away from Oracle and towards SQL Server.[896] Oracle submitted that it is common for large enterprises to use both Oracle AI Database and other RDBMS such as SQL Server simultaneously due to 'workload-specific technology choices'.[897]

A.397 Evidence from a Microsoft internal document support the view that Oracle AI Database may have influenced some improvements in SQL Server. This document noted [✂].[898]

A.398 In relation to MySQL, Oracle submitted that MySQL principally targets customers where open-source compatibility and price are the main factors, and that MySQL competes with SQL Server for standard transactional workloads both on premises and on cloud in instances where customers value open source and lower cost deployments.[899]

A.399 MySQL was similarly viewed by customers as an alternative to SQL Server.[900] Our customer research found that customers liked MySQL because of developers' familiarity with it, it is much cheaper than SQL Server as it is open-source, and it is very 'flexible' when deployed on a Linux server.[901] However, our customer research found that MySQL is limited by the fact that 'too many' applications require SQL Server (and so MySQL is not a viable alternative), and that MySQL's tools are not as simple to use as .NET (Microsoft's equivalent).[902]

A.400 The internal documents we reviewed from Microsoft [✂].[903]

A.401 As a result of the above, we provisionally consider that Oracle AI Database is the only competitor with a similar offer to Microsoft's SQL and with a material share of supply.

A.402 Overall, the evidence we have seen to date shows that Oracle AI Database can in some circumstances represent a meaningful competitive constraint on SQL Server. However, as we have explained, this competitive constraint is very limited for existing workloads. Additionally, Oracle poses little constraint for new

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[896] Jigsaw Customer Research, 28 September 2026, page 94.
[897] In addition to workload-specific technology choices, Oracle submitted that the decision to use multiple RDBMS simultaneously may arise from the use of different enterprise applications, mergers and acquisitions, or cloud strategies. Oracle's response dated [✂]to section 69 notice dated [✂].
[898] Microsoft's internal document, [✂].
[899] Oracle's response dated [✂] to section 69 notice dated [✂].
[900] MySQL was cited as a viable alternative to SQL Server by 7 of 13 customers we asked. Multiple responses to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; [✂].
[901] Jigsaw Customer Research, 28 September 2026, page 94.
[902] Jigsaw Customer Research, 28 September 2026, page 94.
[903] Microsoft's internal document, [✂].

workloads where customers have a preference for COTS applications that are SQL Server specific. It also does not offer the same integration, skills and commercial advantages as SQL Server. This is reflected in its share of supply, which is materially lower than that of SQL Server – with Oracle's overall share at [30-40]% in 2025, and its proprietary product Oracle AI Database achieving only]20-30]% share, compared to SQL Server's share of [40-50]%. Oracle AI Database's share of supply has also decreased more rapidly than SQL Server.

A.403 In contrast, the evidence suggests that MySQL is a differentiated product, particularly suitable for certain workloads where customers value open-source compatibility and price.[904] As a result, we consider that MySQL poses little competitive constraint on SQL Server for most customers and workloads.

A.404 While Oracle's proprietary RDBMS can be an alternative to SQL Server, this is more limited for workloads that are closely linked with Microsoft's Business Software Ecosystem (including those requiring COTS applications designed for SQL Server, or where it is favoured due to skills or integration advantages).

PostgreSQL

A.405 PostgreSQL is an open-source RDBMS and is free to download. PostgreSQL can also be integrated into products by third parties, including a PostgreSQL-based RBDMS within Azure maintained by Microsoft.

A.406 PostgreSQL is a project maintained by a large number of individual contributors. As such, there is no single legal entity that owns or runs the project, and it has no employees.[905] All project contributors either work as volunteers or for third-party companies with an interest in PostgreSQL who pay them to contribute to PostgreSQL. These third-party companies comprise both small and large enterprises, including Google, Amazon, Microsoft, EnterpriseDB, Databricks, Snowflake, and pgEdge, all of whom offer some form of PostgreSQL-based products to their own customers.[906]

A.407 The evidence we have seen to date indicates that use of PostgreSQL is increasing. PostgreSQL was the second most commonly mentioned alternative to SQL Server in our customer evidence gathering after Oracle AI Database,[907] and our shares of supply analysis described above indicates that PostgreSQL has

[904] Additionally, as discussed above, the fact that proprietary RDBMS remain in widespread use despite the presence of free open-source alternatives such as MySQL, suggests there is sufficient differentiation in capability or support provision that some customers consider open-source alternatives to be poor substitutes for paid RDBMS products.
[905] Note of call [✂] on [✂].
[906] Note of call [✂] on [✂].
[907] PostgreSQL was cited as a viable alternative to SQL Server by 8 of 13 customers we asked. Multiple responses to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; [✂]; [✂]; [✂]; [✂]; [✂]; response to follow up questions dated [✂]; response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].

