

Anticipated acquisition by Microsoft of Activision Blizzard, Inc.

Provisional findings report

Notified: 8 February 2023

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Glossary

Summary

Overview

1. The Competition and Markets Authority (**CMA**) has provisionally found that the anticipated acquisition (the **Merger**) of Activision Blizzard, Inc. (**Activision**) by Microsoft Corporation (**Microsoft**) (together, the **Parties**) may be expected to result in a substantial lessening of competition (**SLC**) in gaming consoles and cloud gaming services in the UK.
2. The report and its appendices, which will be published shortly after this summary, constitute the CMA's **Provisional Findings**. We invite any interested parties to make representations on these provisional findings by no later than **1 March 2023**. We will take all submissions received by this date into account in reaching our final decision. Interested parties should refer to the notice of provisional findings for details of how to do this.
3. As set out below, we provisionally found competition concerns in the markets for gaming consoles and cloud gaming services in the UK.
4. In relation to gaming consoles, we provisionally found that Xbox and PlayStation compete closely with each other, and that Activision's *Call of Duty* (**CoD**) is important to the competitive offering of each. The evidence suggests that, after the Merger, Microsoft would find it commercially beneficial to make *CoD* exclusive to Xbox or available on Xbox on materially better terms than on PlayStation. We provisionally found that this would substantially reduce competition in gaming consoles to the detriment of gamers—Xbox and PlayStation gamers alike—which could result in higher prices, reduced range, lower quality, worse service, and/or reduced innovation.
5. In relation to cloud gaming services, we provisionally found that Activision's titles (including *CoD* and certain PC titles such as *World of Warcraft*) will be important for the competitive offering of cloud gaming services as the market continues to grow and develop. We provisionally found that, after the Merger, Microsoft would find it commercially beneficial to make Activision's titles exclusive to its own cloud gaming service or available there on materially better terms than on rival cloud gaming services. Given we have provisionally found that Microsoft already has a strong position in this market through its ownership of Xbox, a global cloud computing service, and the leading PC operating system (**OS**), we are concerned that even a moderate increment to its strength may be expected to substantially reduce competition in this developing market to the detriment of current and future cloud gaming users.

6. In our Notice of possible remedies, published alongside our Provisional Findings, we have set out three options to remedy the provisional SLC: prohibition of the merger, divestiture of a part of Activision's business, or behavioural commitments by the Parties. We also invite submissions from interested parties on these initial views by **22 February 2023**.

About the gaming industry

The same three companies have been the only major suppliers in the console gaming market for the past 20 years

7. The gaming industry is the UK's largest revenue-generating form of entertainment. It is bigger than pay TV, home video (including streaming), cinema, music, or books. In 2022, it generated around £5 billion in revenue in the UK.
8. For the past twenty years, the same three companies have been the only significant suppliers of console gaming – Microsoft (Xbox), SIE (PlayStation) and Nintendo (Switch being the current generation console), with little or no entry from new rivals.
9. Part of the difficulty in entering and expanding in the console gaming market is the existence of strong network effects. Console providers such as Microsoft compete to attract users who want to play high-quality games, as well as high-quality content from game developers. Consoles with a large user base attract more users, especially those who want to play multi-player games with their friends and other users (ie, direct network effects). Consoles with a lot of users attract better content, which in turn attracts more gamers to that console, which in turn attract better content, and so on (ie, indirect network effects). This self-reinforcing mechanism makes it more difficult for new entrants without a large user base or good pre-existing gaming content to enter and grow in the market.
10. Gaming consoles compete against each other across a wide range of parameters, including price, quality, and game range. Price is determined by the console manufacturer, both for the console itself and for the console provider's own games on its console. Quality reflects mainly a console's technical specifications (eg, CPU, GPU, RAM, storage, video output, audio output, connectivity, networking features, etc). These can affect the range of games that can run on the console and the quality of gameplay. Game range is determined by the titles available from the console manufacturer (first-party titles), together with the titles from other publishers (third-party titles) available on that console. In general, the console provider's first-party titles are less

likely to be available on other consoles, whilst third-party titles are more likely to be available across different consoles.

11. The most important games for a console are typically referred to as 'AAA', which is a loosely defined term to denote the most popular, costly and/or graphically intensive games in the industry. Although there are thousands of games available on console and PC, only a handful of AAA games, including *CoD*, account for the majority of gametime and revenues on Xbox and PlayStation.
12. In recent years, gaming consoles have also started to compete on the basis of their multi-game subscription offerings. Unlike the traditional buy-to-play model, where users pay an up-front fee for lifetime access to a game, these services allow gamers to access a catalogue of games for a fixed, often monthly, fee. Although some multi-game subscription services have extensive gaming catalogues, several AAA games (such as *CoD*) are either not currently available on these services or only available in older versions. While most of the revenue in the industry continues to be generated from the purchase of individual games, multi-game subscription services are expected to grow over the next few years.
13. In addition to consoles, people play games on PCs and mobile devices. Consoles and PCs designed for gaming can usually process more complex and technically demanding games (such as *CoD*). Mobile devices currently lack the technical capabilities to run most console games locally, and people can use them to play more casual games specifically designed for mobile devices (such as *Candy Crush* or *Call of Duty Mobile*).

Cloud gaming services are growing as a potential alternative to consoles

14. In recent years, cloud gaming has started to emerge as an alternative to gaming consoles and PCs. Unlike consoles and PCs, where gamers typically download and run games locally on their device, cloud gaming services allow complex games to be accessed on remote servers and streamed directly to a range of devices.
15. The evidence we have seen suggests that cloud gaming may be an important disruptive force in the gaming industry. Since games are executed remotely, gamers can play using devices that can be less powerful, and are often cheaper, than consoles or gaming PCs (such as mobile phones, smart TVs, less powerful PCs, or tablets). This widens the pool of potential customers—including those not willing or able to buy a gaming console or PC—and introduces new ways to compete that could facilitate new entry. Besides Microsoft, recent new entrants into cloud gaming include Amazon Luna,

NVIDIA GeForce Now, Shadow, Google Stadia (now shut down), as well as publishers like Ubisoft. Several industry experts predict that cloud gaming will continue to grow significantly in the coming years.

16. The evidence we have seen suggests that, to succeed, cloud gaming providers will need to offer a strong gaming catalogue. For new entrants without an existing gaming console (including its games and operating system), we have found that this catalogue is most likely to come from games that are currently available on PC OS, as these can be streamed from any cloud gaming service that runs that OS (provided that adequate licensing arrangements are in place). As such, cloud gaming service providers will also need an OS license—such as for Windows, the OS for which most PC games are designed—and access to cloud infrastructure.

Who are the businesses and what services do they provide?

Microsoft has a strong gaming ecosystem

17. Microsoft is a global technology company offering a wide range of products and services, with a global turnover of around £150 billion in FY2022. Since 2001, it has released several generations of Xbox gaming consoles. Gamers typically download digital copies of the games they want to play on Xbox from Microsoft's Xbox Store. They can also pay a monthly fee to gain access to a library of downloadable and cloud-based content via Xbox Game Pass, Microsoft's multi-game subscription service.
18. Microsoft is also a game publisher and currently owns 24 game development studios, several of which it acquired in recent years. These studios make games such as *Minecraft*, *Forza*, *Elder Scrolls*, and *Halo* for Xbox and other consoles, PC, and mobile devices. Many of Microsoft's first-party titles are available exclusively on Xbox and some are licensed to rival console providers.
19. Microsoft has other business areas that are important to gaming. One is Xbox Cloud Gaming, Microsoft's current cloud gaming service, which is powered by custom Xbox Series X hardware. Another is Azure, a leading cloud platform (ie a network of data centres and cloud computing infrastructure) that offers a wide range of services across several industries, including gaming. Another is Windows, the leading PC OS. Many people play games on a PC rather than a console, and most of them use Windows OS. Because of its popularity, game developers generally make PC games that are designed and optimised for Windows OS.

Activision creates some of the most popular gaming content

20. Activision is a game developer and publisher with global turnover of £6.1 billion in FY2022. It develops gaming content for consoles, PC, and mobile. Activision's three most popular franchises—*CoD*, *World of Warcraft* and *Candy Crush*—account for most of its revenue. It publishes these games through three separate business divisions, ie, Activision, Blizzard, and King, respectively.
21. *CoD*, in particular, is widely regarded as one of the most successful gaming franchises of all time. For more than a decade, its releases have ranked in the top games available on console. The latest game in the franchise, *CoD Modern Warfare II*, was released in November 2022 to what Activision described as the #1 top-selling opening weekend ever in the franchise.

Our Assessment

Why are we looking at this merger?

22. The CMA's primary duty is to seek to promote competition for the benefit of consumers. It has a duty to investigate mergers that could raise competition concerns in the UK, provided it has jurisdiction to do so.
23. Microsoft announced in January 2022 that it had agreed to acquire Activision for a purchase price of USD 68.7 billion. The Merger is conditional on receiving merger control clearance from several global competition agencies, including the CMA.
24. While both Microsoft and Activision are US-based entities, the question for the CMA is whether the Merger may have an impact on competition in the UK. This link to the UK can be established based on the turnover of the business being acquired in the UK. In this case, we have provisionally concluded that the CMA has jurisdiction to review this Merger because Activision generated more than £70 million turnover in the UK in FY2021.

How have we examined this merger?

25. In deciding whether a merger may be expected to result in an SLC, the question we are required to answer is whether there is an expectation—a more than 50% chance—that the merger will result in an SLC within any market or markets in the UK.
26. To determine whether this is the case, we have gathered information from a wide variety of sources, using our statutory powers to ensure that we have as

complete a picture as possible under the constraints of the statutory timetable to understand the implications of this Merger on competition.

27. We have focused on two ways, or ‘theories of harm’, in which the Merger could give rise to an SLC:
 - (a) The first considers whether Microsoft would be able to harm gaming console rivals now or in future, to the detriment of consumers, by making *CoD* exclusive to Xbox (or by only making it available to rivals on worse terms), whether it would be commercially beneficial to do so, and what the impact would be on competition in the market for gaming consoles.
 - (b) The second considers whether Microsoft would be able to harm cloud gaming rivals now or in future, to the detriment of consumers, by making *CoD* and other Activision PC games, such as *World of Warcraft*, exclusive to its cloud gaming offering (or by not making them available on equal terms), whether it would be commercially beneficial to do so, and what the impact would be on competition in the market for cloud gaming services.
28. We provisionally concluded that the Merger is likely to give rise to an SLC both in gaming consoles and in cloud gaming services in the UK. This is discussed in further detail below.

What evidence have we looked at?

29. In assessing this Merger, we looked at a wide range of evidence that we considered in the round to reach our provisional decision. The evidence we have gathered has been tested rigorously, and the context in which the evidence was produced has been considered when deciding how much weight to give it.
30. We received a significant volume of evidence from the Parties. In response to targeted information requests, we received over 3 million internal business documents from Microsoft and Activision, including key strategy documents and email communications among senior staff. These documents which, for the most part, were created in the ordinary course of business, set out the Parties’ views of the console and cloud gaming markets, as well as their future commercial strategy.
31. The Parties also had several opportunities to make submissions and comment on our emerging thinking throughout the investigation. In October 2022, the Parties submitted a response to our phase 1 decision. They subsequently submitted a response to our Issues Statement, where we set out the theories

of harm on which we planned to focus our phase 2 investigation. We held a site visit with each of the Parties, where their senior business staff gave us several presentations on the nature of their businesses, the rationale for the Merger, and answered our questions relating to our investigation. We then produced working papers and an annotated Issues Statement with our emerging thinking, and the Parties submitted their views on that material. We held formal hearings with each of the Parties, in which we spoke to the Parties' senior management about topics that we were exploring in our investigation. In addition, the Parties made a number of other submissions setting out their views on our theories of harm and evidence base at different points in our investigation.

32. We gathered evidence from other gaming console providers, game publishers, and cloud gaming service providers. We sent out over 50 requests for information, held several calls and meetings, and gathered hundreds of internal documents from these third parties. In our calls, we spoke to senior staff and business experts across the industry to have a better understanding of the competitive landscape and likely future developments in these markets.
33. We sought views from the public. In response to our Issues Statement of 14 October 2022, we received and reviewed over 2,100 emails containing views on the transaction. We considered those views and published a summary of these responses on 21 December 2022.
34. We engaged an independent market research company to conduct an online survey. The survey polled a random sample of PlayStation *CoD* gamers—defined for the purposes of the survey as those who played at least 10 hours or spent at least \$100 on the game between July 2021 and June 2022—to get a sense of how important this game franchise is to them, and what they might do if it became partially or totally exclusive to Xbox after the Merger.
35. While there are no pre-defined measures for assessing whether a merger may be expected to result in an SLC, market shares are a commonly used measure in merger control cases. There is a high degree of product differentiation in some of the markets in which Microsoft and Activision operate, which means that market shares may not be the best indicator, in this case, of how closely businesses compete with each other. As such, when assessing the impact of the Merger on competition, we have considered the evidence on market shares alongside other evidence on how closely the Parties compete with rivals (either currently or in the future). As well as the Parties' market shares, our assessment has taken account of the type of games that Activision offers, of the technical specifications of different consoles (and the types of games that users play on them), and of Microsoft's potential strengths in cloud gaming arising from its broader multi-product

ecosystem. We have also taken account of the strength of competitive constraints on the Parties, and the extent of past entry and exit from the relevant markets.

36. Finally, as well as looking at how competition works currently (and the Parties' current market positions), we recognise that markets, and in particular markets for digital products and services such as those offered by the Parties, change over time. Our assessment is therefore forward-looking and considers how markets are evolving and the Parties' plans for their businesses in future.

What would have happened absent the merger?

37. To determine the impact that the Merger may have on competition, we have considered what is likely to happen absent the Merger. This is known as the counterfactual.
38. For an anticipated merger such as this, the counterfactual may consist of the prevailing conditions of competition or conditions involving stronger or weaker competition than under the prevailing conditions. In this case, based on the evidence we gathered, our provisional conclusion is that the counterfactual is the prevailing conditions of competition.
39. We recognise that, as part of the prevailing conditions of competition, markets may continue to evolve and develop. In this case, our provisional view is that the market is likely to develop in important ways absent the Merger in the near future (ie, within the next five years): in relation to gaming consoles, we consider the evidence shows that multi-game subscription services would continue to grow but would be unlikely to offer Activision's most valuable games on the date of their release (we note that several AAA games currently make most of their sales in the first 12 months after release). In relation to cloud gaming services, we consider that the evidence shows that the market would continue to grow but, unlike multi-game subscription services, we believe that at least some of these cloud gaming providers—especially those with a buy-to-play or bring-your-own-game offering—would have Activision's most valuable games available on their platforms on the date of their release. We explain the relevance of these findings in our assessment below.

What did the evidence tell us?

...about the importance of Activision's gaming catalogue

40. We have gathered substantial evidence from Microsoft, Activision, and third parties to assess the significance of Activision's gaming portfolio. This evidence consistently points towards Activision's content, especially *CoD*, as

being important and capable of making a material difference to the competitiveness of rivals' gaming platforms. Activision invests significant time and capital in creating regular *CoD* releases, which consistently rank as some of the most popular games. These titles require thousands of game developers and several years to complete, and there are very few other games of similar popularity. Moreover, *CoD*'s popularity has been consistent over time and is continuing. For example, Activision reported that the release of *CoD Modern Warfare II* on October 28, 2022 was the franchise's best-ever opening weekend, delivering more than \$800 million worldwide in the first three days from its release.

41. Activision also offers PC games and mobile games. Through its Blizzard division, its most popular release is *World of Warcraft*, a massively multiplayer online role-playing PC game. Through its King division, it offers *Candy Crush*, a free-to-play casual game available on mobile and PC. Although these games are not relevant to our assessment of the impact of the transaction on gaming consoles, we have provisionally found that some Activision PC titles, such as *World of Warcraft*, are popular PC games that may be important for cloud gaming services, thereby adding to Activision's already strong catalogue in this market.

...about the impact of the Merger on gaming consoles

42. Our assessment under this theory of harm is focussing on whether Microsoft would have the ability and incentive to limit access to *CoD*, and whether this 'foreclosure' would have an effect on the ability of rivals to compete with Microsoft in gaming consoles. In terms of 'ability', we consider whether limiting access to *CoD* would harm the competitiveness of Xbox's rivals. In terms of 'incentive', we consider whether Microsoft stands to gain from this strategy. And in terms of 'effect', we consider how this would impact overall competition in the market for gaming consoles.
43. *CoD* is currently available on two gaming consoles – Xbox and PlayStation. We have provisionally found that these consoles compete closely with each other in terms of content, target audience, and console technology. We have provisionally found that Nintendo's consoles compete less closely with either of Xbox or PlayStation, generally offering consoles with different technical specifications, and with its most popular titles tending to be more family- and child-friendly. Nintendo does not currently offer *CoD*, and we have seen no evidence to suggest that its consoles would be technically capable of doing so with a similar quality of gameplay as Xbox or PlayStation in the near future.
44. The evidence we gathered shows that the *CoD* franchise is important to PlayStation.

45. First, the evidence shows that *CoD* accounts for a significant proportion of PlayStation's overall gametime, implying that making it totally or partially exclusive to Xbox would represent an important reduction in range of games offered on PlayStation.
46. Second, the large majority of our survey respondents (ie, *CoD* gamers as described above) indicated that the content available on a console is important to their choice of console, and around 24% of them said they would divert away from PlayStation if *CoD* were no longer available on that platform. The level of switching in this analysis, which indicates that a significant proportion of all PlayStation gamers would switch away from the platform, suggests that PlayStation gamers would be affected by not having access to *CoD*, notwithstanding the availability of other games on PlayStation.
47. Third, even *CoD* gamers who would remain on PlayStation could be harmed by the reduction in choice in that console. They would also likely spend less time and money on PlayStation than they did before, which the evidence suggests would have a material impact on PlayStation's revenue and ability to compete.
48. As to what Microsoft would do with *CoD*, we have provisionally found that it would have an incentive to make it either partially or totally exclusive to Xbox.
49. First, Microsoft's commercial strategy to date suggests that there are strategic benefits in limiting the availability of acquired gaming content. Microsoft has acquired a range of gaming studios over the past few years and, with very few exceptions, has made their future releases of games exclusive or redirected the efforts of those studios to produce exclusive Xbox games. Although we recognise that Activision is a bigger studio than any acquired by Microsoft before, this pattern of behaviour seems to be consistent with Microsoft's commercial strategy.
50. Second, the evidence suggests that making *CoD* partially or totally exclusive could bring Microsoft longer-term strategic benefits. These would include acquiring new loyal customers, growing the number of Game Pass subscribers, and strengthening Microsoft's reputation as having a console with attractive exclusive content. We recognise that Microsoft could face backlash from some gamers for adopting this approach, but we believe that this would not be enough to make these strategies commercially disadvantageous in the long run.
51. Third, we provisionally believe that making *CoD* exclusive to Xbox could be profitable for Microsoft. Although it is difficult to quantify Microsoft's financial gains and losses from making *CoD* partially or totally exclusive to Xbox, we

have tried to approximate these by using two different financial models. One model measured the direct financial gains over the course of one year of making *CoD* exclusive to Xbox. It is a straightforward comparison of the income that Microsoft would lose from not selling *CoD* on PlayStation against the additional income that it would earn from selling *CoD*, additional Xbox consoles, and other games to new customers who would switch—as estimated from our survey results—from PlayStation to Xbox. We provisionally found that this calculation on its own was broadly neutral in terms of profitability. The other model considered data used by Xbox in the ordinary course of business on the ‘lifetime value’ of new customers. This has the benefit of accounting for five years of spend on the Xbox platform and on *CoD*. This model, which we currently believe is a better way to estimate long-term financial incentives, suggests that making *CoD* exclusive to Xbox would be profitable for Microsoft.

52. On this basis, we provisionally believe that this combination of financial and broader strategic considerations would provide Microsoft with the incentive to make *CoD* either partially or totally exclusive to Xbox following the Merger.
53. We are concerned about the impact that these exclusivity strategies could have on competition between gaming consoles. Given that PlayStation is Xbox’s closest rival, we provisionally believe a strategy that makes it a less effective competitor would harm overall competition in gaming consoles.
54. In some cases, mergers generate efficiencies, for example by enabling a combined product offering that would not be available without the merger. These efficiencies can, where certain conditions are met, offset the anti-competitive effects of a merger, so that no SLC arises.
55. Microsoft has publicly stated that, if the Merger goes through, it intends to make Activision’s games available on Game Pass, something that we have provisionally found is unlikely to happen absent the Merger in relation to Activision’s newest releases. Except for game publishers’ own subscription services, most third-party games available today on multi-game subscription services tend to be added some time after their release date. In this sense, the Merger would generate an efficiency by enabling Activision’s games to become available on Game Pass on their release date.
56. We have provisionally found, however, that this efficiency is not enough to make up for the reduction in competition that would arise from the Merger. Xbox users can already access *CoD* on Xbox on a buy-to-play basis. Being able to access it on Game Pass would give them a new way to pay for the game, something that would increase choice and potentially encourage rival multi-game subscription services to offer more games on subscription to their

own users (whether this improvement in choice would amount to a cheaper way to access and play *CoD*, however, depends on a range of factors, including the future price of Game Pass and each individual user's gametime relative to the length of their subscription). Balanced against this would be (i) the reduction in range for PlayStation users, who would no longer be able to access *CoD* at all (or not on equal terms), and (ii) the reduction in competition between Xbox and PlayStation, which could lead to higher prices, reduced range, lower quality, and/or worse service for all console gamers. On balance, we provisionally believe that these would significantly outweigh the benefit to Xbox users of being able to pay for *CoD* in different ways through its availability on Game Pass and any potential improvements in the range of games available in multi-game subscription services more generally.

57. During our investigation, Microsoft told us that it has offered to enter into new long-term agreements with SIE, Nintendo, and Steam to supply them with *CoD* post-Merger. Whether some form of supply or licensing agreement might satisfactorily remedy our concerns in gaming consoles is something that we will consider as part of our remedies process, rather than in our competitive assessment.
58. On this basis, we provisionally conclude that the Merger may be expected to result in an SLC in gaming consoles in the UK, as a result of vertical effects in the form of input foreclosure.

...about the future of cloud gaming

59. The evidence we found suggests that cloud gaming could be transformative for the gaming industry in the next few years, helping to reach new customers and improve choice for existing customers (potentially replacing consoles altogether for some of them).
60. Cloud gaming has historically faced some unique challenges relative to consoles. It requires users to have a fast and stable internet connection capable of streaming graphically complex games. It must overcome latency (ie, the time it takes for data to travel from a gaming device to a cloud server and back), which can introduce delays and affect gameplay. The computing, bandwidth, warehousing, and utilities costs associated with cloud gaming are high, and this has led some in the industry to question whether it can ever be profitable.
61. The evidence we have gathered so far suggests that cloud gaming service providers already have, or soon will, overcome these challenges. In terms of demand, the market is already sizeable and the evidence indicates it is poised to continue growing in the next few years. In terms of latency, some providers

noted that they have already successfully streamed graphically complex games, such as *CoD*, with good results in terms of gameplay. As for profitability, although providers have had mixed results and continue to explore different avenues to monetise their service and gaming content, the evidence suggests that costs will continue to fall as demand grows and providers are able to scale their offering. These expectations are backed up by considerable amounts of investment into this market by a range of market participants.

...about Microsoft's position in cloud gaming

62. Microsoft already holds a strong position in the gaming industry through its established Xbox console, which has a large user base, and a strong catalogue of gaming content. It has been steadily strengthening its gaming ecosystem in line with the evolution of the gaming industry, including by acquiring independent gaming studios (such as Bethesda in 2021), expanding Game Pass, and developing its cloud infrastructure to better support its gaming activities.
63. In relation to cloud gaming services, Microsoft has a combination of assets that we provisionally consider is difficult for other cloud gaming service providers to match. By owning Windows, the OS on which the vast majority of PC games are played, Microsoft could stream games from Windows servers without having to pay a Windows licensing fee or adapt games designed for Windows to an alternative OS. By having Xbox Cloud Gaming and Azure, Microsoft has both a short-term and a longer-term solution to host cloud gaming, leveraging its large and well distributed global cloud infrastructure to stream its games without having to pay a fee to third-party cloud platforms. And by having an existing console ecosystem, Microsoft has a range of popular games that it can offer. As such, we provisionally consider that Microsoft has a strong position in cloud gaming services and will remain an important competitor as the market expands and evolves.

...about the impact of the Merger on cloud gaming

64. Our assessment under this theory of harm focused on whether Microsoft would have the ability and incentive to limit access to Activision's titles, and whether this 'foreclosure' would have an effect on the ability of rivals to compete with Microsoft in cloud gaming services. In terms of 'ability', we consider whether limiting access to Activision's games would harm the competitiveness of Microsoft's cloud gaming rivals. In terms of 'incentive', we consider whether Microsoft stands to gain from this strategy. And in terms of

'effect', we consider how this would impact overall competition in the market for cloud gaming services.

65. We have provisionally found that Activision's games are important for the growing market for cloud gaming services. As explained above, *CoD* is already one of the most important games for consoles. Given that cloud gaming services aim to achieve a similar quality of gameplay as consoles, we would expect customers' preferences in consoles to be broadly similar to their preferences in cloud gaming. We have also seen evidence that *CoD* is a popular game in the PC market, and that it is consistently one of the most requested titles by current cloud gaming users. A range of the evidence that we gathered, including from multiple third parties, suggests that *CoD* could make a material difference to the success of a cloud gaming provider. And we found some evidence that Activision has some PC games, in particular *World of Warcraft*, that are popular and could also be relevant to cloud gaming. Overall, therefore, we provisionally found that Activision's titles are likely to be an important input for the success of cloud gaming services as they are for consoles.
66. As to what Microsoft would do with Activision's titles, we have provisionally found that it would have an incentive to make them either partially or totally exclusive to its cloud gaming service.
67. Cloud gaming is a relatively new market characterised by some elements of direct and/or indirect network effects. In this type of market, success is highly uncertain, and there's an opportunity (and strong incentive) for incumbents to develop a unique offering in a bid to gain market power. One way for Microsoft to achieve this would be to offer exclusive games on its cloud gaming service. The evidence suggests that this is already part of Microsoft's cloud gaming strategy – except for a few Bethesda titles, most of which were old or already available on rival cloud gaming services before Microsoft acquired Zenimax, Microsoft has not made its games available on rival cloud gaming platforms.
68. We are concerned that making Activision's titles exclusive to Microsoft's cloud gaming service would harm competition, particularly since our provisional view is that Microsoft already holds a strong position in this market by virtue of its unparalleled advantages through its ownership of Windows, its cloud infrastructure, and its catalogue of first party titles. There are a few emerging rivals with their own respective strengths, such as Amazon, SIE, and NVIDIA, but none seem to be as well positioned as Microsoft in this market. We consider that Google's recent decision to shut down its own cloud gaming service, Stadia, shows that merely having some strengths relevant to cloud gaming is not enough to guarantee a platform's success. The evidence also suggests that there are significant barriers to entry and expansion, including

the cost of cloud infrastructure, the cost of acquiring content, and the need for economies of scale in order to drive down costs. Since Microsoft already appears to face limited competitive constraints from current and potential rivals, we are concerned that making Activision's content exclusive to its cloud gaming platform is particularly likely to harm competition.

69. On this basis, we provisionally conclude that the Merger may be expected to result in an SLC in cloud gaming services in the UK, as a result of vertical effects in the form of input foreclosure.

...about the overall impact of the Merger on consumers

70. Our statutory duty is to assess whether the Merger may be expected to result in an SLC within any market or markets in the UK for goods or services. Any such reduction in competition can have a potential impact on consumers.
71. In this case, we are concerned that the Merger will ultimately harm current and future gamers, whether they are Xbox users, PlayStation users, or cloud gaming users.
72. First, PlayStation gamers could see a reduction in the range and/or quality of games that they would have enjoyed absent the Merger. Whether it happens immediately or over time, we provisionally believe that Microsoft would not make *CoD* available to them at all, or at least not on equal terms as to Xbox gamers.
73. Second, the weakening of PlayStation, both in terms of its range and revenue, could eventually harm all console gamers. Consumers currently benefit from the fact that Xbox and PlayStation compete closely with each other. Although we recognise that PlayStation is currently the market leader in consoles, PlayStation's strong competitive offering makes it necessary for Xbox to compete hard to attract users, including on price and through the quality of its console, games, and multi-game subscription offering. Weakening PlayStation by taking important content away from its platform would reduce, not increase, Microsoft's incentive and SIE's ability to compete in the console market. This could eventually lead to higher prices, reduced range, lower quality, worse service and/or reduced innovation in gaming consoles and their games for all gamers.
74. We recognise that having Activision's content available on Game Pass is an attractive prospect to some Xbox customers and something that, based on the emails that we received from the public during this investigation, seems to explain much of the support for this Merger by those in favour of it. We also recognise that this could prompt other providers to make more content

available on their own multi-game subscription services. But, on balance, we are provisionally of the view that having this new option to pay for content that is already available on a buy-to-play basis on Xbox, in circumstances where the content would no longer be available (or not available on equal terms) on rival consoles, would not outweigh the overall harm to competition (and, ultimately, consumers) arising from this Merger.

75. Finally, by stifling competition in the growing and dynamic market for cloud gaming services, the Merger could alter the future of gaming. The market for cloud gaming seems poised to grow and become an important conduit for playing games, both for new users who are unable or unwilling to buy an expensive console, and for existing gamers looking for an alternative to consoles. Absent the Merger, strong competition in this market could make cloud gaming better and more affordable for consumers. By contrast, we are of the provisional view that the Merger would make an already strong incumbent in this market even stronger, which could result in Microsoft retaining a big share of the market and facing limited competition from current and potential rivals. This reduction in competition could harm consumers in the long run.

Provisional conclusions

76. As a result of our investigation and our assessment, we have provisionally concluded that the anticipated acquisition by Microsoft of Activision would result in the creation of a relevant merger situation.
77. We have also provisionally concluded that the Merger may be expected to result in an SLC:
- (a) in the supply of console gaming in the UK due to vertical effects resulting from input foreclosure; and
 - (b) in the supply of cloud gaming services in the UK due to vertical effects resulting from input foreclosure.

Provisional findings

1. The reference

- 1.1 On 15 September 2022, the Competition and Markets Authority (**CMA**) in exercise of its duty under [section 33\(1\)](#) of the Enterprise Act 2002 (the **Act**), referred the anticipated acquisition by Microsoft Corporation (**Microsoft**) of Activision Blizzard, Inc. (**Activision**) (the **Merger**) for further investigation and report by a group of CMA panel members (the **Inquiry Group**). Microsoft and Activision are referred to collectively as **the Parties** or, for statements referring to the future, the **Merged Entity**.
- 1.2 In exercise of its duty under [section 36\(1\)](#) of the Act, the CMA must decide:
- (a) whether arrangements are in process or contemplation which, if carried into effect, will result in the creation of a relevant merger situation (**RMS**); and
 - (b) if so, whether the creation of that RMS may be expected to result in a substantial lessening of competition (**SLC**) within any market or markets in the United Kingdom (**UK**) for goods or services.
- 1.3 In assessing the competitive effects of the Merger, we must decide whether there is an expectation (ie a more than 50% chance) that the Merger will result in an SLC.
- 1.4 We are required to prepare and publish our final report by 26 April 2023.
- 1.5 Our terms of reference, along with information on the conduct of the inquiry, are set out in Appendix A and Appendix B respectively.
- 1.6 This document, together with its appendices, constitutes the CMA's provisional findings published and notified to the Parties in line with the CMA's rules of procedure.¹ Further information relevant to this inquiry can be found on the CMA case page.²

¹ [CMA rules of procedure for merger, market and special reference groups \(CMA 17\), Rule 11.](#)

² [Microsoft/Activision Blizzard Case Page.](#)

2. The Parties, the Merger, and the rationale

2.1 This chapter sets out:

- (a) an overview of the Parties and their financial information;
- (b) the background to the Transaction, including the valuation; and
- (c) the Parties' stated rationale for the Merger.

The Parties

Microsoft

Principal activities

2.2 Microsoft is a global technology company founded in 1975 and headquartered in Redmond, Washington, US.³ Microsoft is publicly listed on Nasdaq. Microsoft's global turnover in the financial year 2021 was close to £125 billion, of which [REDACTED] was generated in the UK.⁴

2.3 Microsoft is organised into three operating segments: (i) Productivity and Business; (ii) Intelligent Cloud; and (iii) More Personalised Computing.⁵ Microsoft offers a wide range of products and services including:

- (a) Windows OS. Microsoft Windows is a computer OS that can be installed on a PC or server to provide a graphics-based interface between the user and the computer's hardware and software. Over the years, Microsoft has released various versions of Windows aimed at improving on features like speed and user interface.⁶ Microsoft offers two types of licences for Windows – Windows for desktop PCs (**Windows Client**) and Windows for servers (**Windows Server**) [REDACTED].⁷
- (b) Azure. Azure is Microsoft's public cloud platform and associated services. Azure offers over 200 Infrastructure-as-a-Service (**IaaS**) and Platform-as-a-Service (**PaaS**) solutions including computing, storage, networking, databases, operating systems, developer tools, and runtimes, to help enterprises build and run their systems, analytics, and applications in the

³ Parties, Final Merger Notice.

⁴ Parties, FMN.

⁵ Parties, FMN.

⁶ 'From Windows 1 to Windows 10: 29 years of Windows evolution', dated 2 October 2014, accessed 4 August 2022.

⁷ Parties' response to the CMA's Request for Information (**RFI**).

cloud. Customers pay consumption-based fees for the services they use.⁸ Within Azure, Microsoft offers Azure PlayFab, a back-end platform for live games, providing managed game services, real-time analytics, and live operations, which enables game developers to build and operate games, analyse gaming data, and improve overall gaming experiences.⁹ Examples of games that run on Azure PlayFab include first-party games such as Minecraft, Forza Horizon 4, Doom Eternal, and Microsoft Flight Simulator, as well as some third-party games including Roblox, Astroneer and Wasteland 3.¹⁰

- (c) Xbox Cloud Gaming. Microsoft currently offers cloud-based game streaming through Xbox Cloud Gaming, which is composed of dedicated Xbox consoles located in Microsoft data centres.¹¹ This is distinct from Azure. Microsoft has deployed around [redacted] Xbox console motherboards worldwide across its data centres to provide Xbox Cloud Gaming. Microsoft initially submitted [redacted];¹² however, Microsoft has since noted that it [redacted].¹³
- (d) Xbox. Xbox is Microsoft's gaming console. It connects to a television or other display and allows users to play games specifically developed for Xbox. Xbox first launched in 2001 and has since remained one of the three main gaming consoles in the market (along with SIE's and Nintendo's consoles).¹⁴
- (e) Xbox Game Studios. Microsoft is active as a developer, publisher, and distributor of games. Microsoft publishes games for PCs, consoles and mobile devices developed by Xbox Game Studios, a collection of 24 first-party development studios, including the recently acquired ZeniMax studios. Examples include games in the Minecraft, Forza, Elder Scrolls and Halo game titles.¹⁵
- (f) Digital distribution. Microsoft distributes games in digital form.¹⁶ Microsoft operates the Microsoft Store on Windows (the **Microsoft Store**), an app store on Windows PCs, through which it distributes its own first-party games and third-party games for PC, as well as an Xbox-branded

⁸ Parties, FMN.

⁹ Parties, FMN.

¹⁰ Parties, FMN.

¹¹ Parties, FMN.

¹² Parties, FMN.

¹³ Microsoft site visit presentation.

¹⁴ Parties, FMN.

¹⁵ Parties, FMN.

¹⁶ Microsoft also distributes games in physical form through third parties, but does not have 'bricks-and-mortar' retail outlets in the UK.

storefront (the **Xbox Store**), which can be accessed via an Xbox console, web-browser, or the Xbox App for Windows.¹⁷

(g) Gaming Subscription Services. Microsoft offers multi-game subscription (**MGS**) services that include access to first- and third-party games (eg Xbox Live Gold and Xbox Game Pass), online multiplayer capabilities (eg Xbox Live and Xbox Live Gold) and cloud gaming functionality (Xbox Cloud Gaming, which is available as part of the Xbox Game Pass top-tier subscription and on a free-to-play basis with Fortnite).¹⁸

2.4 Microsoft publishes PC and console games developed by its 24 first-party game development studios, as well as by second- and third-party developers.¹⁹

Key financials

2.5 Microsoft generated \$198.1 billion USD in revenue in the 2022 financial year, an 18% increase on the \$168.1 billion USD earned in 2021.²⁰

2.6 As noted above, Microsoft is split into three business segments. Table 2.1 below sets out the revenue and operating income earned by Microsoft by business segment in the years to June 2019, 2020, 2021 and 2022.

Table 2.1: Microsoft's revenue and operating income split by business segment from 2019 to 2022

	2019	2020	2021	2022
				<i>\$m</i>
Revenue				
Productivity and Business Processes	41,160	46,398	53,915	63,364
Intelligent Cloud	38,985	48,366	60,080	75,251
More Personal Computing	45,698	48,251	54,093	59,655
Total	125,843	143,015	168,088	198,270
Operating income				
Productivity and Business Processes	16,219	18,724	24,351	29,687
Intelligent Cloud	13,920	18,324	26,126	32,721
More Personal Computing	12,820	15,911	19,439	20,975
Total	42,959	52,959	69,916	83,383

Source: Microsoft, [Annual Report 2021](#), 'Summary Results of Operations', accessed 3 November 2022 and Microsoft, [Annual Report 2022](#), 'Summary of Results of Operations', accessed 18 January 2023.

Note: Revenue represents the total revenue earned by each of Microsoft's segments, while operating income represents the profits after operational costs.

¹⁷ Parties, FMN.

¹⁸ Parties, FMN.

¹⁹ Parties, FMN.

²⁰ Microsoft, [Annual Report 2022](#), 'Summary of Results of Operations', accessed by the CMA on 18 January 2023.

- 2.7 Microsoft's gaming activities sit within the More Personal Computing business segment. Microsoft noted that the increase in revenues earned by the More Personal Computing segment was driven by gaming in the year to 30 June 2021.²¹
- 2.8 In its 2021 Annual Report, Microsoft noted the growth in gaming revenue, explaining that: (i) gaming revenue increased \$3.8 billion or 33% in FY21 driven by growth in Xbox content and services and Xbox hardware; (ii) Xbox content and services revenue increased \$2.3 billion or 23% driven by growth in third-party titles, Xbox Game Pass subscriptions, and first-party titles; and (iii) Xbox hardware revenue increased 92% driven by higher price of consoles sold due to the Xbox Series X|S launches.²²
- 2.9 Growth in gaming continued in the year to 30 June 2022. Microsoft noted that Gaming revenue increased \$860 million, or 6%, on a prior year comparable. Microsoft explained that Xbox hardware revenue increased 16% due to continued demand for Xbox Series X|S. Xbox content and services revenue increased 3% driven by growth in Xbox Game Pass subscriptions and first-party content, offset in part by a decline in third-party content.²³
- 2.10 Table 2.2.2 below further breaks down the revenues earned by Microsoft's gaming business unit in the years to June 2019, 2020 and 2021.

Table 2.2: Microsoft Gaming revenues from 2019 to 2021 (year to June)

[REDACTED]

Source: CMA analysis of: [REDACTED]
* [REDACTED].

Activision

Principal activities

- 2.11 Activision is a game developer and publisher founded in 2008 and headquartered in Santa Monica, California, US.²⁴ Activision is publicly listed on Nasdaq. Activision's global turnover in the financial year 2021 was over £6 billion, of which approximately £716 million was generated in the UK.²⁵
- 2.12 Activision is active in the following areas:

²¹ Microsoft, [Annual Report 2021](#), 'Summary Results of Operations', accessed by the CMA on 3 November 2022.

²² Microsoft, [Annual Report 2021](#), 'Summary Results of Operations', accessed by the CMA 3 November 2022.

²³ Microsoft, [Annual Report 2022](#), 'Summary Results of Operations', accessed by the CMA 18 January 2023.

²⁴ Parties, FMN.

²⁵ Parties, FMN.

- (a) Game development and publishing. Activision develops games for PCs, consoles, and mobile devices, and publishes them in most countries around the world through three business units: (i) Activision Publishing, Inc (the **Activision segment**); (ii) Blizzard Entertainment, Inc (the **Blizzard segment**); and King Digital Entertainment (the **King segment**).²⁶
- (b) Digital distribution. In Europe, Activision provides warehousing, logistics, and sales distribution services to third-party publishers of interactive entertainment software and interactive entertainment hardware (as well as its own publishing operations). Activision also has an online gaming digital storefront for PC games, Battle.net, which facilitates digital distribution of Blizzard and select Activision content.²⁷
- (c) Display advertising. Activision operates digital display advertising within some of its game content, particularly within mobile games offered by King.²⁸

Key financials

2.13 Activision earned total revenues of \$8.8 billion USD in the financial year ended December 2021, a slight increase on the \$8.1 billion USD in the year to 2020.²⁹

Table 2.3: Activision net revenues and operating income by segment in the years ended 31 December 2019, 2020, and 2021³⁰

	2019	2020	\$m 2021
Revenue			
Activision segment	2,219	3,942	3,478
Blizzard segment	1,719	1,905	1,827
King segment	2,031	2,164	2,580
Total	5,969	8,011	7,885
Operating income			
Activision segment	850	1,868	1,667
Blizzard segment	464	693	698
King segment	740	857	1,140
Total	2,054	3,418	3,505

Source: Activision, Annual Report and Accounts for 2019, 2020 and 2021.

Note: Revenue represents the total revenue earned by each of Activision's segments, while operating income represents the profits after operational costs.

²⁶ Parties, FMN.

²⁷ Parties, FMN.

²⁸ Parties, FMN.

²⁹ Activision Blizzard, 2021 Annual Report, 'Activision Blizzard, Inc. and Subsidiaries Consolidated Statement of Operations', page F-4 (78 of document).

³⁰ Note that the segment net revenues set out in Table 2.3 differ from the consolidated net revenues in Tables 2.4 and 2.5. Segment revenues set out in Table 2.3 do not include revenues from non-reportable segments (other

2.14 Table 2.3 shows Activision's net revenues and operating income by operating segment in the three years ended 31 December 2019, 2020, 2021. The Activision segment (which produces Call of Duty (**CoD**)) consistently generated the most revenue and operating income across the three-year period, followed by King (which produces *Candy Crush*). Revenue peaked in the year to 31 December 2020 – despite a slight decline in revenue in 2021, the results remained significantly higher than in 2019.

Table 2.4: Activision consolidated net revenues by platform in the years ended 31 December 2019, 2020, and 2021

	<i>\$m</i>		
	2019	2020	2021
Console	1,920	2,748	2,637
PC	1,718	2,056	2,323
Mobile and ancillary ³¹	2,203	2,559	3,182
Other ³²	648	687	661
Total	6,489	8,086	8,803

Source: Activision, Annual Report and Accounts for 2019, 2020 and 2021.

2.15 Table 2.4 demonstrates that console gaming was the largest revenue platform for Activision in 2019 and 2020, but this was overtaken by mobile gaming in 2021. Console gaming saw a slight decline in 2021, but the results do not yet point to any continued change in revenue source.

Table 2.5: Activision consolidated statement of operations for the years ended 31 December 2019, 2020, and 2021

	<i>\$m</i>		
	2019	2020	2021
Net revenues	6,489	8,086	8,803
Costs and expenses	4,882	5,352	5,544
Operating income	1,607	2,734	3,259
Net income	1,503	2,197	2,699

Source: Activision, Annual Report and Accounts for 2019, 2020 and 2021.