grown share steadily over the last six years. In our customer research, customers suggested that PostgreSQL has several benefits, including that it is free to use, can run on 'any Windows virtual machine', is better than SQL Server for high-volume transactional workloads, and can integrate with EntraID.[908] However, respondents also noted several drawbacks to using PostgreSQL, including that it is not as good for very large enterprise-scale businesses, there is a skills scarcity, and that it 'feel[s] exploratory' rather than being a core solution.[909]

A.408 The evidence we have seen to date suggests that PostgreSQL is a differentiated product, particularly suitable for certain workloads. As discussed above, the fact that proprietary RDBMS remain in widespread use despite the presence of PostgreSQL and other free open-source alternatives, suggests there is sufficient differentiation in capability or support provision that some customers consider open-source alternatives to be poor substitutes for paid RDBMS products.

A.409 In addition, the fact that Microsoft has developed a PostgreSQL-based RDBMS within Azure suggests that this is a complementary product (and not a competitor) with its paid-for SQL Server. In particular, evidence from a Microsoft internal document[910] and its 2019 acquisition of Citrus Data which it described as 'a leader in the PostgreSQL community',[911] are supportive of differentiation between PostgreSQL and SQL Server, as Microsoft would not have a commercial incentive to [✂] a product that competes closely with SQL Server and costs substantially less.

A.410 We also note that competition from PostgreSQL is limited by the barriers described above, including the lack of IT staff skilled in PostgreSQL, and COTS application dependencies which can favour more established RDBMS such as SQL Server. Additionally, as we have explained, any competitive constraint from PostgreSQL is very limited for existing workloads.

IBM (Db2)

A.411 IBM's Db2 is a proprietary (paid-for) RDBMS. IBM submitted that Db2 and SQL Server compete directly as enterprise-grade RDBMS platforms with comparable capabilities in online transaction processing, analytics, security, and high availability. It submitted that both SQL Server and Db2 are widely deployed for mission-critical workloads and offer mature tooling and ecosystem support.[912]

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[908] Jigsaw Customer Research, 28 September 2026, page 94.
[909] Jigsaw Customer Research, 28 September 2026, page 94.
[910] The document details [✂]. [✂]. Microsoft's internal document, [✂].
[911] Microsoft acquires Citus Data, re-affirming its commitment to Open Source and accelerating Azure PostgreSQL performance and scale - The Official Microsoft Blog, accessed by the CMA on 24 September 2026
[912] IBM's response dated [✂] to section 69 notice dated [✂].

A.412 However, compared to Oracle AI Database, MySQL, and PostgreSQL, Db2 was cited significantly less frequently by customers as a viable alternative to SQL Server.[913] Similarly, our shares of supply estimates suggest that Db2 is a significantly smaller competitor to SQL Server than those discussed above. Furthermore, we note that any competition from IBM is also limited by the barriers to switching existing workloads and the importance of those workloads as described above as well as the broader barriers to competition which also affect new workloads. We note that the internal documents we reviewed from Microsoft [✂].[914]

Other RDBMS providers

A.413 There are some other, less frequently used, RDBMS products, which are primarily open source, with some proprietary products. For other providers of RDBMS, including Google, AWS, and others, the evidence we have seen to date suggests that these products are primarily used for specific, differentiated use cases.[915]

A.414 Some RDBMS providers submitted that their products do not compete for all customers. [✂] submitted that its [✂] RDBMS can be used for a range of use cases but competes with SQL Server only for certain niche use cases.[916] One RDBMS provider submitted that it only targets customers of its own COTS applications and therefore that it competes with other application providers, rather than with RDBMS providers.[917] [✂]submitted that while its products compete closely with SQL Server for a meaningful subset of customer data platform opportunities, it is focused on analytics workloads and customers may prefer SQL Server for departmental, operational, and application-centric workloads.[918] [✂]submitted that customers may use both SQL Server and Snowflake, noting that they have different functions.[919]

A.415 Similarly, our customer research found that customers viewed Snowflake as an alternative to Microsoft Fabric – Microsoft's unified data management and analytics platform which combines data from a variety of sources including an

[913] IBM's Db2 was cited as a viable alternative to SQL Server by 3 of 13 customers we asked. [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂]; response to follow up questions dated [✂]; [✂] response dated [✂] to section 174 notice under the Enterprise Act in the context of the CMA's Cloud Services Market Investigation dated [✂].
[914] Microsoft's internal document, [✂].
[915] The evidence for this is set out in the paragraph below, and more generally in section 'The contestability of new workloads'.
[916] [✂] response dated [✂] to section 69 notice dated [✂].
[917] [✂] response dated [✂] to section 69 notice dated [✂].
[918] [✂] response dated [✂] to section 69 notice dated [✂].
[919] [✂] response dated [✂] to section 69 notice dated [✂].

organisation's RDBMS[920] – with some noting that it is not technically an RDBMS (though is it spoken about in a similar way).[921]

Expected and foreseeable developments in RDBMS

A.416 As we have described above, Microsoft's SQL Server faces limited constraints from rival RDBMS providers while there are significant barriers to competition which reinforce Microsoft's position. We have considered the foreseeable developments which may affect Microsoft's conduct and future competition with other RDBMS providers over the next five years.