2.16 In line with Table 2.3 and Table 2.4, Table 2.5 shows an overall increase in Activision's revenues from 2019 to 2021, which flows through to an overall increase in both operating and net income.

income and expenses outside of reportable segments, including Activision' Distribution business and unallocated corporate income and expenses), share based compensation expenses, restructuring costs, and other accounting items (eg amortisation of intangible assets and recognition (or deferral) of deferred revenue). Reconciliations between segment net revenues and consolidated net revenues for 2021 and 2020 can be found on page 47 of the 2021 Annual Report and Accounts, and on page 41 of the 2019 Annual Report and Accounts for 2019.

³¹ Net revenues from 'mobile and ancillary' include revenues from mobile devices as well as non-platform specific game related revenues, such as standalone sales of toys and accessories.

³² Net revenues from 'other' primarily includes revenues from the Distribution business, the *Overwatch League*, and the *Call of Duty League*.

The Merger

- 2.17 On 18 January 2022, Microsoft entered into an agreement with Activision, via its direct wholly owned subsidiary Anchorage Merger Sub Inc., to acquire sole control of Activision (as defined above, the **Merger**).³³ Under the terms of this agreement, Microsoft agreed to pay USD 95 per share, representing a purchase price of approximately USD 68.7 billion.³⁴
- 2.18 The Parties informed the CMA that the Merger is also the subject of review by competition authorities in a number of other jurisdictions, including Australia, Brazil, [REDACTED], [REDACTED], the EU, Japan, [REDACTED], South Korea, and the US.³⁵ In August 2022, the Saudi Arabian General Authority for Competition cleared the merger,³⁶ followed by the Brazilian Administrative Council for Economic Defense (CADE) on 5 October and Chile's Fiscalía Nacional Económica (FNE) on 29 December.³⁷

Valuation

- 2.19 Microsoft's valuation model of January 2022 estimated Activision's value to Microsoft to be \$[REDACTED]. This [REDACTED].³⁸

Standalone valuation (ie Activision's current business)

- 2.20 In determining the 'standalone' value of Activision, Microsoft used [REDACTED].³⁹
- 2.21 In determining the relevant cashflows for its valuation, Microsoft estimated [REDACTED], as set out in Table 2.6 below.

Table 2.6: [REDACTED]

[REDACTED]

Source: [REDACTED]

- 2.22 Microsoft estimates that [REDACTED] Activision operating segment revenue [REDACTED].^{40 41}

³³ Parties FMN. See, here: [press release](#) issued by Microsoft.

³⁴ Parties, FMN.

³⁵ Parties, FMN.

³⁶ Saudi Arabia General Authority for Competition on Twitter, [Certificate of No Objection](#), 22 August 2022, accessed by the CMA on 7 November 2022.

³⁷ CADE, '[CADE clears Microsoft's acquisition of Activision Blizzard](#)', 7 October 2022, accessed by the CMA on 7 November 2022 and FNE, '[FNE aprueba la adquisición de Activision Blizzard por parte de Microsoft Corporation](#),' 29 December 2022, accessed by the CMA on 2 February 2023.

³⁸ Microsoft, FMN.

³⁹ Microsoft, FMN.

⁴⁰ Note that Table 2.6 sets out [REDACTED]. Source: Microsoft, FMN and Microsoft, email to the CMA.

⁴¹ Microsoft, FMN.

2.23 In 2021, [REDACTED]% of the Blizzard operating segment's revenues were generated by [REDACTED] content with [REDACTED] distributed across its other franchises (eg [REDACTED], [REDACTED] and [REDACTED]). The proportion of Blizzard's revenue earned by these games is expected to change by [REDACTED], with [REDACTED] dropping to approximately [REDACTED]% and most of the remaining revenue being generated by [REDACTED].⁴²

2.24 The King operating segment revenues are [REDACTED]. Microsoft expects [REDACTED].⁴³

Synergies arising from the Merger

2.25 Microsoft identified the following [REDACTED] synergies as being key value drivers for the Merger:

(a) [REDACTED]⁴⁴

(b) [REDACTED]

(i) [REDACTED]

(ii) [REDACTED]

(iii) [REDACTED]⁴⁵

(c) [REDACTED]⁴⁶

The rationale

Parties' submissions

2.26 The Parties told the CMA that Microsoft's rationale for the Merger is to:

(a) provide Microsoft with gaming content (including popular Activision franchises like CoD, World of Warcraft, and Candy Crush Saga) which will help Microsoft to execute a cross-platform strategy (allowing gamers to play games on multiple devices);⁴⁷

(b) improve Microsoft's presence in the mobile segment, where Activision holds an established position (particularly through King);⁴⁸

⁴² Microsoft, FMN.

⁴³ Microsoft, FMN.

⁴⁴ Microsoft, FMN.

⁴⁵ Microsoft, FMN.

⁴⁶ Microsoft, FMN.

⁴⁷ Parties, FMN.

⁴⁸ Parties, FMN.

- (c) support Microsoft's investments in its multi-game subscription service, Xbox Game Pass⁴⁹ (**XGP**), and improve user engagement/adoption amongst Xbox and PC users;⁵⁰
- (d) improve Microsoft's ability to create a 'Universal Store' (extending the Xbox digital storefront across non-Xbox platforms and devices);⁵¹ and
- (e) increase the attractiveness of MSAN.⁵²

2.27 Microsoft described the acquisition as supporting the opportunity to 'pivot away from the device centric strategy of the past' and 'focus instead on a consumer-centric, cross-platform approach that will allow gamers to play wherever and on whatever device they wish.'⁵³ Microsoft's internal documents from before and at the time of the Merger broadly support the rationale stated above, with a particular focus on acquiring a broad range of differentiated gaming content to help scale XGP.⁵⁴

2.28 Microsoft placed significant emphasis on the importance of mobile gaming to its ongoing growth and presence in the gaming market in its submissions, noting that [REDACTED], and has identified this as a key driver of the transaction.⁵⁵ Microsoft's focus on expanding its presence in mobile is reflected in internal documents.⁵⁶

⁴⁹ For completeness, the CMA notes that Microsoft offers a number of pricing options for its subscription services, for users on both PC and consoles, as well as a bundled subscription and cloud gaming offering (Xbox Game Pass Ultimate). Throughout this Provisional Findings report, references to Xbox Game Pass refer to the various offerings as a collective, unless otherwise specified.

⁵⁰ Parties, FMN.

⁵¹ Parties, FMN.

⁵² Parties, FMN.

⁵³ Parties, FMN.

⁵⁴ For example, see [REDACTED].

⁵⁵ Microsoft site visit.

⁵⁶ For example, see: Microsoft response to CMA RFI.

3. Relevant merger situation

- 3.1 In accordance with [section 36](#) of the Act and pursuant to our terms of reference we are required to investigate and report on two statutory questions:
- (a) whether arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of an RMS; and
 - (b) if so, whether the creation of that situation may be expected to result in a SLC within any market or markets in the UK for goods or services.
- 3.2 We address the first of the statutory questions in this section.

Enterprises ceasing to be distinct

- 3.3 The first element of the RMS test is whether the arrangements in progress or contemplation will, if carried into effect, lead to enterprises ceasing to be distinct.⁵⁷
- 3.4 The Act defines an ‘enterprise’ as ‘the activities or part of the activities of a business’. A ‘business’ is defined as including ‘a professional practice and includes any other undertaking which is carried on for gain or reward or which is an undertaking in the course of which goods or services are supplied otherwise than free of charge.’⁵⁸
- 3.5 We have described the activities of Microsoft and Activision in Chapter 2 above. In light of this, we are satisfied that Microsoft and Activision are ‘businesses’ and that they each satisfy the definition of ‘enterprise’ in accordance with the Act.
- 3.6 [Section 26](#) of the Act provides that any two enterprises cease to be distinct if they are brought under common ownership or common control. The background to the Merger is described in Chapter 2 above. On completion of the Merger, Activision will be under the common ownership and control of Microsoft.
- 3.7 Our provisional view is therefore that the Merger will result in Microsoft and Activision ceasing to be distinct enterprises for the purposes of the Act.

⁵⁷ [Section 23](#) and [section 24](#) of the Act.

⁵⁸ [Section 129\(1\)](#) and [\(3\)](#) of the Act.

Jurisdiction test

- 3.8 The second element of the RMS establishes whether the Merger has sufficient connection with the UK on a turnover or share of supply basis to give the CMA jurisdiction to investigate.
- 3.9 The turnover test is satisfied where the value of the turnover in the UK of the enterprise being taken over exceeds £70 million. As noted in Chapter 2, Activision's turnover in the UK exceeded £70 million in FY2021. We are therefore satisfied that the turnover test in [section 23\(1\)\(b\)](#) of the Act is met. As we have provisionally concluded the turnover test is met, there is no need to consider the share of supply test.

Provisional conclusion on the relevant merger situation

- 3.10 In the light of the above, we have provisionally found that the Merger constitutes arrangements in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

4. Industry background

Introduction

4.1 This chapter sets out background information on the gaming industry relevant to our assessment of how Microsoft and Activision operate in the industry.

The chapter is split into the following subsections:

- (a) Overview of the industry;
- (b) Game development, publishing, distribution and marketing;
- (c) Gaming hardware;
- (d) Game purchasing; and
- (e) Cloud gaming.

Overview of the industry

4.2 The gaming industry is the UK's largest revenue-generating form of entertainment. It is bigger than pay TV, home video (including streaming), cinema, music, or books. In 2022, it generated approximately £5 billion in revenue in the UK.⁵⁹

4.3 Gamers can play games on PCs, gaming consoles or mobile devices.⁶⁰ Games played on mobile devices tend to be less demanding games in terms of processing power.

4.4 Games are developed (ie conceived, designed, programmed and tested) by game studios. While game studios and publishers may be different entities, there can be, and often is, common ownership across the two. Once developed, games are licensed, marketed, and released in different regions by publishers. While game studios and publishers may be different entities, there can be, and often is, common ownership across the two. Games are distributed to gamers across various channels and platforms.⁶¹

4.5 Games can be monetised in different ways. Over the past several years, gamers have typically accessed games by paying an up-front fee and downloading the relevant games from a digital storefront (such as the Xbox

⁵⁹ BBC, [Almost 90% of games sold in UK in 2022 were digital - ERA](#), 10 January 2023, accessed by the CMA on 30 January 2023.

⁶⁰ Parties, FMN, 5 July 2022.

⁶¹ Parties, FMN, 5 July 2022.

Store) to their console or device (such as a PC or mobile). This ‘buy-to-play’ (B2P) model remains the primary mode of delivering games on console. Some console providers also monetise content by offering multi-game subscription services. Unlike the traditional B2P model, these services allow gamers to access a catalogue of games for a fixed, often monthly, fee. In both B2P and multi-game subscription services, there are some games that allow users to make in-game purchases, meaning they can purchase access to additional features in the game. The ‘in-game’ purchasing model is a key feature of free-to-play games which are free to access but generate revenue from in-game purchases.

- 4.6 The gaming industry is characterised by strong network effects. Console providers such as Microsoft compete to attract users who want to play high-quality games, often with friends, as well as high-quality content from game developers, who want to make games for consoles with a large user base. Console platforms with a lot of gamers attract better content, which in turn attracts more gamers to that console platform, which in turn attract better content, and so on.
- 4.7 In recent years, the industry has seen the development of cloud gaming services, a technology that allows complex games to be accessed on remote servers and streamed directly to a device. Since games are executed remotely, gamers can play using a range of devices that can be less powerful, and are often cheaper, than consoles (such as mobile phones or tablets). There have been several recent entrants into the gaming industry using this disruptive technology, including Amazon Luna, Google Stadia,⁶² Blacknut, and NVIDIA GeForce Now. These entrants are exploring different ways to monetise their offering, including through ‘B2P, ‘bring-your-own-game’ (BYOG) (whereby customers can play games purchased on third-party storefronts on the relevant cloud gaming service), and multi-game subscription models.

Game development, publishing, distribution and marketing

- 4.8 This section sets out a summary of the lifecycle of a game from development stage through to game publishing, distribution and marketing.

⁶² Note that Google Stadia was shut down on 18 January 2023t. Source: Google, ‘[Thank you for playing with us](#)’, accessed by the CMA on 31 January 2023.

Game Development

- 4.9 The first stage in the game lifecycle is game development, which relates to the development and production of the game. This includes the design, art, programming and testing of a game, and is typically done by one or more development studios.
- 4.10 Game development involves the use of software development tools (including 'game engines' and other tools such as audio and video middleware) which may be created by a studio in-house or licensed from third parties. The core functionality typically provided by a game engine includes a rendering engine for 2D or 3D graphics, a physics engine (including collision detection and collision response), sound, scripting, animation, networking, streaming, memory management, threading, localisation support, scene graph, and sometimes video support for cinematics. These different tools result in different gaming experiences, in particular between PC/console games as compared to native mobile games. Typically, PC and console games offer a more advanced gaming experience and require more advanced game development tools.⁶³
- 4.11 Developers may be first-, second-, or third-party:
- (a) First-party developer: a first-party developer refers to development completed internally by the game publisher, a subsidiary, or a fully integrated studio, and then made available to the public by that developer;
 - (b) Second-party developer: a second-party developer is ordinarily a game studio that enters into development contracts with a publisher, such as SIE, Nintendo or Microsoft, and develops games exclusively for that publisher;
 - (c) Third-party developer: a third-party developer is an independent developer that develops and owns games that are then published by a game publisher.⁶⁴

Game Publishing

- 4.12 Following game development, game publishers make video games available to the public for sale or for free. They are responsible for licensing the rights in relation to the game as well as for handling the advertising, marketing and distribution of the game.

⁶³ Parties, FMN.

⁶⁴ Parties, FMN.

Game Distribution

- 4.13 Game distribution has traditionally occurred through gamers purchasing a hard copy of their games on physical media from a retail store. There has been a significant shift in recent years to games being purchased digitally. In both instances, software is executed locally on the player's gaming device.
- 4.14 Gamers may also access games via a streaming service. In this case, the gaming software is executed remotely on cloud infrastructure and streamed over the internet to the player's end device. The end device can, in principle, be anything from a mobile phone to a smart TV.
- 4.15 Some providers offer multi-game subscription services that allow gamers to purchase access to a number of games for a fixed monthly fee (multi-game subscriptions). Depending on the subscription, gamers may download or stream these games.

Game Marketing

- 4.16 Games are often marketed by reference to their type or their genre:
- (a) **Game type:** Definitions of game types are imprecise, but typical categorisations used in the industry are: 'AAA', 'AA', and Indie.
- (i) AAA games tend to be considered to be those which are typically developed by large development studios and require significant budget and time (eg a number of years). AAA status is not a well-defined term, but in industry discussions is correlated with its budget, complexity, popularity, or some combination of the three.
- (ii) AA games tend to have significantly smaller budgets. While they are still developed by large groups of developer staff that are spread across multiple offices, they tend not to have the scale and reach of AAA games.
- (iii) Indie games are those developed by companies that are typically small, self-funded and 'independent' from broader parent companies which dictate the direction of the game developers. Indie studios are often made up of smaller teams and can often depend on crowdfunding and donations to fund their games.
- (b) **Genre:** Games may also be classified by reference to their genre, definitions of which can be broad. Some common genres of games include: action; adventure; role-playing games (**RPGs**), shooter, sport, strategy, open world, and resource management. Games are sometimes

recognised as belonging to a genre, but several games have elements of multiple genres, which can make game classification to some extent a subjective exercise. Genres can be broken down into sub-genres; for example, the shooter genre includes: first-person shooters, third-person shooters or battle royale games.

Gaming hardware

Gaming devices

4.17 Gamers have historically used the hardware within one (or more) of the following sub-categories in order to play games:

- (a) PCs (eg desktops, laptops and gaming-specific PCs);
- (b) Dedicated gaming consoles (eg SIE PlayStation, Nintendo Switch, and Microsoft Xbox); and
- (c) Mobile devices.

PCs

4.18 Gaming PCs are personal computers designed for playing video games and are manufactured in such a way as to improve the gaming experience as compared to gaming on a mainstream PC. The specifications and components of a gaming PC make it more suited to delivering a high-quality gaming experience, as compared to a mainstream PC.

Gaming consoles

4.19 The Parties estimate that worldwide revenues from console hardware sales were [£] in 2021, with [£] generated in the UK.⁶⁵

4.20 Consoles were initially released by Atari⁶⁶ and Nintendo in the 1970s and 1980s, followed by SIE in 1995. Microsoft followed in 2001. Consoles are currently in what is known as the 'ninth generation',⁶⁷ with SIE, Nintendo and Microsoft being the leading suppliers.⁶⁸

⁶⁵ Parties, FMN.

⁶⁶ Atari exited the console gaming market in the early 1980s.

⁶⁷ Parties, FMN.

⁶⁸ Parties, FMN.

Figure 4.1 Console generations from 1972 – 2022 by developer

Console generation		Console developers		
		Microsoft	Sony	Nintendo
1st	1972 - 1980	n/a	n/a	n/a
2nd	1976 - 1992	n/a	n/a	n/a
3rd	1983 - 2003	n/a	n/a	NES
4th	1987 - 2004	n/a	n/a	Super NES
5th	1993 - 2006	n/a	PlayStation	Nintendo 64
6th	1998 - 2013	Xbox	PlayStation 2	Game Cube
7th	2005 - 2017	Xbox 360	PlayStation 3	Wii
8th	2012 - 2020	Xbox One	PlayStation 4	Wii U / Nintendo Switch
9th	2020 - present	Xbox Series X, Xbox Series S	PlayStation 5	Nintendo Switch ¹³⁵

Source: Parties, FMN[⁶⁹].

4.21 Recent generations of gaming consoles function as independent media hubs with the ability to download and stream content, such as Netflix and Amazon Prime Video. Generally, there is a period of around five to seven years between consoles. [⁷⁰].⁶⁹ Older consoles tend to be supported for a period of time following the release of a new generation console.⁷⁰ Consoles and PCs can usually process larger and more complex games (such as Call of Duty).

Mobile devices

4.22 In addition to consoles and PCs, people play games on mobile devices. Mobile devices currently lack the technical capabilities to run most console games, and most people use them to play more casual games (such as Candy Crush). We note that some console / PC games have developed mobile versions, which are simplified versions of the game with different game modes and functionality to their console/PC counterparts.

Supporting infrastructure

4.23 This section sets out the key supporting infrastructure in the development of video games, including: (i) operating systems; (ii) Graphics Processing Units; and (iii) network infrastructure for cloud gaming.

⁶⁹ Microsoft response to the CMA's RFI.

⁷⁰ Parties, FMN.

Operating systems

- 4.24 Gaming hardware requires an Operating System (**OS**). An OS provides a graphics-based interface between the user and the device's hardware and software.⁷¹
- 4.25 Microsoft owns Windows OS, which is the market leader in the supply of PC OSs. Microsoft's rivals, which are significantly smaller, include MacOS, ChromeOS, and Linux-based OSs.⁷² Because of the popularity of Windows OS, game developers most commonly make games that are designed and optimised for Windows OS.⁷³ Gaming consoles operate with exclusive and proprietary console operating systems.

Graphics Processing Units

- 4.26 Graphics Processing Units (**GPUs**) are specialised processors designed to accelerate graphics rendering, thereby improving the quality of gaming visuals. In recent years, video games have become more computationally intensive, with some featuring hyper-realistic graphics or vast and sophisticated in-game worlds. With advanced display technologies (such as 4k screens) and the rise of virtual reality gaming, the demands on graphics processing have grown significantly and continue to do so. With better graphics performance, games can be set to a higher resolution, at faster frame rates, or both. The leading suppliers of GPUs are AMD and NVIDIA.

Network infrastructure for cloud gaming

- 4.27 Cloud infrastructure to deliver cloud-based game streaming enables gamers to access games across a range of different endpoints or devices. It is therefore a critical asset in the provision of cloud gaming. A provider may build their own cloud streaming infrastructure, partner with a cloud computing provider to do so, or use a white-label service provided by a third-party provider. Providers such as Microsoft, Amazon, Google, SIE, NVIDIA and others have built their own infrastructure.⁷⁴ We set out further detail on the

⁷¹ Parties' response to the CMA's RFI.

⁷² Linux is an operating system engine which is free to use and modify resulting in multiple Linux based operating systems. Windows' share of user personal computer OSs is [70-80%] worldwide and [60-70%] in the UK (Source: Parties' response to the CMA's RFI. The hypothetical market share of OS software for PCs used for gaming is even higher than this, upwards of 95% ('[Steam Hardware & Software Survey: July 2022](#)', dated July 2022, accessed by the CMA on 15 August 2022).

⁷³ Note that the Valve Software has released 'Proton', a compatibility layer which allows games developed on the Microsoft OS to be run on other Linux-based operating systems.

⁷⁴ Parties' response to RFI 2.

ecosystem of cloud gaming infrastructure within the ‘cloud gaming’ section below.

Game purchasing

- 4.28 Gamers have traditionally purchased games under a ‘B2P model in which they pay a one-time upfront fee for each individual game. Increasingly, games which are purchased upfront also offer additional purchasable content (eg expansion packs or in-game purchases). For example, gamers will pay an upfront amount for the core Call of Duty game but may make additional payments as they play the game, eg to purchase in-game currency which they can exchange for additional content, upgraded ammunition etc.⁷⁵ In 2021, Activision earned 26% of revenues from product sales and 60% of revenues from in-game purchases (both B2P and F2P games). The remaining 14% of revenues were categorised as relating to subscriptions and other sources.⁷⁶
- 4.29 Some providers are now offering subscription services, which require ongoing payments to play games. One popular subscription option is multi-game subscription services. These enable gamers to: (i) access a catalogue of games, which gamers can download or stream, effectively renting access to games; and/or (ii) play with each other online in the form of multi-player experiences across multiple games (although multi-player is not unique to multi-game subscriptions).
- 4.30 Subscription services currently include: Microsoft Xbox (Xbox Game Pass and Xbox Live Gold), Sony PlayStation Plus, Nintendo Switch Online, EA Play, Apple Arcade, Google (Play Pass and Google Stadia⁷⁷), Amazon (Luna⁷⁸ and Prime Gaming), Ubisoft Plus, Netflix Gaming, Utomik, and Blacknut.
- 4.31 However, for the purpose of our assessment we focus on multi-game subscription services that offering a relatively wide range of games (eg Game Pass, PS+ Extra and PS+ Premium), rather than services which mainly offer access to online multiplayer and/or only a few monthly games (eg Xbox Live Gold and PS+ Essential).

⁷⁵ Parties, FMN.

⁷⁶ CMA analysis of: Activision, [2021 Annual Report](#), accessed by the CMA on 18 January 2023. Product sales of \$2,311 million revenue (page F-4); in-game net revenue of \$5,266m (page 45); subscription and other revenue of \$1,226 million (calculated as the difference between product sales and in-game net revenue and total revenue, of \$8,803 million). Note that this relates to revenues across the entirety of Activision content, including mobile as well as console, meaning that in-game purchase percentages are likely to be higher than in the case of console gaming only. This is due to the majority of revenue on mobile games being generated from in-game purchases rather than upfront purchase costs.

⁷⁷ As noted above, on 18 January 2023 Google closed down its Stadia service.

⁷⁸ Amazon Luna is not currently available in the UK.

Cloud gaming

Overview of cloud gaming

- 4.32 Cloud-based game streaming services (**cloud gaming services**) are consumer-facing services which allow games to be streamed over the internet from gaming hardware in a data centre to a gamer's choice of supported device. This differs from traditional gaming on PCs, mobile, and console, where customers are limited to playing games that have been downloaded to that specific piece of hardware. Cloud gaming provides gamers the opportunity to play technologically complex games on less powerful devices—such as mobile devices—that may otherwise lack the computing power or storage to support them.⁷⁹ There are several existing cloud gaming services available to the public today. It is, however, a market that has emerged only in recent years, and industry participants expect it to grow and develop considerably. In that sense, cloud gaming is still a nascent market.⁸⁰
- 4.33 Microsoft offers cloud gaming services through Xbox Cloud Gaming (**xCloud**). This is available to gamers as a bundled offering with its Xbox Game Pass Ultimate (**XGPU**) multi-game subscription service, as well as separately on a free trial basis for one game, Fortnite.⁸¹ Activision does not currently allow its games to be streamed via any cloud gaming service.⁸²
- 4.34 The key benefit to gamers of cloud gaming is the ability to stream games without the need to purchase console (or other) hardware, which results in a cost saving. Cloud gaming also allows a gamer to start gameplay without waiting for a game to download locally to a device.

Cloud gaming monetisation models

- 4.35 Cloud gaming service providers are testing a range of different business models to monetise their services. They all currently offer a subscription-based model for access to their servers (and some offer a free tier with advertising for this purpose). Different services monetise their gaming content in different ways, including (i) the traditional B2P model, whereby users pay a one-time fee to purchase a game and can only play it on that platform, (ii) the BYOG model, whereby users pay a regular subscription fee for access to cloud gaming servers and can play games bought in third-party storefronts,

⁷⁹ Parties, FMN.

⁸⁰ Further evidence on Microsoft and third-party submissions on the future of cloud gaming is set out in more detail in Chapter 8.

⁸¹ Parties' response to the CMA's RFI.

⁸² Parties' response to the CMA's RFI.

such as Steam and Epic Games Store (eg, NVIDIA GeForceNow), (iii) free-to-play offerings monetised through advertising revenue and in-game purchases, and (iv) multi-game subscription services, whereby users pay a subscription fee for access to gaming servers and a catalogue of games (eg, Amazon Luna and Xbox Game Pass Ultimate). These business models are not fixed, and cloud gaming services can, and often do, explore different ways of monetising their services. For example, Amazon Luna offers both an MGS subscription, and a BYOG feature for Ubisoft games.⁸³

Cloud gaming infrastructure and ecosystem

- 4.36 The 'cloud' refers to a network of servers which are accessed over the internet. Cloud gaming utilises cloud servers, as noted above, to allow gamers to play games without the need for gaming hardware (eg an Xbox or PlayStation).
- 4.37 In addition to the supporting infrastructure required for game development more broadly (as noted above), the cloud-gaming ecosystem is reliant on:
- (a) Data centres: data centres are physical buildings located around the world where servers are placed and connected to the internet.
 - (b) Servers: servers combine computing components to produce a machine with significant processing power which run games in a central location, which gamers connect to via the internet. Server components include:
 - (i) Central Processing Units (**CPUs**): The CPU is a processing device which carries out instructions, allowing the computer to perform its tasks.⁸⁴
 - (ii) GPUs: as set out at paragraph 4.26 above, the GPU allows for the processing of graphics to improve the visual gaming experience.
 - (iii) Storage drives: The storage drive of the server is the core data storage device, holding the OS, applications, data files etc. This can be stored on solid-state drives (**SSDs**) or hard disk drives (**HDDs**). A cloud server can connect to multiple drives hard drives as needed to

⁸³ [Amazon Luna – Cloud Gaming Service](#), accessed by the CMA on 23 December 2022.

⁸⁴ The two main manufacturers of CPUs are [Intel](#) and [AMD](#). In December 2020, [Bloomberg reported](#) that Microsoft is in the process of designing its own chips and other articles have suggested that Microsoft may be hiring staff to do so.

allow you access to more games than you could store on a personal device.⁸⁵

- (iv) OSs: The OS running on the data server requires compatibility with the games being played by end-users. As noted above, the majority of PC games are developed using Microsoft's *Windows* OS, while console games are developed for proprietary console OS.

4.38 Accessibility to each of these core components is essential for the provision of cloud-gaming. The reliance of cloud gaming providers on third parties in order to access each of these core components varies. For example, across its broader offering (including a move into cloud-gaming), Netflix uses Amazon's AWS servers to host its content on the cloud. Conversely, Microsoft hosts its Xbox Cloud Gaming internally, on dedicated console hardware residing in Microsoft's own data centres.

⁸⁵ Some of the key manufacturers of hard drives include Hewlett-Packard (HP), Kingston Technology, Seagate, Western-Digital and SanDisk.

5. Introduction to competitive assessment

- 5.1 This chapter sets out some aspects of our treatment of the evidence considered in our assessment of the potential competitive effects of the Merger, including a summary of the evidence base itself. It then sets out our Provisional Findings with respect to the market definitions relevant for the competitive assessment.

Treatment of evidence

- 5.2 In the following paragraphs, we briefly set out some of the sources of evidence we have gathered during our investigation. We then set out some aspects of our approach to the assessment of certain types of evidence – in particular, internal documents, views submitted by market participants and by the public, and economic modelling.

Evidence gathered in this investigation

- 5.3 In assessing this Merger, we have looked at a wide range of evidence that we considered in the round to reach our provisional decision. The evidence we have gathered has been tested rigorously, and we considered the context in which the evidence was produced when deciding how much weight to give it.
- 5.4 We received a significant volume of evidence from the Parties. In response to targeted information requests, we received over three million internal business documents from Microsoft and Activision, including key strategy documents and email communications among senior staff. These documents which, for the most part, were created in the ordinary course of business, set out the Parties' views of the console and cloud gaming markets, as well as their future commercial strategy.
- 5.5 The Parties also had several opportunities to make submissions and comment on our emerging thinking throughout the investigation. In October 2021, the Parties submitted a response to our Phase 1 decision. They subsequently submitted a response to our Issues Statement, where we set out the theories of harm on which we planned to focus our phase 2 investigation. We held a site visit with each of the Parties, where their senior business staff gave us several presentations on the nature of their businesses, the rationale for the Merger, and answered our questions relating to our investigation. We subsequently produced working papers and an annotated Issues Statement with our emerging thinking, and the Parties submitted their views, in writing, on those materials. We held formal hearings with each of the Parties, in which we spoke to the Parties' senior management

about topics that we were exploring in our investigation. In addition, the Parties made a number of other submissions setting out their views on our theories of harm and evidence base at different points in our investigation. This includes two additional submissions received as late as the week before issuing these Provisional Findings (and six weeks following the deadline for responses to Working Papers). Accordingly, it has not been possible to take full account of these most recent submissions in the assessment contained in these Provisional Findings. We will review and take account of these submissions in the next stage of our investigation.

- 5.6 We gathered evidence from other gaming console providers, game publishers, and cloud gaming service providers. We sent out over 50 requests for information, held several calls and meetings, and gathered hundreds of internal documents from these third parties. In our calls, we spoke to senior staff and business experts across the industry to gain a better understanding of the competitive landscape and likely future developments in these markets.
- 5.7 We sought views from the public. In response to our Issues Statement of 14 October 2022, we received and reviewed over 2,100 emails containing views on the transaction. We considered those views and published a summary of these responses on 21 December 2022.
- 5.8 We engaged an independent market research company to conduct an online survey. The survey polled a random sample of PlayStation CoD gamers—defined for the purposes of the survey as those who played at least 10 hours or spent at least \$100 on the game between July 2021 and June 2022—to get a sense of how important this game franchise is to them, and what they might do if it became partially or totally exclusive to Xbox after the Merger.
- 5.9 While there are no pre-defined measures for assessing whether a merger may be expected to result in an SLC, market shares are a commonly used measure in merger control cases. There is a high degree of product differentiation in some of the markets in which Microsoft and Activision operate, which means that market shares may not be the best indicator, in this case, of how closely businesses compete with each other. As such, when assessing the impact of the Merger on competition, we have considered the evidence on market shares alongside other evidence on how closely the Parties compete with rivals (either currently or in the future). As well as the Parties' market shares, our assessment has taken account of the type of games that Activision offers, of the technical specifications of different consoles (and the types of games that users play on them), and of Microsoft's potential strengths in cloud gaming arising from its broader multi-product ecosystem. We have also taken account of the strength of competitive

constraints on the Parties, and the extent of past entry and exit from the relevant markets.

Internal documents

- 5.10 Internal documents can be a useful source of information in merger investigations. Documents produced in the ordinary course of business provide evidence on the perspectives of market participants beyond their direct submissions to the CMA, often from before the merger under investigation was in contemplation. In some cases, they speak directly to questions we seek to answer in our investigations, including for example questions on what businesses can do, what businesses may find it in their interest to do, sources of competition that businesses monitor or react to, or industry trends that provide context for our analysis.
- 5.11 Among the large number of documents that we requested from the Parties and third parties, we identified a range of documents containing information and discussions relating to a range of themes that are of importance to our investigation. By way of summary, the evidence base we have drawn from internal documents includes evidence on:
- (a) commercial discussions relating to consumer behaviour and market mechanics, including drivers of console choice, the presence and extent of network effects, multi-homing, and other aspects of how competition works in the gaming industry;
 - (b) expectations in relation to industry trends (such as subscriptions and cloud gaming), including quantitative forecasts of revenue growth, reflections of senior staff on the importance of those trends in the wider industry, and details of firms' strategic responses to those trends;
 - (c) consideration of whether content should be included on subscription and/or cloud services, including senior staff views on the merits of doing so, discussions between publishers and platforms relating to supplying such content, and actual decisions on whether content should be listed on platforms (both in general and specifically in relation to supplying content to platforms that are rivals);
 - (d) the importance of large game franchises (including but not limited to CoD and WoW), including in relation to cloud, PC and cloud gaming services, and the possible ramifications of content exclusivity for commercial success;

- (e) the role of operating systems in cloud gaming, including the cost to serve when using Windows or Linux, and the impact of choice of operating system on access to content;
- (f) the role of cloud infrastructure in cloud gaming, strategies and plans for such infrastructure, and forward-looking assessments of the expected evolution of firms' cloud infrastructure costs over time; and
- (g) internal discussions of the relative strengths of rivals and potential entrants in cloud gaming services, including in relation to advantages from existing scale, access to content, operational capabilities and cloud infrastructure.

5.12 In our review of these internal documents, we took care to interpret them in their context. In deciding what weight to attach to them we considered information such as the identity and role of the staff that prepared, sent or received them. In line with our guidance, where internal documents support claims being made by merger firms or third parties, we considered whether those documents were generated prior to the period in which the Parties were contemplating the Merger, and the period in which third parties were aware of the Merger. We also attached weight to whether documentary evidence was consistent with other evidence.

5.13 Where we received submissions suggesting that our interpretation of documents was incorrect, we assessed those claims. We applied our judgement to the credibility of those claims, accounting for the nature of the statements made in documents, the interests of the relevant party in suggesting an alternative interpretation, and the consistency of any alternative interpretations with other documents and evidence.

Views of market participants

5.14 During our phase 2 investigation, we engaged with a range of market participants, including through written questionnaires, data requests, meetings, as well as having received and considered submissions from some third-party market participants.

5.15 Views of market participants are an important source of evidence in CMA merger investigations. That said, the outcomes of a merger investigation can have a direct financial or strategic impact on market participants, and we therefore—as with internal documents—considered the interests and incentives of the Parties, market participants that oppose the Merger and other third parties, as well as the extent to which such claims are consistent with other evidence, when assessing what weight to attach to those views.

- 5.16 In addition to views provided by firms, we also heard from the public directly, both through a consumer survey, and from emails received from members of the public during the period for response to the CMA's Issues Statement. The CMA invited comments from anyone in response to its Issues Statement, including members of the public.⁸⁶
- 5.17 Details of our customer survey are provided in Appendix D. As set out in that Appendix, our customer survey (the **CMA Survey**) was commissioned by an independent specialist agency under controlled conditions, with questions specifically tailored to bring out objective responses, and accounting for comments provided by the Parties and by SIE. We are of the provisional view that the CMA Survey has been designed, conducted and analysed robustly in accordance with survey good practice.
- 5.18 In relation to views received by email from individual members of the public, it was necessary for us to apply caution in interpreting these. There is no practical way for us to verify that views provided through an open channel are submitted by genuine consumers, nor that those submitting views are representative of all relevant consumers (and in particular UK consumers). In relation to representativeness in particular, open calls for comment may attract greater attention from particular cohorts of the market than others, either through random chance, or as a result of varying degrees of awareness across different cohorts (which can be affected by press coverage, internet commentary and social media coverage—including coverage by interested parties). As a result, we were unable to place any particular weight on these email submissions, or to use them to make inferences about 'average views' of consumers. However, we note that many respondents raised issues and concerns that were aligned with those under consideration in the inquiry (both in terms of the impact of the Merger on competition and any potential benefits for consumers arising from the Merger). These issues are considered further in Chapters 7 and 8 below.

Role of quantitative evidence

- 5.19 Economic modelling and quantitative evidence—including shares of supply, financial modelling, and analysis of business data—can be helpful in assessing a range of questions relevant to merger investigations, which is how they have been used in this case.

⁸⁶ The CMA received approximately 2,600 emails, but some of these were excluded from our review because they contained abusive content (with no other substantive content), or were blank, unintelligible, stated to be from non-UK consumers, or not in English. The summary of Issues Statement responses received from members of the public is available on the case page: [Issues statement: Summary of responses \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

- 5.20 Quantitative analysis has strengths but can also have limitations. On one hand, attempting to quantify certain variables can help by giving a sense of degree when an aspect of the investigation is not clear cut—for example: the credibility of a substitute, the strength of a firm, the importance of an input, or the profitability of a strategy. On the other hand, quantitative evidence can vary depending on the assumptions applied in the methodology. Quantifications do not capture all relevant considerations. Shares of supply may not capture the extent to which firms may be closer (or less close) alternatives to each other because of product differentiation. Financial data may fail to capture economic gains that are not typically captured in accounting terms but are nevertheless implicitly or explicitly accorded weight by senior management, such as increased future opportunities, greater strategic flexibility, long-run payoffs in terms of scale or network effects, etc.
- 5.21 In our assessment, we have considered a range of both quantitative and qualitative evidence, and also considered carefully the relative weight to attach to each. Where both types of evidence have been available, we have sought to interpret quantitative evidence alongside qualitative evidence.

Market definition

Framework

- 5.22 Where the CMA makes an SLC finding, this must be ‘within any market or markets in the United Kingdom for goods or services’.⁸⁷ An SLC can affect the whole or part of a market or markets.
- 5.23 Market definition provides a framework for assessing the competitive effects of a merger. The assessment of the relevant market is an analytical tool that forms part of the analysis of the competitive effects of the merger and should not be viewed as a separate exercise.⁸⁸ The boundaries of the market do not determine the outcome of the analysis of the competitive effects of the merger, as it is recognised that there can be constraints on merging parties from outside the relevant market, segmentation within the relevant market, or other ways in which some constraints are more important than others. We will take these factors into account in its competitive assessment.
- 5.24 In this case, as in other digital markets, the relevant products are complex and have been—and will continue to be—subject to change and development over time. Demand for gaming products can vary considerably between gamers,

⁸⁷ [Section 35\(1\)\(b\)](#) of the Act.

⁸⁸ [Merger Assessment Guidelines \(CMA129\)](#), March 2021, paragraph 9.1.

and there are complexities in how customers make decisions. The choices available to customers depend on whether they already own a gaming device or if they are planning on buying one. In addition, different customer characteristics mean that some customers may consider a broader range of choices than others. For example, some gamers may prefer complex games that require considerable time and skill (and have historically been played on consoles or high-specification gaming PCs). Others may prefer simpler games that can be played casually for short periods of time on a range of devices including mobiles, whilst another group may prefer a mix of both. This choice also extends to the supply side, where some devices support games that require high-powered graphical processing units (eg consoles), while others do not. Where possible, we have accounted for these factors in the discussion of market definition which follows. However, we note that a single market definition may not always capture the true competitive interactions between different providers and, where this is the case, these are discussed in the competitive assessment.⁸⁹

5.25 The potential issues under analysis in this case relate in various ways to how competition between the Parties and their rivals will dynamically evolve over time, in particular in relation to MGS and cloud gaming services, and also in relation to the next generation of consoles. This chapter does not attempt to predict the direction in which these markets, and competition in these markets, will evolve in the future (our views on these issues are set out in the chapters that follow). In these circumstances, we will place more emphasis on the competitive assessment than on static market definition. In the assessment of the impact of the Merger on competition, we will consider evidence on concentration measures alongside evidence of closeness of competition. This involves assessing the strength of the current and likely future constraints between the products of the Parties and their rivals. Evidence on concentration and on closeness of competition can be interpreted and taken into account without the need for a precise definition of the relevant markets.⁹⁰

5.26 Accordingly, and in particular in relation to those areas involving evolving conditions of competition (including the emergence of MGS and cloud gaming services), our analysis does not seek to conclude on a bright-line definition of the relevant markets, but instead describes the competitive framework within which the Parties and their rivals operate.⁹¹

⁸⁹ CMA 129, paragraph 9.4.

⁹⁰ CMA 129, paragraph 9.3.

⁹¹ CMA 129, paragraphs 9.4-9.5.

- 5.27 In this case, we consider that gaming platforms are two-sided, with users on one side and content providers on the other. In defining the market, we have assessed each side of the market separately, focusing primarily on the user side of the market, where the potential competitive concerns in this Merger arise. We have considered both sides of the market in the competitive assessment, including the impact of direct and indirect network effects.⁹²
- 5.28 The starting point for our assessment is the relevant services provided by the Parties in:
- (a) the supply of gaming hardware, and the associated game distribution (where Microsoft is currently active);
 - (b) the supply of cloud gaming services (where Microsoft is currently active); and
 - (c) the supply of game publishing services (where both Microsoft and Activision are currently active).
- 5.29 We consider each of these in turn below.

The supply of gaming hardware (and associated gaming distribution)

- 5.30 In this section, we discuss the product and geographic market definition relating to services involved in the supply of gaming hardware. As explained in Chapter 4, the hardware that gamers typically use to consume gaming content includes PCs (including desktops, laptops and gaming-specific PCs), dedicated gaming consoles and mobile devices. As such, our analysis focuses on the supply of PCs, consoles and mobile devices.
- 5.31 Microsoft manufactures and sells dedicated gaming consoles under its Xbox brand. Microsoft also sells PCs (such as its Surface series of computers) and mobile devices (such the Microsoft Surface Duo), which can also be used to play video games.
- 5.32 Activision does not manufacture or sell any gaming hardware including PCs, consoles, or mobile devices.⁹³

⁹² CMA 129, paragraph 4.22.

⁹³ Parties, FMN.

Product market definition: supply of gaming hardware (and associated gaming distribution)

5.33 In this section we consider the product market definition relating to the supply of gaming hardware, ie PCs, consoles and mobile devices. We also consider the extent to which game distribution is integrated with this hardware (in particular, for gaming consoles), and therefore how this also fits with the product market definition.

Substitutability of mobile devices with consoles and PCs

5.34 First, we consider whether mobile devices should be included in the same product market as PCs and consoles.

- *Parties' views*

5.35 The Parties submitted that there are separate markets for the manufacture and supply of (i) PCs and consoles and (ii) mobile devices.⁹⁴ In particular, the Parties explained that mobile devices lack the technical capabilities to play most PC and console games, and only a small proportion of PC and console games are also available as native mobile apps.⁹⁵

- *Our assessment*

5.36 From a demand side substitutability perspective, the available evidence indicates that there is limited substitution of a mobile with consoles/PC for gaming. Third party reports indicate that gamers use mobile devices in a complementary manner to PC or console; for example, with one third-party report indicating that a majority of gamers ([x]%) play games on their mobiles and at least one other platform.⁹⁶

5.37 There are also differences in the price and user interface of mobiles as compared to PC and consoles. Mobiles tend to be less expensive than consoles or high-end PCs (though we recognise that mobile devices are available at a wide range of price points). Mobiles may be purchased for a number of different uses as opposed to consoles or gaming PCs. Additionally, users tend to interact with mobiles via a touch screen rather than a controller, mouse or keyboard.

⁹⁴ Parties, FMN.

⁹⁵ Microsoft estimates that only approximately [x]% of consoles games and [x]% of PC games were available on mobile devices in 2020. See Parties, FMN.

⁹⁶ Microsoft Internal Document.

5.38 From a supply side substitutability perspective, the evidence indicates that there are significant differences in the technical capabilities of a mobile versus PC/console.