A.417 With regards to future competition and emerging trends in RDBMS, including AI, Microsoft submitted that:

(a) It expects competition in RDBMS to intensify over the next five years, driven by increased adoption of open-source databases (particularly PostgreSQL) and the expansion of cloud-native offerings from Amazon, Google, and others.[922]

(b) It expects competitors to develop products that lower the cost of moving away from SQL Server, including new migration tooling and compatibility layers and, most notably, new AI-powered modernisation tools.[923] Microsoft also submitted that AI integration is increasingly becoming an important dimension of competition.[924]

A.418 We have therefore examined whether the growth of cloud workloads and developments in AI will impact the ability of rivals to compete with Microsoft in RDBMS.

Evidence on the effect of cloud adoption on competition for RBDMS

A.419 The evidence we have seen to date supports the view that workloads will continue to transition from on premises to the public cloud, though this is likely to happen gradually and a significant proportion of workloads are likely to remain on premises over the next five years, including to meet regulatory requirements.

(a) Some RDBMS providers indicated that the overall direction of travel for RDBMS workloads is towards greater cloud adoption,[925] though it is likely that a meaningful proportion of RDBMS workloads will continue to be

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[920] What is Microsoft Fabric? | Microsoft Fabric, accessed by the CMA on 22 September 2026.
[921] Jigsaw Customer Research, 28 September 2026, pages 94-95.
[922] Microsoft's response dated [✂]to section 69 notice dated [✂].
[923] Microsoft's response dated [✂]to section 69 notice dated [✂];
[924] Microsoft's response dated [✂]to section 69 notice dated [✂].
[925] [✂] response dated [✂] to section 69 notice dated [✂]; [✂] response dated [✂]to section 69 notice dated [✂].

deployed on premises over the next five years.[926] Some RDBMS providers submitted that the pace of migration may vary by customer, workload, or due to regulatory requirements.[927]

(b) Industry reports provided to us indicate that on-premises deployments remain important, with hybrid deployments being a popular option.[928]

(c) A small number of customers submitted that they intend to retain some on-premises workloads in the future even as they transition parts of their IT estate to the cloud.[929]

A.420 Additionally, as described above, the prevalence of 'lift and shift' migration means that customers using SQL Server on premises are likely to continue using SQL Server when they migrate to the cloud, and where customers seek to switch RDBMS, the evidence we have seen to date suggests that this is complex and not guaranteed to be successful. New 'cloud-native' workloads are also, as discussed above, impacted by differentiation that limits the number of viable alternative RDBMS providers. We have not seen evidence that the barriers we have identified above will ease in future, so that customers would be able to easily switch to an alternative RDBMS as they migrate.

A.421 We note that Microsoft has been able to retain a strong position across RDBMS as UK organisations built-out their cloud usage over the last ten years, supported by its leading position in cloud via its Azure platform. We therefore provisionally consider that cloud migration is unlikely to disrupt Microsoft's position in RDBMS.

A.422 Therefore, the evidence we have seen to date does not suggest that further migration to the cloud is likely to, in and of itself, materially affect competition in RDBMS.

Evidence on the effectiveness of AI modernisation tools and the importance of AI features and functionality on competition for RDBMS

A.423 As outlined above, AI-powered modernisation tools have the potential to mitigate some barriers to switching around the recoding/refactoring of applications.

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[926] [✂] response dated [✂] to section 69 notice dated [✂]. As discussed above, one RDBMS provider submitted an industry report from PW consulting which reported that on-premises RDBMS deployments accounted for 35% of RDBMS spend in 2025. [✂] response dated [✂]to section 69 notice dated [✂].

[927] [✂] response dated [✂]to section 69 notice dated [✂]; [✂] response dated [✂]to section 69 notice dated [✂]; [✂] response dated [✂]to section 69 notice dated [✂].

[928] For example, one RDBMS provider quoted an industry report from Redgate which found that 20% of organisations host their databases entirely or mainly on-premises, and 43% use a mix of cloud and on-premises. [✂] response dated [✂] to section 69 notice dated [✂].