(a) Third party views highlight differences in technical capabilities between mobile devices and other types of hardware. For example, one publisher [REDACTED] stated that some of its games are available across all platforms except mobile due to the level of porting and optimisation required.⁹⁷ Another publisher [REDACTED] stated that even if the technology to play console titles on mobile does become available, the mechanics required to play a game on console may not translate well to a mobile screen.⁹⁸ A competitor [REDACTED] noted that most third parties publish their content on both PCs and console. Mobile games are more removed from PC and console games.⁹⁹

(b) Microsoft's internal documents also discuss the technical differences between mobiles and consoles. One transcript of a call states that '[REDACTED]'.¹⁰⁰ Another document summarises internal research into mobile gamers. The document states that [REDACTED].¹⁰¹

5.39 More generally, we note that mobiles are considered separately to PCs and consoles in Microsoft's internal documents ([REDACTED]).¹⁰² The CMA has also seen third-party reports that also consider mobile gaming separately to PC and console gaming.¹⁰³

5.40 Testimony of Microsoft's executives in US court proceedings further substantiates that Xbox does not view mobile devices as their competitors. Speaking in relation to the competitors of Xbox for hardware sales, Microsoft's vice-president of business development for gaming, media, and entertainment in 2021 one of Microsoft's executives stated that Microsoft 'certainly don't view iPhone as a competing device'.¹⁰⁴

5.41 Based on the above evidence, we do not include mobile devices in the same product market as consoles.

⁹⁷ [REDACTED] call note.

⁹⁸ [REDACTED] call note.

⁹⁹ [REDACTED] call note.

¹⁰⁰ Microsoft Internal Document.

¹⁰¹ Microsoft Internal Document.

¹⁰² Microsoft Internal Document; Microsoft Internal Document; and Microsoft Internal Document.

¹⁰³ Microsoft Internal Document; and Microsoft Internal Document.

¹⁰⁴ Testimony of [REDACTED], 'Epic Games, Inc., v. Apple, Inc.', 5 May 2021.

Substitutability of PCs with consoles

5.42 Next, we consider whether PCs and consoles should be included in the same product market.

- *Parties' views*

5.43 In relation to the substitutability between PCs and consoles, the Parties submitted that PCs and consoles should be considered part of the same market because (i) PC graphics technology has caught up; (ii) the gap in prices has narrowed substantially; (iii) performance and characteristics of consoles and PCs have converged.¹⁰⁵

- *Our assessment*

5.44 From a demand side substitutability perspective, third party evidence suggests a slightly higher degree of multi-homing of gamers between consoles and PC than between different consoles, indicating that PCs are considered less substitutable with a console by gamers. For example, external research from Game Track in Q4 2021 submitted by a third party [REDACTED] showed that a greater percentage of users of one console played on a PC [REDACTED] as opposed to playing on another console ([REDACTED] and [REDACTED] on each other console).¹⁰⁶ However, we note that many games are available on both PCs and consoles, and gamers can play the same game across these devices.

5.45 In terms of price differences, the same third party submitted that gaming PCs are more expensive than PlayStation/Xbox, typically costing \$800-1,200+ as opposed to \$400-500 for consoles at first release.¹⁰⁷ This means that in response to a general increase in the price of consoles, a substantial price difference would persist between gaming PCs and consoles (given they currently costing at least twice as much). We consider this likely to limit the extent of substitution between them.

5.46 From a supply-side substitutability perspective, third party evidence indicates that PCs are still considerably different to consoles in terms of their technical specifications. One third party console supplier [REDACTED] submitted that PCs are general purpose computing devices that are not specifically dedicated to video gaming. The third party stated that while consoles are designed to be used out of the box and require minimal technical knowledge, many gaming

¹⁰⁵ Parties, FMN.

¹⁰⁶ [REDACTED] response to the CMA RFI.

¹⁰⁷ [REDACTED] response to the CMA RFI.

PC users build or customise their device with components from a variety of manufacturers.

- 5.47 Evidence from Microsoft's internal documents also indicates that there are some technical challenges to porting a PC game to console. For example, [REDACTED]. The document goes on to explain that [REDACTED].¹⁰⁸ Another draft internal document [REDACTED].¹⁰⁹
- 5.48 Finally, evidence indicates that the competitive landscape is different on PCs and consoles, though this may evolve in the future.
- (a) Third parties noted the differences in the gaming ecosystems and demand of PCs and consoles. One third party publisher [REDACTED] told the CMA that certain device categories (ie PC, console, and mobile) are better suited to certain types of games.¹¹⁰ Another third party [REDACTED] considered that the PC gaming ecosystem has always been open and generally not as commonly driven by exclusive titles as consoles; which suggests the competitive landscape in game publishing is different for consoles and PC.¹¹¹ Additionally, another third party [REDACTED] stated that, unlike consoles, which are updated uniformly and generationally, users of gaming PCs generally determine for themselves when and how upgrades are required.¹¹²
- (b) As in the case of mobiles above, internal documents and third-party reports submitted by the Parties also consider PC and console gaming separately in their discussion of competitive landscapes.¹¹³ However, some third-party reports discuss the increasing similarity between PCs and the latest generation of consoles; for example, one report noted that console manufacturers are moving away from the more static 8-10 year console cycle, and instead adopting behaviour more akin to that of PC, where owners upgrade to a new machine every 3-4 years.¹¹⁴ On the other hand, another third party report notes differences, arguing that '[REDACTED]'.¹¹⁵
- 5.49 Given the supply-side and demand-side evidence, together with the mixed evidence on the evolving competitive landscape between consoles and PCs, for the purposes of the competitive assessment, we do not include PCs in the

¹⁰⁸ Microsoft Internal Document.

¹⁰⁹ Microsoft Internal Document.

¹¹⁰ [REDACTED] call note.

¹¹¹ [REDACTED] call note.

¹¹² [REDACTED] response to the CMA RFI.

¹¹³ Microsoft Internal Document; Microsoft Internal Document; Microsoft Internal Document; Microsoft Internal Document; Microsoft Internal Document.

¹¹⁴ Microsoft Internal Document.

¹¹⁵ Microsoft Internal Document.

product market with consoles; nevertheless, we consider any constraint from PC in the competitive assessment.

Substitutability of different console types

- 5.50 Finally, we have considered whether the product market should be further segmented by console type. The Parties submitted that static consoles and handheld consoles should be considered part of the same market because there is no longer a marked distinction between these different types of consoles; and handheld consoles also support technologically advanced games (eg Nintendo Switch, Valve's Steam Deck).¹¹⁶
- 5.51 We consider evidence on the similarity between the Xbox and PlayStation (static consoles) and Nintendo Switch (which is both a static and handheld console) in the following chapters. The evidence broadly shows that Xbox, PlayStation and Nintendo all compete in the console market—from a demand-side perspective, they are all used almost exclusively for gaming and enable publishers to offer a variety of games on their hardware. From a supply side, they offer consoles with broadly similar technical specifications and prices that are comparable (particularly Xbox and PlayStation, and to a lesser extent, Nintendo).¹¹⁷ As such, we do not consider it appropriate to further segment by console type.
- 5.52 However, whilst we recognise that all gaming consoles exert some competitive constraint on each other, we also consider any differences between consoles that may make them less substitutable with each other. This is particularly true for Nintendo consoles—the latest Switch consoles are handheld with lower technical specifications (eg in terms of RAM, GPU, memory) and offer content that is more family/child friendly. This is discussed further in the competitive assessment.

Provisional conclusion on product market definition for gaming hardware

- 5.53 Based on this evidence, we provisionally consider that there are significant differences between PCs, consoles, and mobile devices as gaming hardware, and that it is appropriate to distinguish between each of them for our analysis of the Merger. We do not consider it appropriate to further segment the console market by console type, but we assess the different closeness of

¹¹⁶ Parties, FMN.

¹¹⁷ In relation to the recently released Steam Deck – a portable PC - we note that it allows gamers to play PC games natively (or via a cloud platform, including console games) on a handheld device. While we note that the Steam Deck is more similar to the Nintendo Switch than static-consoles such as Xbox or PlayStation in its technical specifications, we do not assess this further given it is a portable PC and has a relatively insignificant share of the gaming hardware market.

competition between rivals within the competitive assessment. We cannot rule out that over the longer-term PCs and consoles may become increasingly substitutable, and the distinctions between different hardware types may become less relevant in a world where cloud gaming has become more important. We consider any dynamic elements of competition as they are relevant in our competitive assessment.

Other considerations in the supply of gaming consoles

5.54 In addition to our assessment above that consoles, PC and mobile devices are in separate product markets, we set out below two additional considerations regarding the gaming console market relevant to our competitive assessment.

Console hardware and distribution

5.55 Digital storefronts are integrated with the console hardware and are the primary means by which gamers purchase B2P games and subscription services for that specific console. It is not possible to buy or access console games in digital form other than from the digital storefront associated with the specific console. For example, for Xbox, digital games are purchased via the Xbox Store; Xbox's MGS, Game Pass, is also available through the Xbox Store (and likewise for PlayStation and the PlayStation Store, and Nintendo and the Nintendo Store). While some games (albeit a small and declining proportion) are also still purchased in physical form, which can be via an intermediary as well as direct from the console manufacturer, physical console games are also tied to a particular console.¹¹⁸ As such, we consider that competition happens at a platform level from both a supply and demand-side (ie the console and associated console game distribution combined). We therefore provisionally consider it appropriate to treat console hardware and associated game distribution as part of the same product market, and consider these collectively in the assessment. This includes MGS services as well as B2P console games for the reasons discussed further below.

5.56 For PCs, on the other hand, we note that the storefronts are distinct to hardware, with different firms and competitive dynamics and with no tied/bundled relationship between the hardware and storefronts. For example, there are various storefronts available for purchasing PC games which are not

¹¹⁸ For example, you would need to purchase an Xbox version of a game to play that game on an Xbox console. Further, many purchases of physical games are made at the time as the console and are sold as part of a bundle.

inherently tied to the particular manufacturer's hardware and offer games for multiple operating systems.

- 5.57 For the reasons set out above, we do not consider game distribution for either mobile or PC in our competitive assessment and do not assess these further.

Segmentation between MGS and B2P services

- 5.58 In this section, we discuss evidence related to the product market for MGS services, and whether we should assess it separately to other B2P console games.

- *Parties' views*

- 5.59 Microsoft submitted that MGS services were a means of payment – not a market. It further submitted that the gaming content that is available on MGS services was also available to purchase on a standalone B2P basis and there is no additional or new content offered via MGS. Microsoft submitted that this evidence was consistent with gamers perceiving subscription and B2P purely as alternative payment methods to access the same content.¹¹⁹

- 5.60 Microsoft also submitted that Xbox telemetry data shows that gamers frequently switch between the two payment options. In particular, Microsoft submitted that based on this data:

- (a) Between [X] % and [X] % of Xbox gamers continue playing games purchased on a B2P basis in the 12 months after unsubscribing from Game Pass. Between [X] % and [X] % of gamers purchase a game on a B2P basis within a year after unsubscribing from Game Pass.¹²⁰
- (b) Gamers that subscribe to Game Pass “mix and match” across games irrespective of how they paid for them. Microsoft submitted figures on the gamers who spent at least [X] % of their total game-time on Halo Infinite in the month following release. According to Microsoft, these figures show that while these gamers' total game-time increases as a result of their engagement with the new Halo release, both B2P game-time on other games and Game Pass game-time fall. Microsoft submitted similar figures for CoD: Modern Warfare. According to Microsoft, these figures show that gamers who play that game increase their overall game-time, however their Game Pass and B2P game-time on other games declines.¹²¹

¹¹⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.8 (a).

¹²⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.18.

¹²¹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.19.

(c) [REDACTED]% of Game Pass customers who had been subscribed to Game Pass for six months or more had bought games on a B2P basis during that period.¹²²

5.61 Microsoft also submitted that its internal analysis shows a [REDACTED]% decline in base game sales twelve months following their addition on Game Pass.¹²³

- *Our assessment*

5.62 We consider that Microsoft's telemetry data and internal analysis presented above have some limitations. The time period over which Microsoft appears to infer that a B2P purchase constitutes substitution is quite long (up to one year). Moreover, the observation that Game Pass customers continue to purchase B2P games during the period is more consistent with complementarity than substitutability. Given B2P purchases continue even during the subscription period, it is unclear from Microsoft's submission whether and to what extent the proportion of consumers that make B2P purchases within a year of closing their subscription is different from the proportion of consumers making B2P purchases that never had a subscription in the first place.

5.63 However, notwithstanding these limitations, the telemetry data suggests that, overall and at least at a point in time while MGS is expanding, there is some substitution from B2P to MGS services. It also suggests that there is possibly some diversion from MGS to B2P services, but the data is more unclear in that respect as the magnitude of any substitution effect is lower and more difficult to detect by just looking at the data.

5.64 Microsoft internal documents recognise that adding titles to Game Pass would lead to cannibalisation of B2P sales, [REDACTED]:

(a) One internal email exchange stated that '[REDACTED]'.¹²⁴

(b) One internal document stated that '[REDACTED]'.¹²⁵

(c) One internal document states that '[REDACTED]'.¹²⁶

5.65 We asked third parties (competitors and publishers) to provide their views on the level of substitutability between B2P and MGS services within gaming. Some responses were fairly generic (eg explaining that games are available

¹²² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.20.

¹²³ Microsoft response to the phase 1 Issues Letter.

¹²⁴ Microsoft Internal Document.

¹²⁵ Microsoft Internal Document.

¹²⁶ Microsoft Internal Document.

on both MGS and B2P), and were not informative on the relevant question. However, the other responses in the round suggest that MGS services place some constraint on B2P services and vice-versa.¹²⁷

- *Provisional conclusion on segmentation by MGS and B2P*

- 5.66 In the long-term, as the market matures, we consider that diversion may be stronger between competing MGS services than between MGS and B2P services.
- 5.67 This might be, for instance, because MGS and B2P have different characteristics. Under an MGS service, gamers can access a bundle of games during a period of time for a fixed fee. The drivers of demand in that context are the price of the bundle, the range of content, and the quality of individual titles. By contrast, when accessing games through digital storefronts, gamers typically pay a higher up-front price for a single game. Although stores can monetise games using a range of methods (eg in-app purchases), gamers typically have unlimited access to the game after the purchase. The drivers of demand in that context are the price and quality of the individual game.
- 5.68 However, we have seen no evidence that consumers choose between different MGS in isolation or the rate of switching between different MGS. Rather, we see that Xbox and SIE market their MGS as part of their overall console package, and these are therefore competitive parameters of their offering.¹²⁸
- 5.69 Therefore, we provisionally conclude that console B2P and MGS are within the same product market, but recognise there is some differentiation between the two (which we discuss in more detail in the competitive assessment, as relevant).
- 5.70 We refer to this product market as ‘gaming consoles’ which, for the reasons explained, incorporates the console hardware and integrated digital storefront, including for both B2P games and MGS.

¹²⁷ [redacted] response to CMA RFI; [redacted] response to CMA RFI; [redacted] response to CMA RFI; [redacted] response to CMA RFI; [redacted] response to the CMA’s section 109 notice (**s109 notice**).

¹²⁸ See for instance Microsoft’s webpage advertising/explaining its consoles where it describes the speed and performance of the Xbox Series X/S, the expanding game library, Xbox Game Pass, and Smart delivery. See <https://www.xbox.com/en-US/consoles>.

Geographic market definition: supply of console gaming services

Parties' views

- 5.71 The Parties submitted that their products and services are available on a global basis, including in the UK. In relation to PCs and consoles, the Parties submitted that the geographic market is at least wider than the UK (including the EEA) if not worldwide, as consoles supplied across the UK/EEA are technically equivalent and there are no impediments to cross-border sales of PCs/consoles within the UK and EEA.¹²⁹

Our assessment

- 5.72 We note that Microsoft and its console gaming service rivals (ie SIE and Nintendo) are active across a broader geographic region than the UK and are often active globally.
- 5.73 However, various third-party internal documents discuss the competitive landscape in consoles at a regional/national level. For example, a third party's [REDACTED] internal document considers pricing, the available game library, awareness and interest of gamers and supply of consoles by country, for this third party's main sales countries.¹³⁰ The document also analyses and indicates differences in the breakdown of new console adoption rates by different customer segments at a national level.¹³¹ Another document of the same third party [REDACTED] analyses platform preference and brand momentum at a country level.¹³² Various other third party documents also survey users by region and discuss findings and competition by country.¹³³
- 5.74 We found additional evidence suggesting that the above markets may have a national dimension:
- (a) The market shares provided by the Parties show material differences between the UK and global shares, suggesting differences in the competitive landscape by geography. In particular, the Merged Entity generally has higher shares of supply in the UK as compared to worldwide. For example, in 2021, the Parties estimate Microsoft's share of

¹²⁹ Parties, FMN.

¹³⁰ [REDACTED] Internal Document.

¹³¹ [REDACTED] Internal Document.

¹³² [REDACTED] Internal Document.

¹³³ See for example, [REDACTED] Internal Document; and [REDACTED] Internal Document.

supply of console hardware by sales volume to be [10-20]% globally but [20-30]% in the UK.¹³⁴

(b) In addition, the CMA has seen some evidence of differential availability of services in local markets, including of Microsoft's Game Pass offering.¹³⁵

(c) Further, in relation to Xbox Live Gold, for example, Microsoft's website explains that '[t]o ensure that pricing for the Xbox Live Gold subscription service reflects the local market economies, Xbox Live Gold subscription cards are only redeemable in the country purchased and cannot be redeemed in any other country'.¹³⁶

5.75 As such, while recognising that there are multi-national aspects to competition in this market, there is also evidence of regional and national variations in supply and demand. We therefore provisionally consider it is appropriate to assess the impact of the Merger in gaming consoles in the UK, but taking into account the multi-national context and evidence as relevant and appropriate in the competitive assessment. We consider much of the evidence available which is not limited to the UK is highly relevant to our assessment, and we also do not consider our competitive assessment or provisional conclusions would materially change if we were to consider a wider geographic frame of reference (ie regional or global). For example, foreclosure strategies may be implemented on a multi-national or global level, and we take this into consideration where appropriate.

The supply of cloud gaming services

Product market definition: supply of cloud gaming services

Parties' views

5.76 Microsoft submitted that cloud gaming is a means of accessing games, not a separate market. It described cloud gaming as a feature that provides an alternative way for gamers to access content that is not tied to a specific device and should not be considered separately from other ways of accessing and playing games, at least on console and PC.¹³⁷

5.77 It stated that cloud gaming was [redacted]. In support of this it stated that the [redacted]% of xCloud use in 2022 was on console, and that telemetry data indicates that

¹³⁴ Parties, FMN.

¹³⁵ For example, see '[Xbox Supported Countries/Regions](#)', accessed by the CMA on 30 August 2022.

¹³⁶ '[Making sure your Xbox digital subscription is valid for your country | Xbox Support](#)', accessed by the CMA on 4 August 2022

¹³⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.7.

[REDACTED]% of XPGU usage (in terms of active users) was on xCloud in September 2022.¹³⁸

- 5.78 Microsoft further stated that gamers choose a gaming experience based on whether it provides enjoyment at an attractive price point and are not motivated by the location of the content or the means of delivery. Cloud gaming services therefore need to compete effectively with downloadable game options if they are to grow.¹³⁹
- 5.79 Microsoft also stated that, whilst it agrees that in the long-term cloud gaming may make hardware distinctions less important, it remains unproven as a customer proposition and the available evidence did not indicate in any manner that this is likely to change anytime soon.¹⁴⁰ We discuss the future of cloud gaming separately in Chapter 8.
- 5.80 The Parties however acknowledged that cloud gaming services could be attractive to a different pool of customers that does not have access to the current hardware required for playing more complicated games and will lower the barriers for certain gamers to access titles.¹⁴¹

Our assessment

- 5.81 On the demand side, cloud gaming allows consumers to play high performance games that were previously only available on consoles or high-end PCs, on a range of lower-powered devices including mobiles, smart TVs, and low-end PCs.¹⁴² This means consumers do not need to pay the substantial upfront cost associated with consoles and high-end PCs, therefore making cloud gaming attractive to a new pool of consumers. An internal document from one competitor [REDACTED] describes how cloud gaming will grow the total addressable number of gamers playing console-quality games.¹⁴³ Another competitor [REDACTED] similarly described how cloud gaming could make interactive 3D gaming more accessible to billions of gamers.¹⁴⁴
- 5.82 An internal document from Microsoft [REDACTED].¹⁴⁵ The responses show that consumers were most [REDACTED]. In our view this indicates that consumers consider different factors important for cloud gaming as compared to consoles or PCs.

¹³⁸ Microsoft response to working papers.

¹³⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.8.

¹⁴⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.9.

¹⁴¹ Submission made during the Phase 1 Issues Meeting.

¹⁴² Cloud gaming can also be used for lower performance games, but as described below, this is not the focus of our competitive assessment.

¹⁴³ [REDACTED] Internal Document,

¹⁴⁴ [REDACTED] response to the CMA's RFI.

¹⁴⁵ Microsoft internal document.

In contrast to the Parties' submission that cloud is primarily used as a way to circumvent downloading games, only [REDACTED].¹⁴⁶

- 5.83 Whilst Microsoft submitted that most xCloud usage is currently on console, in our view this may be influenced by Microsoft tying its own cloud gaming offering to Game Pass Ultimate and using its existing consumer base to grow its cloud gaming service. We expect this to change in the future, and the pattern of use across devices is already different for other competitors. Evidence from one competitor [REDACTED] shows that around [REDACTED].¹⁴⁷ Furthermore, this competitor stated that the vast majority of its users were not using high-end PCs and were new to gaming.¹⁴⁸
- 5.84 On the supply side, cloud gaming services are very different from console gaming. To offer cloud gaming services, a provider needs access to cloud infrastructure that is capable of running high performance games and offering a low-latency gaming experience. Console gaming, by contrast, requires the manufacture, distribution, and ongoing support of physical devices.
- 5.85 Certain internal documents from Microsoft show that [REDACTED].¹⁴⁹ These documents are discussed in more detail in Chapter 8. Microsoft gaming's CEO also publicly stated in 2020 that it sees Amazon and Google as its main competitors in gaming going forward, rather than the traditional gaming companies SIE and Nintendo which are not well positioned for cloud gaming.¹⁵⁰ In our view, this suggests that Microsoft considers cloud gaming as distinct to console gaming (and that it expects cloud gaming to be more important, which is covered in more detail in the 'future development of cloud gaming' section).
- 5.86 Similarly, internal documents from another competitor [REDACTED], discuss cloud gaming separately from console.¹⁵¹
- 5.87 As the market is still developing, and our assessment is forward looking, we do not have real world evidence of consumer diversion in response to a change in price or quality. However, in our view, the above evidence suggests customers are likely to have specific reasons for choosing to cloud game (including not being tied to a particular piece of hardware), Microsoft and other cloud gaming service providers monitor cloud gaming competitors separately

¹⁴⁶ Microsoft internal document.

¹⁴⁷ [REDACTED] Internal Document.

¹⁴⁸ [REDACTED] call note.

¹⁴⁹ For example, see Microsoft internal document; Microsoft internal document; Microsoft internal document; Microsoft internal document; and Microsoft internal document.

¹⁵⁰ 'Games Industry.biz - "We see Amazon and Google as the main competitors"', accessed by the CMA on 30 January 2023.

¹⁵¹ [REDACTED] internal document; and [REDACTED] internal document.

from console competitors, and on the supply side the required inputs to compete are very different. Therefore, while we expect at least some constraint from console and PC, we provisionally find that cloud gaming services should be considered as a distinct market to console and PC.

Other considerations in the supply of cloud gaming services

- 5.88 As described above, we provisionally have found that, when it comes to gaming hardware, mobile devices are in a different market to consoles, partly because of technical differences and the comparative limitations of mobile devices. Similarly, we do not think that firms that are solely focused on bringing mobile-quality games to cloud are a meaningful constraint on cloud gaming services that provide console-quality and/or gaming PC-quality games (high-performance games). Throughout this report, where we refer to high-performance games, we mean games that would not typically run natively on mobile. From the evidence we have reviewed in Chapter 8, we consider that these games are the focus of competition within cloud gaming services, and are therefore the focus of our competitive assessment.
- 5.89 As the market is still developing, cloud gaming service providers are testing a range of different business models to monetise their service. Different services monetise their gaming content in different ways, including (i) the traditional B2P model, whereby users must purchase a game through the cloud provider's storefront in order to play it (eg, Google Stadia),¹⁵² (ii) BYOG model, whereby users pay a regular subscription fee for access to cloud gaming servers and can play games bought in third-party storefronts (eg, NVIDIA GFN), (iii) free-to-play offerings paid through advertising revenue and in-game purchases, and (iv) MGS services, whereby users pay a subscription fee for access to gaming servers and a catalogue of games through the cloud provider's storefront (eg, Amazon Luna and Xbox Game Pass Ultimate). As with consoles, we provisionally consider it appropriate to treat cloud gaming services and their associated game distribution as part of the same product market, and consider these collectively in the competitive assessment.
- 5.90 The evidence we have reviewed shows that these business models are not fixed, and that cloud gaming service providers are open to exploring different ways of monetising their services, and a single participant may have more than one way of monetising content. For example, Amazon has implemented

¹⁵² This service was shut down in January 2023.

a B2P and BYOG option in Luna for Ubisoft games, [REDACTED].¹⁵³ An internal document from Microsoft [REDACTED].¹⁵⁴

- 5.91 As noted above, given the market is still developing, we also do not have real world evidence of consumer diversion between different options. However, we expect the evidence on diversion and segmentation between B2P and MGS on console presented above to apply to cloud gaming too, with the additional option of BYOG—which in practice is similar to B2P for the customer, although with the flexibility to use the game across compatible platforms—not changing that assessment.
- 5.92 We therefore provisionally consider it appropriate to assess the impact of the Merger within a product market including B2P, BYOG and MGS cloud gaming. We have however taken the differences between these business models into account in our competitive assessment, including our assessment of the relevant counterfactual, which is discussed further in Chapter 8.

Geographic market definition: supply of cloud gaming services

Parties' views

- 5.93 The Parties submitted the market for cloud gaming services is worldwide.¹⁵⁵

Our assessment

- 5.94 Customers can only use cloud gaming services that are available in the country in which they are located, as providers can typically restrict usage based on IP address. There are currently substantial differences in the availability of services across countries, for example:
- (a) Amazon Luna is currently only available in the US.¹⁵⁶
 - (b) NVIDIA GFN is available only in selected countries, excluding for example China and India.¹⁵⁷
 - (c) xCloud is only available in selected countries, excluding for example China, India, and Indonesia.¹⁵⁸

¹⁵³ 'Amazon Luna Ubisoft Store', accessed by the CMA 17 January 2022; and [REDACTED] call note.

¹⁵⁴ Microsoft Internal Document.

¹⁵⁵ Parties, FMN.

¹⁵⁶ 'Amazon Luna - FAQs' accessed by the CMA 26 January 2023.

¹⁵⁷ 'NVIDIA GeForce Now supported locations', accessed by the CMA 26 January 2023.

¹⁵⁸ 'Game Pass supported countries/regions', accessed by the CMA 26 January 2023.

- 5.95 Whilst we might expect these differences in availability to reduce over time as services are expanded to more countries, providers may still price differentiate based on customer location, since customers are unable to easily switch to cloud gaming services operating in other countries if the price of the UK service increases.
- 5.96 In addition, on the supply side, to provide a low latency gaming experience a cloud gaming service provider must have servers located in a data centre close to the consumer.¹⁵⁹ This creates a barrier to expanding to new geographies as a provider must first invest in or gain access to national or regional data centres.
- 5.97 Providers, however, are multi-national. The content available on different services is generally the same across countries, and the cloud infrastructure technology used is also generally the same, subject to being rolled out to regional data centres.
- 5.98 As such, while recognising that there are multi-national features to this market, there is also evidence of regional and national variations in supply and demand. We therefore provisionally consider it is appropriate to assess the impact of the Merger in the market for cloud gaming services in the UK, but taking account of the multi-national aspects of competition where relevant. We consider much of the evidence available which is not limited to the UK is highly relevant to our assessment, and we also do not consider our competitive assessment or provisional conclusions would materially change if we were to consider a wider geographic frame of reference (ie regional or global). For example, foreclosure strategies may be implemented on a multi-national or global level, and we take this into consideration where appropriate.

The supply of game publishing services

- 5.99 Game development refers to the creation of a game (including the design, art, programming and testing), using software development tools (including software development kits (**SDKs**) and ‘game engines’). Game publishing refers to subsequently making available a game to the public, for sale or free of charge. For the purposes of these Provisional Findings, and in line with the Parties’ submissions, we have considered development and publishing activities jointly (under the single term, publishing).¹⁶⁰

¹⁵⁹ For example, providers are likely to require servers in a UK or Western European data centre to provide cloud gaming in the UK.

¹⁶⁰ Parties, FMN.

5.100 The Parties are both active in the publishing of games for PCs, consoles, and mobile devices.¹⁶¹

Product market definition: supply of game publishing services

5.101 In this section, we consider the product market definition for game publishing services. There is a wide variety in the types of games that are published, with significant differences between them, including based on the device on which they are published and their content/target audiences. In this section, we therefore assess whether game publishing should be segmented into further markets by device types (ie PC, consoles and mobile) and/or by game genre.

Product market definition by device type

5.102 First, we consider whether games published on mobiles, PCs and consoles should be included in the same product market as each other.

- *Parties' views*

5.103 The Parties submitted that the CMA should consider an overall market for game publishing.

5.104 The Parties submitted that there are differences between PC/console games and native mobile games.¹⁶² They explained that technical differences between mobile and PCs/consoles lead to the development of different gaming content in each. The Parties explained that PC/console games tend to be more complex and narrative-driven than native mobile games and, therefore, cater to different audiences.¹⁶³

5.105 The Parties also submitted that the distinction between PC and console games has blurred as game publishers are increasingly launching games for both PCs and consoles. The Parties explained that this trend has been reinforced by the launch of next generation consoles that are becoming similar to PCs, and by the emergence of cross-play and **cross-progression** (ie the ability to save game progress on one device and access it on another device) which enables gamers to play across devices.¹⁶⁴

¹⁶¹ Parties, FMN.

¹⁶² Parties, FMN.

¹⁶³ Parties, FMN.

¹⁶⁴ Parties, FMN.

- *Our assessment*

5.106 We have assessed whether game publishing should be segmented by the type of device on which the game is published.

5.107 **Mobile vs PC/consoles:** Third party evidence supports the view that there are material differences between publishing games on mobile devices relative to PCs/consoles, due to their technical differentiation, differentiated monetisation models and type of games:

- (a) One third party [redacted] stated that mobile devices have physical limitations in terms of power, battery life, screen size, etc. As such, mobile games are generally lower quality, simple in design and concept, and frequently played to kill time, eg while commuting. The third party explained that mobile games tend to be free-to-play, with revenues driven almost exclusively by in-app purchases.¹⁶⁵ The competitor [redacted] noted that most third parties put their content on PCs and consoles, but that mobile content is further removed from PC and console content.¹⁶⁶
- (b) A publisher [redacted] stated that some of its games are available across all platforms except mobile due to the level of porting and optimisation required.¹⁶⁷
- (c) Another publisher [redacted] stated that even if the technology to play console titles on mobile does become available, the mechanics required to play a game on console may not translate well to a mobile screen.¹⁶⁸

5.108 The Parties' internal documents also support the view that there is relatively low substitutability from the publishers' side between mobile and PCs/consoles. For example, one Microsoft document notes that [redacted].¹⁶⁹ An Activision strategy document noted that publishing companies are [redacted] between PC/console and mobile.¹⁷⁰ Another Activision document noted that games such as [redacted] and [redacted] either chose not to pursue a cross-platform game that include mobiles due to [redacted] and for [redacted]; or chose to [redacted].¹⁷¹

5.109 From a demand side perspective, evidence from the Parties' internal documents indicated that the target audiences for mobile are different to consoles and PC games. One Activision internal document highlighted that by

¹⁶⁵ [redacted] response to the CMA's RFI.

¹⁶⁶ [redacted] call note.

¹⁶⁷ [redacted] call note.

¹⁶⁸ [redacted] call note.

¹⁶⁹ Microsoft Internal Document.

¹⁷⁰ Activision Internal Document.

¹⁷¹ Activision Internal Document.

[REDACTED], Activision has been able [REDACTED].¹⁷² Another Activision internal document notes that only approximately [REDACTED]% of [REDACTED], and points to the differences in [REDACTED] as an area for investigation.¹⁷³ One Microsoft internal document looks at [REDACTED].¹⁷⁴ An Activision document looks at [REDACTED], finding that they differ in areas such as the length of playtime and preferred type of gameplay.¹⁷⁵

5.110 **PCs vs consoles:** Third party views similarly also indicated that there are hardware and software differences between PCs and consoles which limits their ability to publish games on both PC and consoles without additional cost and effort:

- (a) A number of third parties told the CMA that they require SDKs from console original equipment manufacturers to publish games on console, which is not required for publishing PC games.¹⁷⁶
- (b) One third party explained that one console has hardware limitations that other consoles and PCs do not, which can present difficulties in publishing PC games on that console.¹⁷⁷

5.111 We note that many games, including the Parties', are often published on only one form of hardware (for example, Activision's World of Warcraft games are only playable online on PCs, and have not been released on the latest generation consoles).¹⁷⁸

5.112 As discussed above, internal documents and third-party reports submitted by the Parties also consider mobile, PC and console gaming separately in their discussion of competitive landscapes in publishing.¹⁷⁹ However, some third-party reports discuss the increasing similarity between PCs and the latest generation of consoles; for example, one report noted that trends in cross-play and cross progression will eventually lead to consolidation as consumers '[REDACTED]'.¹⁸⁰ We note that this overlaps with the developments in cloud, ie over time gaming could become more device agnostic (at least for devices capable of running high-performance games), such that over the longer term we can expect these high-performance games for PC and console to increasingly overlap.

¹⁷² Activision Internal Document.

¹⁷³ Activision Internal Document.

¹⁷⁴ Microsoft Internal Document.

¹⁷⁵ Activision Internal Document.

¹⁷⁶ [REDACTED] call note; and [REDACTED] response to the CMA questionnaire.

¹⁷⁷ [REDACTED] call note.

¹⁷⁸ Parties, FMN.

¹⁷⁹ Microsoft Internal Document; Microsoft Internal Document; Microsoft Internal Document; Microsoft Internal Document; and Microsoft Internal Document.

¹⁸⁰ Microsoft Internal Document.

5.113 Finally, we note that (i) Microsoft's stated rationale for the Merger is in part to improve its presence and expertise in mobile gaming; and (ii) the Parties' shares of supply vary between publishing games for each of PCs, consoles, and mobile devices, with the competitor sets varying between category of gaming hardware too.¹⁸¹ We consider this further supports a conclusion of different markets by device type.

- *Provisional conclusion on segmentation by device type*

5.114 Based on the above, we provisionally consider that there are differences between games published on PC, console and mobile, and that it is appropriate to treat them as separate game publishing markets for our analysis of the Merger. We also note that over the longer term there is evidence that PC and console games may become increasingly substitutable, especially with the increased relevance of cloud gaming. We will consider any constraint from PC games or console games where relevant in the competitive assessment.

Product market definition by genre

5.115 In this section, we assess whether it is appropriate to consider separate markets by genre within game publishing.

- *Parties' views*

5.116 In relation to segmenting the market by game genre, the Parties submitted that, whilst games are sometimes categorised by reference to their genre (eg role-playing games, shooters, puzzle games, etc), there is no need to further segment on that basis as many games combine aspects of multiple genres, and gamers generally just play whatever game they like best, irrespective of what genre that game may be.¹⁸²

5.117 Microsoft further submitted that Xbox telemetry data shows that gamers play multiple genres: [X] % of gamers play three or more genres and [X] % of gametime on Xbox was accounted for by gamers playing at least three different genres.¹⁸³ Microsoft also submitted that evidence from actual gamer behaviour on Xbox also shows that gamers switch between genres in response to new releases.¹⁸⁴

¹⁸¹ Parties, FMN.

¹⁸² Parties, FMN.

¹⁸³ Microsoft, response to working papers.

¹⁸⁴ Microsoft, response to working papers.

- *Our assessment*

- 5.118 Games are generally classified, discussed and listed for sale in digital storefronts by reference to their ‘genre’, which can include action, adventure, role-playing games, shooter, sport, strategy, etc. Some of these genres can be further segmented into sub-genres—for example, shooter games can be further classified into first-person shooters, third-person shooters, etc. We also note that some games can belong to multiple genres.
- 5.119 As context, we note that two of Activision’s main games on console, CoD and Overwatch, belong to the shooter genre. The shooter genre constitutes a significant share of the publishing market, particularly on consoles. Evidence from the Parties shows that shooters account for [redacted] of publishing revenues across all platforms.¹⁸⁵ Evidence submitted by third parties also indicates that shooter is an important game category on consoles. For example, data from [redacted] indicates that shooters constituted [redacted]% of PlayStation’s revenue and 40% of PlayStation’s playtime globally.¹⁸⁶ [redacted] also submitted that in 2021, ‘first person shooter’ games represented [redacted]% of gameplay hours amongst PlayStation’s top 100 titles.¹⁸⁷
- 5.120 The Parties’ internal documents indicate that the Parties categorise, distinguish, and compare games from different publishers according to genre. For example, a third-party report submitted by Microsoft analyses trends and market shares in the game publishing market by genres, within different geographies.¹⁸⁸ The Parties also advertise games by genre in their digital storefronts.¹⁸⁹
- 5.121 Some third parties explained that certain game genres (such as shooter games) compete more closely with each other than with games from different genres.¹⁹⁰ Specifically in relation to the shooter genre and CoD, [redacted] publishers that responded with CoD’s closest competitors listed other shooter games such as EA’s Battlefield.¹⁹¹ Publishers also listed: Halo, Overwatch, Apex Legends, Rainbow 6 Siege, Far Cry, Destiny, PUBG and Hell Let Loose.

¹⁸⁵ Parties Internal Document.

¹⁸⁶ [redacted] Internal Document.

¹⁸⁷ [redacted] submission to the CMA.

¹⁸⁸ Microsoft Internal Document.

¹⁸⁹ See ‘[Xbox Games Catalog](#)’, accessed by the CMA on 24 August 2022; and ‘[Battle.net](#)’, accessed by the CMA on 10 January 2022.

¹⁹⁰ For example, see [redacted], submission to the CMA; and [redacted] call note.

¹⁹¹ [redacted] response to the CMA’s RFI; and [redacted] response to the CMA’s RFI.

5.122 In relation to the shooter genre, various Activision internal documents list and track [REDACTED] as competitive constraints to CoD (and Overwatch), including comparing [REDACTED].¹⁹² The main competitors tracked include [REDACTED].

(a) In particular, multiple documents track [REDACTED] as a close competitor to CoD.¹⁹³ For example, one Activision email chain refers to a competitor analysis produced by Activision's EMEA insights team: it compares the performance of '[REDACTED]' to the one of 'Call of Duty Vanguard' in the first week after its launch since CoD is a 'competitor'.¹⁹⁴

(b) Various Activision documents also track [REDACTED] closely as a competitor to CoD,¹⁹⁵ including comparing the effect on engagement on CoD during a [REDACTED].¹⁹⁶

(c) Other documents also analyse the impact of [REDACTED] on CoD.¹⁹⁷

5.123 In addition to the Activision documents listed above, one internal Microsoft presentation analyses the impact of the introduction of [REDACTED] in the market on gameplay time and spending on [REDACTED]; and notes that [REDACTED].¹⁹⁸

5.124 On the other hand, we received evidence suggesting that the importance of genre as a means of segmenting games has decreased in recent years. One third party publisher [REDACTED] stated that popular games have adopted elements of multiple genres, and games often compete across genres for the attention of gamers.¹⁹⁹ Other third party publishers [REDACTED] stated that factors beyond genre may lead to titles competing closely, such as the quality of the franchise, release date or quality of the gaming franchise (leading to its overall popularity).²⁰⁰

5.125 Third parties' internal documents suggest that CoD's closest competitors are titles of other large franchises across genres, along with shooters. For example, one third party console gaming service competitor's [REDACTED] internal document from February 2022 compared CoD's total gameplay hours per title on the competitor's two most recent console generations with other titles like

¹⁹² See for example, Activision Internal Document.

¹⁹³ See for example, Activision Internal Document; Activision Internal Document.

¹⁹⁴ Activision Internal Documents.

¹⁹⁵ Activision Internal Documents; Activision Internal Document; and Activision Internal Document.

¹⁹⁶ Activision Internal Document.

¹⁹⁷ Activision Internal Document; Activision Internal Document; Activision Internal Document; and Activision Internal Document.

¹⁹⁸ Microsoft Internal Document. [REDACTED].

¹⁹⁹ [REDACTED] call note.

²⁰⁰ [REDACTED] call note; and [REDACTED] call note.

Fortnite, FIFA, Apex Legends and GTA V (out of which Fortnite and Apex Legends are shooters).²⁰¹

5.126 Activision's internal documents also indicate that it monitors titles that release in the same [X], rather than by genre. One Activision internal document analyses specific [X].²⁰² Another Activision internal document analyses CoD Vanguard's competitors [X]. The document states that [X] was the top competitor [X], with [X] the top competitors in the shooter genre [X]. The document later states that outside of [X] are CoD Vanguard's top competitors for overall share of gameplay time.²⁰³

- *Provisional conclusion on segmentation by genre*

5.127 Based on the above evidence, we consider that games compete most strongly with other games within the same genre; however, they also compete with games outside the genre (particularly if they are large multi-player franchises with gameplay elements and social aspects similar to other large multi-player franchises in other genres).

5.128 In addition, we note that defining genres, and whether or not a game belongs to a particular genre, can be difficult and somewhat arbitrary, and also subject to change over time (eg games can belong to multiple genres, and games are sometimes classified under different genres by different publishers/platforms).

5.129 We therefore provisionally consider it is appropriate to assess the impact of the Merger in the game publishing market without considering different markets by genre. However, given the strong evidence above on the extent to which there is similarity within genres, and differentiation across them, we consider any relevant differences regarding competitive constraints within genres in our competitive assessment. In particular, we consider the particular competitive conditions within the shooter segment in our competitive assessment.

Geographic market definition: supply of game publishing services

Parties' views

5.130 The Parties submitted that they consider the relevant geographic market for game publishing to be worldwide. They stated that this is supported by the fact that many publishers typically produce one version of a video game for

²⁰¹ [X] Internal Document.

²⁰² Activision Internal Document.

²⁰³ Activision Internal Document.

distribution worldwide (subject to possible localizations), without significant price differences.²⁰⁴

Our assessment

- 5.131 The demand for game publishing services for both PC and console is both from the distributors of the game (direct) and the end-gamers (indirect, for example because game publishers, particularly on console, have a certain degree of control in suggesting the retail price).
- 5.132 From a demand-side perspective of the distributor, we note that contracts are generally negotiated and agreed upon globally.
- 5.133 From a demand-side perspective of the consumer, we note that there do not seem to be significant differences in price across jurisdictions (though there are some variations based on exchange rates, VAT and other taxes applicable different regions).²⁰⁵
- 5.134 However, evidence also points to some regional variations across games, especially on PC:
- (a) Market shares in publishing vary significantly by geography, indicating that there are likely regional variations in consumer demand. Some games (such as League of Legends, Genshin Impact, and Crossfire) are significantly more popular in Asian countries than in the UK. For example, one Microsoft internal document contains the top genres for PC gaming by hours played split by region ([redacted]).²⁰⁶ [redacted].²⁰⁷
 - (b) Games are not always released at the same time across all countries (or at all). There are also differential requirements in some countries in relation to age restrictions, depiction of violence, etc which require games to be tailored accordingly.
 - (c) Matching of gamers in multiplayer games places a degree of weight on players' relative locations when forming a lobby, because geographical proximity both to the hosting server and to other players is an important

²⁰⁴ Parties, FMN.

²⁰⁵ See for example, [Steam All Region Price Checker \(steamregionalprices.com\)](https://steamregionalprices.com), accessed by the CMA on 3 February 2023.