[929] [✂]response dated [✂]to voluntary request for information dated [✂]; [✂] response dated [✂] to voluntary request for information [✂]. Note of call [✂] on [✂]. For [✂], these comments were given in the context of its Server OS estate, though this customer also confirmed that it has not identified any specific developments that would change its RDBMS IT estate in the next five years. We understand that there is substantial overlap between a customers' Server OS and RDBMS estates.

However, the evidence we have seen to date suggests that they have thus far had a limited impact on reducing barriers to switching for existing workloads.

A.424 We have received limited evidence on the likely future development and anticipated impact of AI switching tools, and we do not see evidence that the speed and extent of progress in AI tools will materially reduce switching barriers.

(a) For example, one cloud provider submitted that it does not anticipate any developments in its own products that would make it easier for customers to switch away from Microsoft's SQL Server;[930]

(b) Some customers suggested that these tools may become more effective in the future;[931] and

(c) One RDBMS provider submitted that AI is changing both the application development and the AI-assisted migration landscapes rapidly and in unprecedented ways.[932]

(d) Most engagement however focussed on the fact that other barriers to switching would persist.[933,934]

A.425 As such, we expect that technical barriers are likely to remain even with the support of AI tools, while others will not be eased by these tools (such as technical and commercial barriers or barriers to re-architecting of proprietary software, such as SQL Server itself and many COTS applications).

A.426 We have not seen evidence that the development of AI features within RDBMS is likely to make a significant difference to future competition. We have limited evidence, as this is not an area that providers or customers have focused on:

(a) We asked resellers which factors they considered were important for customers' choice of RDBMS, and they did not rank AI features and functionalities highly compared to other factors.[935]

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[930] [≫] response dated [≫] to section 69 notice dated [≫].
[931] Note of call [≫] on [≫]; Note of call [≫] on [≫]; Note of call [≫] on [≫]; Note of call with [≫] on [≫]; Note of call with [≫] on [≫].
[932] [≫] response dated [≫]to section 69 notice dated [≫].
[933] An RDBMS provider submitted that while it expects AI-powered modernisation tools to lower certain technical barriers to switching, AI tools do not eliminate the need to address application dependencies, data models, operational processes, performance validation, regulatory requirements, and organisational skills. [≫] response dated [≫] to section 69 notice dated [≫].
[934] Most of those customers we spoke to who commented on the future development of AI tools also said that other barriers to switching such as concerns about costs, validation, skills gaps, service risks and application dependencies would persist. Note of call [≫] on [≫]. Note of call [≫] on [≫]. Note of call [≫] on [≫].
[935] We asked six resellers to rank the following factors from 1 (very unimportant) to 5 (very important). Of these, four resellers provided responses. The factors were: price, quality of the product, track record of the provider, breadth of other products offered, interoperability with Microsoft products, interoperability with non-Microsoft products, ongoing product support, security and compliance, AI features and functionalities, breadth of industry adoption, regulatory compliance,

(b) Some RDBMS providers submitted that they are investing in AI features and functionality for their RDBMS, though none of these providers indicated that AI features are currently a primary factor influencing most customers' choice of RDBMS.[936] Some RDBMS providers noted that Microsoft is also upgrading SQL Server with new AI capabilities, meaning their RDBMS will not necessarily become relatively more attractive to customers as a result of their AI investments.[937]

(c) Evidence from RDBMS providers generally indicates that the market is unlikely to change significantly in the next five years,[938] though one RDBMS provider noted that it expects market developments to increase competition for new workloads, particularly driven by AI adoption.[939]

A.427 Therefore, we do not expect the development of AI features within RDBMS to significantly change the extent of competition faced by Microsoft in RDBMS.

[i] This table has been updated as the proposed decision issued on 16 October 2026 was missing a row with the share of supply for Teradata.
[ii] This table has been updated as the proposed decision issued on 16 October 2026 was missing a row with the share of supply for Teradata.

user familiarity/internal skills base, and pre-installation on hardware. AI features and functionalities were rated on average at 3 out of 5, while seven other factors received average ratings of 4 or higher. [≫] response dated [≫] to voluntary request for information dated [≫]; [≫] response dated [≫]to voluntary request for information dated [≫]; [≫] response dated [≫]to voluntary request for information dated [≫]; [≫] response dated [≫]to voluntary request for information dated [≫]; Multiple responses to voluntary request for information dated 7 July 2026, question 6. [≫]; [≫]; [≫]; [≫].

[936] [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫].

[937] [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫].

[938] [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫]; [≫] response dated [≫]to section 69 notice dated [≫]; [≫] response dated [≫] to section 69 notice dated [≫].

[939] [≫] response dated [≫] to section 69 notice dated [≫].