²⁰⁶ Microsoft Internal Document.

²⁰⁷ We note that the document indicates that Chinese data may be less reliable due to the high level of regional localization of titles, however we believe that it is still broadly representative of preferences.

determinant of the latency experienced by gamers when playing a match.²⁰⁸

5.135 As such, our provisional view is that it is appropriate to assess the effects of the Merger on the supply of console game publishing and PC game publishing services globally, while taking account of any regional or UK-specific differences where relevant in the competitive assessment. In any event, we consider that our competitive assessment and its provisional conclusions would not materially change if we were to consider a narrower geographic frame of reference (eg UK or EEA countries).

²⁰⁸ Activision response to the CMA's RFI.

6. Counterfactual

Framework for assessment of the counterfactual

- 6.1 The counterfactual is an analytical tool used to help answer the question of whether a merger gives rise to an SLC.²⁰⁹ It does this by providing the basis for a comparison of the competitive situation with the merger against the competitive situation absent the merger.²¹⁰
- 6.2 The counterfactual is not, however, intended to be a detailed description of those conditions of competition that would have prevailed absent the merger.²¹¹ The CMA's assessment of those conditions is better considered in the competitive assessment.²¹² The CMA also seeks to avoid predicting the precise details or circumstances that would have arisen absent the merger.²¹³
- 6.3 At phase 2, the CMA will select the most likely conditions of competition as its counterfactual against which to assess the merger.²¹⁴ For anticipated mergers, the counterfactual may consist of the prevailing conditions of competition, or conditions of competition that involve stronger or weaker competition between the merger firms than under the prevailing conditions of competition.²¹⁵
- 6.4 In its assessment of the counterfactual, the CMA may need to consider multiple possible scenarios, before identifying the relevant counterfactual.²¹⁶ As part of this assessment, the CMA will take into account whether any of the possible scenarios make a significant difference to the conditions of competition,²¹⁷ and if they do, the CMA will ultimately select the most likely conditions of competition absent the merger as the relevant counterfactual.²¹⁸ Counterfactual assessments will often focus on significant changes affecting competition between merger firms, such as entry into new markets in competition with each other, significant expansion by the merger firms in markets where they are both present, or, exit by one of the merger firms.²¹⁹
- 6.5 We may examine several possible scenarios to determine the appropriate counterfactual, one of which may be the continuation of the prevailing

²⁰⁹ CMA129, paragraph 3.1.

²¹⁰ CMA129, paragraph 3.1.

²¹¹ CMA129, paragraph 3.7.

²¹² CMA129, paragraph 3.7.

²¹³ CMA129, paragraph 3.11.

²¹⁴ CMA129, paragraph 3.13.

²¹⁵ CMA129, paragraph 3.2.

²¹⁶ CMA129, paragraph 3.13.

²¹⁷ CMA129, paragraph 3.13.

²¹⁸ CMA129, paragraph 3.13.

²¹⁹ CMA129, paragraph 3.8.

conditions of competition. An example of a situation where the CMA may select a counterfactual different from the prevailing conditions of competition is where the target is likely to exit the market absent the transaction under review. Another scenario in which the CMA may consider an alternative counterfactual to the prevailing conditions of competition is where one of the merging parties would have entered or materially expanded its presence in a market absent the transaction.

- 6.6 Further, the time horizon considered by the CMA in its assessment of the counterfactual will depend on the context and will be consistent with the time horizon used in the competitive assessment.²²⁰

The Parties' submissions on the relevant counterfactual

- 6.7 The Parties submitted that the relevant counterfactual against which to assess the Merger is the prevailing conditions of competition. They submitted that: (i) there are no competing bids or parallel transactions; (ii) neither Party can be considered a failing firm; and (iii) the Merger does not result in the loss of a potential entrant that would make a material difference to the competitive assessment.²²¹

- 6.8 Microsoft submitted that there is no counterfactual available in which Activision content (specifically Call of Duty) would be widely available via multiple subscription services.²²² It told us that Activision currently only makes limited back-catalogue titles available on subscription, and only on a limited time-period basis.²²³ Microsoft submitted that Activision has never published newer content on multi-game subscription services and has no intention to do so in the future,²²⁴ which it submitted is reflected in statements made by Activision's senior leadership and in internal documents.²²⁵

- 6.9 Microsoft also noted Activision's existing agreements with Sony, [REDACTED]. Microsoft submitted that [REDACTED].²²⁶

Our assessment

- 6.10 In making our counterfactual assessment, we do not seek to ossify the market at a particular point in time.²²⁷ The Parties have submitted that the relevant

²²⁰ CMA129, paragraph 3.15.

²²¹ Parties, FMN.

²²² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.39.

²²³ Microsoft [response to the phase 1 decision](#), 11 October 2022, paragraph 4.12.

²²⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.35.

²²⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.36-4.37.

²²⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.38.

²²⁷ CMA129, paragraph 3.3.

counterfactual against which to assess the Merger is the prevailing conditions of competition, under which our assessment can reflect that, absent the merger, a merger firm would have continued making investments in improvements, innovations or new products.²²⁸

- 6.11 The Parties both operate in dynamic markets which are growing and evolving quickly, and in which competition revolves around bringing new and innovative products to market (see Chapter 4, Industry Background). On this basis, we provisionally consider the prevailing conditions of competition in this Merger include changes or developments in strategy to reflect changing market dynamics, and innovations, such as the continued emergence of multi-game subscription and cloud gaming services.
- 6.12 We provisionally agree with the Parties' view that the prevailing conditions of competition is the correct framework under which to assess the Merger. We are of the view that this captures the likelihood of developments and changes in the market, particularly in relation to MGS and cloud-gaming. We are of the view that the assessment of the likelihood of Activision's content becoming available on MGS services or cloud gaming services is best carried out within the competitive assessment. For the reasons set out in our competitive assessment, we consider that the prevailing conditions of competition would involve Activision 'day and date' content becoming available on cloud gaming services, but not on MGS services, at least for Activision's most valuable games.

²²⁸ [CMA129](#), paragraph 3.3.

7. Theory of harm 1: Vertical effects in console gaming

Introduction

- 7.1 This chapter analyses the Merger's effects on competition in the supply of gaming consoles (ie their hardware, associated digital storefronts and subscription services) arising from input foreclosure.
- 7.2 Microsoft currently competes in the supply of gaming consoles via its Xbox and Activision provides inputs to Microsoft and other console providers in the form of videogames, including CoD.
- 7.3 The concern under this input foreclosure theory of harm is that the Merger may lead to the Merged Entity using CoD and other Activision content to foreclose rival gaming consoles. Specifically, we consider whether Microsoft could harm its rivals' competitiveness by ceasing to supply CoD and other Activision content (total foreclosure), or by worsening the terms or quality of the content provided to rivals (partial foreclosure).
- 7.4 This chapter is structured as follows. First, we assess the competitive landscape in the consoles market. Second, we assess the possibility of Activision's content being available on gaming consoles' MGS services. Third, we present our framework for the assessment of this theory of harm. Fourth, we assess the Merged Entity's ability and incentive to implement a foreclosure strategy, and the effect that this would have on competition in the supply of gaming consoles.
- 7.5 For the reasons set out below, our provisional conclusion is that the Merged Entity has the ability and incentive to foreclose downstream console gaming rivals, particularly PlayStation. We found that this would substantially lessen overall competition in the supply of gaming consoles.

Competitive landscape in consoles

Introduction

- 7.6 Before considering the vertical foreclosure framework and assessment, we provide an overview of the competitive landscape of the console gaming services market.
- 7.7 In this section, we consider:
- (a) Features of the market that are relevant to our assessment (network effects and multi-homing).

- (b) Shares of supply in gaming consoles, ie looking at gaming hardware, distribution and subscription services.
- (c) The closeness of competition between Xbox, PlayStation and Nintendo's consoles.

Features of the console gaming market

Network effects

- 7.8 Gaming platforms are two-sided, with users on one side and content providers on the other. Two-sided markets are often characterised by network effects, where the value of the product for customers on one side of the platform depends on the volume of users either on the same side (direct network effects) or on the other side (indirect network effects).²²⁹
- 7.9 Network effects in gaming can be direct and indirect:
- (a) Direct network effects are likely to arise particularly in multiplayer games, where users like to play the same game with their friends (at the same time), and where players get 'matched' with other players more effectively as the number of players on the platform increases. This often requires having the same manufacturer's consoles (except for games that allow cross-play across different consoles). As such, an increase in the number of users that play a game in a particular platform would increase the attractiveness of that game and platform, thereby drawing additional users.
 - (b) Indirect network effects arise because game publishers are more likely to develop content for a platform with a significant user base and, in turn, a strong content library attracts more users to the platform.
- 7.10 In this section, we assess whether evidence supports the existence of such direct and indirect network effects at game and platform level. This is important because (i) the existence of direct network effects amplifies the effect of any foreclosure strategy, with a greater number of users switching away to continue playing the same game with their friends, and (ii) indirect network effects incentivise publishers to focus their efforts on making games for platforms with a significant user base (which in turn attracts more customers to that platform).

²²⁹ CMA129, paragraph 4.22.

Parties' views

- 7.11 In relation to direct network effects, Microsoft explained that gamers like to be on the same platform as their friends to play multiplayer games.²³⁰ It also submitted that gamers may benefit from a broad gamer base with multiplayer games, on account of better 'matchmaking' across players when there is a larger pool of players available to be matched. Microsoft stated that this therefore implies that direct network effects operate primarily at the game level rather than at a platform level.²³¹
- 7.12 Microsoft further submitted that direct network effects are too weak for Microsoft to foreclose rival consoles because (i) gamers make console decisions based on the utility they derive from the library of games on a console rather than a single game (and therefore network effects on one game cannot foreclose rival consoles); (ii) the co-existence of Nintendo, PlayStation and Xbox over the past 20 years does not support the existence of strong network effects; and (iii) more multiplayer games can be played online across devices, due to cross-play functionality.²³² Microsoft submitted that an increasing number of games have cross-play functionality, which means that network effects operate at the market level (rather than the platform level) and publishers have an increased incentive to publish on multiple consoles.²³³ Evidence submitted by Microsoft showed that the gametime share of Xbox's top 20 games with cross-play available as an option was [REDACTED]% in 2021, up from [REDACTED]% in 2020.²³⁴
- 7.13 In terms of indirect network effects, Microsoft explained that game publishers are more likely to develop content for a platform with a significant user base and that, in turn, a strong content library attracts more users to a platform.²³⁵ Microsoft also submitted that evidence from the past 20 years has shown that indirect network effects in the gaming industry are too weak to foreclose rivals because (i) Sony, despite having 'double the user base of Microsoft', has not been able to foreclose Microsoft or stop it from attracting content from publishers, and (ii) publishers multi-home across platforms, which is consistent with weak indirect network effects.²³⁶
- 7.14 In respect of Microsoft's argument that the continued co-existence of Nintendo, PlayStation and Xbox does not support the existence of strong

²³⁰ Microsoft response to the phase 1 Issues Letter.

²³¹ Microsoft response to working papers.

²³² Microsoft response to working papers.

²³³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.56(d).

²³⁴ Microsoft response to working papers.

²³⁵ Microsoft response to the phase 1 Issues Letter.

²³⁶ Microsoft response to working papers.

network effects, we consider that network effects can be strong even in a scenario where they are not sufficiently strong to have caused a market to ‘tip’ to a single supplier. We acknowledge that cross-play can, in principle, dampen network effects at the console level, and the extent to which this will be the case will tend to be reflected in the evidence we consider in our assessment below. The following sections set out our assessment of the evidence on the strength of network effects, which includes third parties’ views and internal documents.

Our assessment

- *Third parties’ views*

7.15 Third parties have noted the existence of direct and indirect network effects in gaming, with direct network effects being particularly strong for large multi-player social franchises such as CoD:

- (a) A third party gaming console supplier [redacted] submitted to the CMA that network effects are a prominent feature in console video gaming and are directly related to the user base and number of content providers. The supplier stated that this therefore would magnify the impact of any action that led to a change in sales, as it would have wider effects beyond the impact on direct sales. It described both direct and indirect network effects as being prevalent in gaming.²³⁷
- (b) A cloud gaming provider [redacted] explained that leading AAA games had multiplayer functionality and had become social media platforms. As a result, established AAA games benefited from significant network effects, which raised barriers to entry for new games and developers.²³⁸ It also stated that, as gamers play games with their friends, they created something akin to a social network devoted to specific games, which they said created large switching costs when transitioning to other games, even in the same genre. These switching costs could result in franchises being popular for years, as gamers are so deeply invested in terms of time, money and friends.²³⁹
- (c) The PC storefront Steam announced that it changed its revenue share structure to reward the positive network effects that developers of large

²³⁷ [redacted] response to the CMA’s RFI.

²³⁸ [redacted] response to the CMA questionnaire.

²³⁹ [redacted] response to the CMA questionnaire.

games create, stating that successful games and their large audiences had a material impact on those network effects.²⁴⁰

- 7.16 We note that some of the evidence above is not directly related to consoles and comes from rivals in cloud gaming and PC storefronts. However, we consider that network effects, particularly at the game-level, work similarly across different gaming platforms.
- 7.17 We consider other evidence relevant to assessing the strength of direct and indirect network effects in gaming below, such as (i) the costs of making a game available on multiple consoles; (ii) the prevalence of cross-play and cross-progression; and (iii) the views of publishers regarding making games exclusive to one platform. These factors determine the stickiness of gamers and/or publishers to consoles, in turn affecting the strength of network effects.
- 7.18 Third parties noted that the costs of developing a game for different consoles or porting a game across consoles were not too high. One publisher [REDACTED] stated that developing games for different consoles requires the use of different software development kits, but this does not result in a material increase in development difficulty, time or costs.²⁴¹ Another publisher [REDACTED] stated that there are minor hardware differences between PlayStation and Xbox, such as graphics processing unit (**GPU**) and driver speeds, which require work to account for the hardware differences. However, the publisher also noted that in general, the game development platforms for PlayStation and Xbox are similar (eg both use C++ coding language).²⁴² Another publisher [REDACTED] noted that tools like the Unreal Engine empower developers to create games that work on multiple platforms including PC and consoles.²⁴³
- 7.19 In relation to the prevalence of cross-play and cross-progression, nearly all publishers that responded to our phase 2 questionnaire stated that there was an increase in the prevalence of cross-play and cross-progression, particularly in multi-player games like CoD.²⁴⁴
- 7.20 Further, publishers stated that they would in general not be in favour of making games exclusive to a platform, unless there were strong commercial or strategic incentives to do so. For example, all of the third party publishers that we have obtained evidence from noted that making a game exclusive to a platform prevents publishers from reaching a large part of players, who are on

²⁴⁰ 'New Revenue Share Tiers and other updates to the Steam Distribution Agreement (steamcommunity.com)', accessed by the CMA on 13 December 2022.

²⁴¹ [REDACTED] response to the CMA's RFI.

²⁴² [REDACTED] response to the CMA's s109 notice.

²⁴³ [REDACTED] response to the CMA's RFI.

²⁴⁴ [REDACTED] response to the CMA's RFI; [REDACTED] response to the CMA's RFI; [REDACTED] response to the CMA's RFI; and [REDACTED] response to the CMA's RFI.

other formats/hardware, therefore forgoing a part of potential revenues.²⁴⁵ One publisher [REDACTED] noted that exclusivity to a console platform favours certain players and upsets others, which can be risky in terms of community management and/or public relations given the current installed base for each console.²⁴⁶

7.21 However, various publishers also stated that they have made games either fully or partially exclusive to a certain platform for commercial or strategic reasons. These included obtaining access to the first-party IP of a particular platform and/or increasing interest in a particular game from users of a platform.²⁴⁷ For example, two publishers [REDACTED] and [REDACTED] stated that platform exclusivity can aid in gaining deeper market penetration on a given platform.²⁴⁸

- *Evidence from the Parties' internal documents*

7.22 Various internal documents of the Parties note that direct network effects are prevalent in gaming and are associated with both (i) ecosystems/platforms that facilitate gaming and (ii) large social multiplayer games like CoD:

7.23 In relation to direct network effects at the platform-level:

(a) One Microsoft internal document from September 2020 looks at platform network effects on Xbox. A regression analysis using Xbox data shows [REDACTED].²⁴⁹

(b) Another Microsoft internal document from June 2022 states that [REDACTED].²⁵⁰

(c) A Microsoft internal document from April 2020 containing a review of Microsoft's strategy states that [REDACTED].²⁵¹

7.24 In relation to direct network effects at the game-level:

(a) An Activision internal document providing an overview of the game streaming industry states that multiplayer games have [REDACTED]. The document explains that [REDACTED] as the gaming audience widens.²⁵²

²⁴⁵ [REDACTED] response to the CMA's RFI.

²⁴⁶ [REDACTED] response to the CMA's RFI.

²⁴⁷ [REDACTED] response to the CMA's RFI; and [REDACTED] response to the CMA's RFI.

²⁴⁸ [REDACTED] response to the CMA's RFI; and [REDACTED] response to the CMA's RFI.

²⁴⁹ Microsoft Internal Document.

²⁵⁰ Microsoft Internal Document.

²⁵¹ Microsoft Internal Document.

²⁵² Activision Internal Document.

- (b) An Activision presentation notes that ‘while the concept of enduring, multi-decade franchises has long been seen across media and entertainment, gaming franchises enjoy attributes that are unique to the sector’. These include [REDACTED].²⁵³ Activision submitted that this document was a deck prepared by Activision to share with [REDACTED]. Activision also explained that the purpose of this particular slide was to explain how consumer interest in video game franchises is [REDACTED].²⁵⁴
- (c) Another Activision document discussing industry trends notes that ‘top performing games are [REDACTED]. The biggest franchises [REDACTED] are massively accessible, deeply social and engaging (often linked to real-world pop culture), [REDACTED]. The document also noted that [REDACTED]. The document further notes that consumers are increasingly demanding an [REDACTED].²⁵⁵

7.25 We note the Parties’ submission that some of the internal documents referred to above are consistent with network effects occurring at the market/game (rather than the platform) level and were drafted prior to [REDACTED] cross-play games [REDACTED].²⁵⁶ However, we note that (i) more recent documents discuss the existence of strong network effects at the platform level; and (ii) the prevalence of cross-play has increased, but not to the extent of eliminating platform-level network effects.

7.26 Microsoft’s internal documents also discuss the presence of indirect network effects in gaming, noting the presence of a virtuous cycle where more games attract more content, which in turn attracts more gamers.

(a) One Microsoft internal document, for example, explains [REDACTED].²⁵⁷

(b) Another Microsoft internal document explains that Microsoft’s gaming ecosystem creates [REDACTED]. The document goes on to illustrate a flywheel that shows [REDACTED],²⁵⁸ [REDACTED].²⁵⁹

Provisional conclusion on network effects

7.27 The evidence presented above indicates that direct network effects are prevalent in the gaming industry at both a game-level and platform-level.

²⁵³ Activision Internal Document.

²⁵⁴ Activision response to working paper.

²⁵⁵ Activision Internal Document.

²⁵⁶ Email from Microsoft to the CMA, 23 January 2023.

²⁵⁷ Microsoft Internal Document.

²⁵⁸ [REDACTED].

²⁵⁹ Microsoft Internal Document.

There is evidence that network effects are stronger for large multiplayer social franchises like CoD, with gamers wanting to play with their network of friends.

7.28 Indirect network effects also exist, with publishers wanting to publish their games on the platform with the most users. However, the evidence shows that most publishers choose to make their games available on as many platforms as possible. It indicates the additional cost of developing a game for both Xbox and PlayStation—as opposed to developing it for a single console—is relatively low. Developments in technology (eg Unreal Engine) have reduced these costs further. Therefore, we consider that Xbox and PlayStation both have a sufficiently large user base to attract good content from game publishers. Although we cannot rule out that indirect network effects could magnify the effectiveness of a foreclosure strategy (due to publishers choosing to not make their games available on the foreclosed console, especially if any such strategy succeeds in significantly reducing a console’s user base), we consider that at present indirect network effects do not represent an obstacle to attracting content for either Xbox or PlayStation.

7.29 We also found that the prevalence of cross-play has increased in recent years, based on data from the Parties and third party evidence. In general, the increased prevalence of cross-play makes it possible to play with gamers on different consoles, along with increasing the total user base available for matchmaking (though we note that it is still possible to have differences in gameplay features and certain content while still enabling cross-play). This, in turn, reduces the strength of direct network effects at console level (but does not reduce the strength of direct network effects at game level). We discuss the impact of network effects and cross-play on incentives to foreclose in our competitive assessment.

Multi-homing across consoles

7.30 In this section, we consider evidence on the extent to which users own more than one type of console (multi-homing). This is important to the assessment for the following reasons:

- (a) First, the extent of multi-homing across various consoles indicates the degree to which gamers consider them to be substitutable, ie a higher level of multi-homing indicates that gamers view the consoles as complements rather than substitutes.
- (b) Second, to the extent that gamers are already multi-homing across Xbox and PlayStation, a hypothetical withholding of CoD and other Activision content from PlayStation is likely to (i) involve lower switching costs for these gamers and (ii) allow Xbox to recapture a smaller amount of the

sales lost on PlayStation, which we consider in our assessment of incentives.

Parties' views

7.31 Microsoft submitted that gamers often multi-home across gaming consoles. In relation to multi-homing across the PlayStation and Xbox consoles (as well as PC), it submitted that at the very least [20-30%] of PlayStation 5 users also owned an Xbox Series X/S and [redacted] also gamed on a PC, based on third party data for the USA procured by Microsoft from a third-party data provider (NPD). Microsoft also submitted that these metrics are as of December 2020 and are likely to have increased materially at the time of its submission (31 October 2022).²⁶⁰

Our assessment

- *Third parties' views*

7.32 In relation to multi-homing across PlayStation and Xbox, third party evidence indicated that a small proportion of PlayStation gamers also owned an Xbox.

(a) Evidence [redacted] submitted by a third party [redacted] indicated that [redacted].²⁶¹

7.33 In relation to multi-homing across other consoles, third party evidence indicated that a greater proportion of users owned a Nintendo Switch along with either Xbox or PlayStation, as compared to multi-homing between Xbox and PlayStation of the same generation.

(a) Evidence [redacted] submitted by a third party [redacted] indicated that [redacted].²⁶²

(b) Survey results submitted by a third party [redacted] in 2021 indicated that a high proportion of UK users of a Nintendo console [redacted]%) owned an Xbox or a PlayStation.²⁶³

(c) Evidence based on third-party NPD data submitted by the Parties showed that in Q4 2020, [redacted]% of PS5 owners owned an Xbox whereas [redacted]% of PS5 users owned a Nintendo Switch console.²⁶⁴

²⁶⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.78.

²⁶¹ [redacted] Internal Document.

²⁶² [redacted] Internal Document.

²⁶³ [redacted] response to the CMA's RFI.

²⁶⁴ The Parties' submission.

- *Evidence from the CMA survey*

- 7.34 Our survey of a sample of PlayStation CoD gamers in the UK found that levels of multi-homing of the surveyed PlayStation CoD gamers with either Xbox or Nintendo were similar.²⁶⁵ In particular, beside a PlayStation, 15% of respondents owned also an Xbox, 18% owned a Switch, and 13% both. This therefore indicates that a maximum of 28% of respondents owned both a PlayStation and Xbox, whereas a maximum of 31% of respondents owned a PlayStation and Nintendo console.
- 7.35 We note that the above statistics do not separate out by the console generation and therefore over-estimate the extent of multi-homing within a generation. The CMA survey found that among those gamers owning both PlayStation and Xbox, 61% owned consoles of the same generation whilst the remaining 39% owned consoles across generations.
- 7.36 However, most of these respondents use only one device as their main gaming console despite owning multiple devices. In particular, among those owning multiple gaming devices, 94% of them use one device almost all of the time or most of the time.

Provisional conclusion on multi-homing across consoles

- 7.37 We note that the level of multi-homing across consoles varies by the generation of console being owned, timing of the survey and the size, geography and other characteristics of the underlying sample of respondents being considered. The evidence nevertheless shows that:
- (a) Less than 28% of PlayStation users already own an Xbox; and
 - (b) a greater fraction of users own the Nintendo Switch along with either Xbox or PlayStation, as compared to multi-ownership between Xbox and PlayStation (this difference is marginal based on some sources of evidence but significant based on others).

Shares of supply in the downstream market

- 7.38 Shares of supply in the downstream console gaming market can provide an indication of the relative size of console manufacturers and can be used to assess the competitive constraints faced by Microsoft in the console gaming

²⁶⁵ The CMA survey refers to an online survey of a sample of SIE's UK customers conducted by DJS Research Ltd. Our sample frame included primary accounts used to play CoD between July 2021 to June 2022 for 10 hours or more and/or to have spent at least \$100 in the period. Please refer to Appendix D for further detail on the CMA survey.

market. They can also be informative in analysing the effect of any foreclosure strategy on downstream rivals.

- 7.39 However, while shares of supply are a useful indicator when firms provide similar products, they are less useful if their products are differentiated. As noted by the CMA's Merger Assessment Guidelines, 'the CMA may calculate concentration measures on multiple different bases, including and excluding different firms, depending on which firms the CMA wishes to compare. The CMA may then attach greater weight to concentration measures that include firms whose products are more substitutable, and less weight to concentration measures that include firms whose products are less substitutable.'²⁶⁶

Parties' views

- 7.40 The Parties submitted that Microsoft's sales of console hardware have lagged behind Sony's and Nintendo's on a worldwide basis over the last three years:²⁶⁷

- (a) Globally, the Parties submitted that Xbox's share of console hardware in 2021 was [10-20%] by sales value.²⁶⁸ They also submitted that the corresponding shares for PlayStation and Nintendo were [40-50%] and [30-40%] respectively.²⁶⁹
- (b) In the UK, the Parties submitted that Xbox's share of console hardware in 2021 was [20-30%] by sales value. The Parties stated that the larger shares of Nintendo ([20-30%]) and PlayStation ([40-50%]) in the UK are indicative of their strength in the console segment.²⁷⁰ In addition, the Parties submitted that PlayStation's shares increased significantly relative to Nintendo between 2020 and 2021 following the release of the new console generation both globally and in the UK.²⁷¹

- 7.41 Microsoft also submitted that PlayStation was twice the size of Xbox in terms of the installed console base globally in 2021:²⁷²

²⁶⁶ CMA129, paragraph 9.3.

²⁶⁷ Email from Microsoft to the CMA.

²⁶⁸ The corresponding shares by sales volume, ie number of console units sold, were [10-20%] for Xbox, [30-40%] for PlayStation and [40-50%] for Nintendo.

²⁶⁹ Email from Microsoft to the CMA.

²⁷⁰ Email from Microsoft to the CMA. The corresponding shares by sales volume, ie number of console units sold, were [20-30%] for Xbox, [30-40%] for PlayStation and [30-40%] for Nintendo.

²⁷¹ Parties, FMN.

²⁷² Microsoft, response to working papers.

- (a) Globally, Microsoft submitted that PlayStation had the largest share [40-50%], followed by Nintendo [30-40%] and Xbox [20-30%].²⁷³
- (b) In the UK, Microsoft submitted that Xbox had a share of [30-40%] by installed console base, while PlayStation and Nintendo had a share of [40-50%] and [20-30%] respectively.

7.42 Microsoft further submitted that PlayStation had more than double the MAUs of Xbox globally.²⁷⁴

7.43 In console digital game distribution (B2P),²⁷⁵ the Parties submitted that Xbox has a UK revenue share of [40-50%] in 2021, whereas PlayStation and Nintendo have a share of [40-50%] and [5-10%] respectively. At the global level, the Parties say that Xbox's share is [20-30%], while PlayStation has a share of [50-60%] and Nintendo [10-20%].²⁷⁶ The Parties noted that these shares reflect the fact that Nintendo sells more of its games in physical (rather than digital) form.²⁷⁷

7.44 In MGS services, the Parties submitted that Xbox had a UK revenue share of [50-60%] in 2021, whereas PlayStation had [30-40%]. At the global level the Parties stated that Xbox's share was [30-40%], while PlayStation had a share of [30-40%].²⁷⁸ These shares included subscription services on all platforms. The Parties also noted that in console MGS services that Xbox's share is not materially different to its overall share in digital distribution, estimating Xbox to have a [50-60%] share in the UK and a [30-40%] share worldwide in 2020. The Parties said that PlayStation had higher shares in console MGS globally in 2020.²⁷⁹

Our assessment

7.45 We used data from the Parties and third parties to estimate market shares for different gaming consoles. We found that, depending on how these shares are measured (ie, by total gaming console revenues, installed base or yearly active users), Microsoft is the second or third largest gaming console provider globally (and second in the UK). As set out below, Microsoft's share of supply ranges between [20-30%] to [30-40%].

²⁷³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, Table 8 and 9.

²⁷⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.7(b).

²⁷⁵ This includes distribution revenue from all content – including in-game and add-ons for free-to-play games.

²⁷⁶ Parties Internal Document.

²⁷⁷ Email from Microsoft to the CMA, 23 January 2023.

²⁷⁸ Parties, FMN.

²⁷⁹ Parties, FMN.

7.46 We also found that Microsoft's shares by gaming console revenue and volume of console units were higher than estimated by the Parties.²⁸⁰ While still smaller than SIE, the difference between the shares of Microsoft and SIE, both in the UK and globally, is significantly smaller than suggested by the Parties. We consider that the discrepancy arises because the Parties do not have access to third party data, which shows that [REDACTED].²⁸¹

7.47 The table below summarises the shares of supply we estimated using the Parties' and third parties' data in 2021 (with further detail provided in Appendix C).²⁸² We consider all gaming console revenues collectively (ie hardware, B2P distribution and subscription) based on our assessment of market definition above.

Table 7.1: Shares of supply in 2021

			%
	Console revenues	Installed console base	Yearly Active Users
<i>Global</i>			
Microsoft	[20-30]	[20-30]	[30-40]
SIE	[40-50]	[40-50]	[40-50]
Nintendo	[20-30]	[30-40]	[10-20]
Total global	100	100	100
<i>UK</i>			
Microsoft	[30-40]	NA	NA
SIE	[40-50]	NA	NA
Nintendo	[10-20]	NA	NA
Total UK	100	NA	NA

Source: CMA's calculations.

Note: The installed console base was computed as the cumulative number of console hardware sales over the period 2013-2021. Console revenues include revenues from hardware, B2P digital distribution and subscription revenues

7.48 In 2021, depending how market shares are calculated:

- (a) PlayStation was [REDACTED] times larger than Microsoft globally and about [REDACTED] times larger in the UK
- (b) Nintendo was [REDACTED] times the size of Microsoft globally, but [REDACTED] times Microsoft's size in the UK.

Provisional conclusion on shares on supply in the downstream market

7.49 We therefore consider SIE to be the largest supplier of console gaming services both globally and in the UK. Microsoft is smaller than SIE, but the

²⁸⁰ The Parties' estimated shares presented above indicate that PlayStation was [REDACTED] times the size of Microsoft in 2021 by console hardware revenue and [REDACTED] times by console units. We found that the PlayStation was [REDACTED] times larger than Microsoft, even when just considering console hardware revenue (ie. excluding distribution and subscription revenue).

²⁸¹ [REDACTED], response to the CMA's RFI; [REDACTED], response to the CMA.

²⁸² Microsoft's shares are not significantly different in 2019 and 2020, but SIE's share in 2020 is c.[REDACTED]% lower by console hardware revenues, with Nintendo gaining that lost share.

difference is smaller than suggested by the Parties, particularly in the UK. Nintendo also has a significant share in the console gaming market globally, however, it has lower shares in the UK relative to both PlayStation and Xbox in console gaming revenue.

Competition among gaming consoles

7.50 In this section, we assess the closeness of competition between Nintendo's Switch, Microsoft's Xbox and SIE's PlayStation.

Parties' views

7.51 Microsoft submitted that the suggestion that Xbox, PlayStation and Nintendo are not close competitors is incorrect.²⁸³

7.52 Microsoft submitted that there are many ways that Sony markets the PlayStation 'reflecting the fact that there are many dimensions of competition in the console market'. Microsoft submitted that these included (i) the technical capabilities and price of the console itself, (ii) Sony's own exclusive content; and (iii) third party content, including Call of Duty and other titles such as FIFA and Grand Theft Auto.²⁸⁴

7.53 In relation to Nintendo specifically, Microsoft submitted that Nintendo is a strong competitor in consoles and the Nintendo Switch is one of the most successful consoles of all time.²⁸⁵ Microsoft further submitted that while the Nintendo Switch is less powerful than the PlayStation 5 or Xbox Series X, [X].²⁸⁶ [X].²⁸⁷

7.54 In response to the suggestion that Nintendo's offering is likely different to other consoles by virtue of its target audience, Microsoft submitted that Nintendo does not just target a family-friendly audience, and instead offers a broader range of 'mature' content than Xbox which are also actively marketed.²⁸⁸ Microsoft stated that several of Nintendo Switch's latest exclusives have been non "family-friendly" games and have received mature ratings.²⁸⁹ Microsoft also submitted data showing that the distribution of

²⁸³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.46.

²⁸⁴ Microsoft response to working papers.

²⁸⁵ Microsoft response to working papers.

²⁸⁶ Microsoft, response to working papers.

²⁸⁷ Email from Microsoft to the CMA.

²⁸⁸ Microsoft cited examples of games rated 'Mature' by the Entertainment Software Rating Board ("ESRB") for violence, blood and gore, partial nudity and strong language, such as Bayonetta 3 and Megami Tensei V.

²⁸⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.46(b).

gamers by age on all three consoles is similar, to further substantiate that Nintendo caters to a similar audience as Xbox and PlayStation.²⁹⁰

Our assessment

7.55 In assessing the closeness of competition between the Xbox, PlayStation and Nintendo consoles, we first note the following preliminary points in relation to the competitive landscape between the three consoles:

- (a) First, Microsoft's internal documents track PlayStation more closely than Nintendo, with Nintendo often being absent from any internal competitive assessment.²⁹¹ One Microsoft internal document assesses [REDACTED].²⁹² Another email exchange between [REDACTED].²⁹³
- (b) Second, previously expressed views of Microsoft show that the Parties consider Nintendo to compete less closely with Xbox compared to the PlayStation. For example, Microsoft's vice-president of business development for gaming, media, and entertainment in 2021 stated in the US Epic Games v. Apple case that 'the most direct competitor for hardware sales would be the SIE PlayStation'; and when asked if there were any others, stated that the Nintendo Switch is also a competitor, but 'to a much lesser extent'.²⁹⁴

7.56 In addition to the above evidence, we have considered the following aspects of competition in the rest of this section:

- (a) Technical specifications and price
- (b) Content type and target audience
- (c) Consumer preferences

Technical specifications and price

7.57 We first assess the closeness between the three consoles in terms of their technical specifications. This is important because gamers require high-performance devices (eg in terms of memory, processing speed) to play graphically intensive games such as CoD. To the extent that a console does

²⁹⁰ Microsoft response to working papers.

²⁹¹ Parties Internal Document; Parties Internal Document; Parties Internal Document.

²⁹² Parties Internal Document.

²⁹³ Parties Internal Document.

²⁹⁴ Testimony of [REDACTED], Epic Games, Inc., v. Apple, Inc., 5 May 2021, 537:14–15.

not meet these technical requirements, it is likely to compete less closely with other consoles for those games.

7.58 Xbox and PlayStation are similar in terms of their technical specifications, while Nintendo’s technical specifications differ significantly from either of the two. As can be seen from the table below, the Nintendo Switch has significantly lower energy usage, fewer cores in the CPU, a lower clock speed, a significantly lower value of graphics processing power and performance and a smaller RAM as compared to PlayStation 5 or Xbox Series X.²⁹⁵ By contrast, the PlayStation 5 and Xbox Series X are very similar to each other in terms of these parameters.

Table 7.2: Comparison of technical characteristics of the Nintendo Switch, Xbox X and PlayStation 5

<i>Specification</i>	<i>Xbox Series X</i>	<i>PlayStation 5</i>	<i>Nintendo Switch (TV mode)</i>
Launch Date	10 November 2020	12 November 2020	8 October 2021
Energy Usage	153W	208.8W	7W
CPU: number of cores	8	8	4
CPU: clock speed	3.8 GHz	3.5 GHz	1 GHz
GPU: performance	12 TFLOPS	10.3 TFLOPS	~0.77 TFLOPS
RAM	16 GB	16 GB	4 GB

Sources: ‘Unveiling New Details of PlayStation 5 Hardware Technical Specs’ accessed by the CMA on 17 January 2023; ‘Energy Efficiency: Active Power Consumption’ accessed by the CMA on 17 January 2023; ‘Xbox Series X’ accessed by the CMA on 17 January 2023; ‘About power options on Xbox One and Xbox Series X|S’ accessed by the CMA on 17 January 2023; <https://www.nintendo.com/switch/tech-specs/> accessed by the CMA on 17 January 2023; [redacted] response to the CMA’s RFI; ‘Nintendo Switch OLED Model’, accessed by the CMA on 24 January 2023; and ‘PlayStation 5 Release Date, Pricing, and Launch Games’, accessed by the CMA on 24 January 2023.

7.59 The Nintendo Switch is also different in terms of its portability. Unlike Xbox or PlayStation, which need to be connected to a monitor to function, the Nintendo Switch is a portable device that contains its own monitor. The Switch is also significantly cheaper (currently at most £310) than the flagship Xbox Series X and PlayStation 5 consoles (sold at £449 and £480, respectively), and is closer in price to the technically less capable Xbox Series S console (sold at £250).

7.60 Activision’s internal documents note the technical limitations of the Nintendo Switch console. For example, one Activision document notes in an early-stage assessment that, to produce a CoD title on the Nintendo Switch, the CoD game would need [redacted]²⁹⁶ (whereas most current CoD titles require from 125-175GB of storage on console or PC).²⁹⁷ The document also refers to Apex Legends’s [redacted].²⁹⁸ Another Activision document analysing potential studios

²⁹⁵ This is measured in TFLOPS, or Tera floating point operations per second.

²⁹⁶ Activision Internal Document.

²⁹⁷ See for example, [Minimum and Recommended System Requirements for Call of Duty: Warzone Caldera on PC \(activision.com\)](#) and [Minimum and Recommended System Requirements for Call of Duty: Modern Warfare on PC \(activision.com\)](#), accessed by the CMA on 17 January 2023.

²⁹⁸ Parties Internal Document.

[REDACTED] CoD assesses the additional work required [REDACTED] and notes technical issues in other games [REDACTED].²⁹⁹

- 7.61 We have also seen evidence that large shooter games do not run as well on Nintendo's consoles due to its technical differentiation. One third party submitted that graphically intensive shooters may often be targeted originally at PlayStation and Xbox due to the specific characteristics of their console performance, and that porting to the Nintendo Switch may require financial investment and compromises on graphical quality, or the use of cloud-gaming solutions.³⁰⁰
- 7.62 Publishers' views similarly indicated that developing a game for Switch is a significantly different task relative to doing it for Xbox and PS due to its technical differences. One publisher stated that it encountered technical difficulties when bringing a game to Nintendo Switch but no difficulty in bringing the same game to Xbox or PlayStation. The publisher noted that the Switch's limited graphics and storage are technical limitations that affect the performance of competitive games more than that of game(s) brought to Xbox or PlayStation.³⁰¹ Another publisher stated that several of its games are not available on Nintendo as Nintendo has different capabilities from PlayStation and Xbox.³⁰²
- 7.63 We note the Parties' submission that challenges with porting a game to Nintendo Switch has not impacted Nintendo's ability to compete on the downstream console market, as it offers more games than Xbox and PlayStation, including major games such as *Apex Legends*, *Fortnite* and *Doom Eternal*.³⁰³ However, we consider the evidence above shows that, relative to the Xbox and PlayStation, the Nintendo Switch (i) does not currently offer the same suite of graphically intensive games that PlayStation and Xbox compete on (with the exception of a few games such as *Fortnite* and *Apex Legends*), (ii) may not be capable of offering certain graphically intensive multiplayer games (such as CoD), and (iii) does not offer a similar user experience (eg, in terms of storage, graphics, and framerate).
- 7.64 We also note the Parties' submission that Nintendo's partnership with Ubitus' cloud streaming technology to release *Resident Evil Village* on Switch enables gameplay with levels of graphical fidelity comparable to that found on

²⁹⁹ Parties Internal Document.

³⁰⁰ [REDACTED] response to the CMA's.

³⁰¹ [REDACTED] call note.

³⁰² [REDACTED] response to the CMA's RFI.

³⁰³ Microsoft, response to working papers; and Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.46(c).

a high-level PC, PlayStation 5 or Xbox Series X.³⁰⁴ However, as discussed above, we consider that there are currently significant differences between cloud gaming and gaming on consoles (eg, the need for an internet connection to stream games from cloud gaming services). Also, the ability of the Switch to connect to a third party cloud gaming service provider would not make it a closer competitor to Xbox and PlayStation in the console gaming market.

- 7.65 Overall, the evidence shows that the product characteristics of Nintendo Switch are significantly different from those of Xbox and PlayStation, including its technical specifications, capability to host graphically intensive games and prices. Xbox and PlayStation are more similar in this respect.

Content type and target audience

- 7.66 Next, we have considered the target audience and content type of Xbox, PlayStation and Switch.
- 7.67 Microsoft's internal [REDACTED]. One Microsoft internal document points to the differences in the technical strategies of Xbox/PlayStation and Nintendo consoles [REDACTED].³⁰⁵ This internal document considers that [REDACTED].³⁰⁶
- 7.68 Third parties noted the differences in Nintendo's business strategy in terms of developing own content for its consoles—making its proposition sufficiently differentiated from other gaming ecosystems; and less dependent on the availability of specific third party games. Two third parties submitted that Switch's most popular games are largely developed and published by Nintendo and are based on Nintendo's owned intellectual property.³⁰⁷
- 7.69 Third parties also noted the differences in the type of content and target audience of Nintendo, compared to PlayStation or Xbox. Two third parties submitted that Nintendo content typically focuses on its family-based target audience;³⁰⁸ and that its games tend to be family-friendly (eg, Mario Kart and Super Mario).³⁰⁹
- 7.70 A third party provided data listing Nintendo's most popular titles by revenue in the financial year 2021/22.³¹⁰ Our assessment of this data is that, with the exception of [REDACTED], these titles are not as graphically intensive as CoD (eg [REDACTED])

³⁰⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.46(c).

³⁰⁵ Parties Internal Document.

³⁰⁶ Parties Internal Document.

³⁰⁷ [REDACTED] call note; and [REDACTED] response to the CMA's RFI.

³⁰⁸ [REDACTED] response to the CMA's RFI; and [REDACTED] call note.

³⁰⁹ [REDACTED] response to the CMA's RFI; and [REDACTED] response to the CMA's RFI.

³¹⁰ [REDACTED] response to the CMA's RFI.

(multiple titles), [redacted] (multiple titles), and [redacted]). We consider that these titles tend to emphasise graphics that either are cartoon-like or use more modest graphics processing resources than the Xbox or PlayStation consoles' biggest franchises - or both. Data from the third party also showed that [redacted] of Nintendo's revenue in financial year 2021/22 was from games exclusive to Nintendo.³¹¹ We note that the share of exclusives is [redacted].

- 7.71 The above evidence is therefore mixed in indicating whether Nintendo has different content and audiences to other consoles. Whilst Nintendo offers content for a mature audience, the evidence we have seen suggests that its most popular titles are targeted at a family audience. However, we also note the Parties' submission above that the actual distribution of gamers by age on the Switch is not very different to Xbox or PlayStation. The evidence therefore indicates that there may be some level of substitutability on the demand side between the Nintendo Switch and other consoles, though the technical differences noted above mean that these audiences cannot access all types of games on Nintendo (eg certain more graphically intensive games), and the most popular games appear more family friendly.

Consumer preferences

- 7.72 Consumer behaviour in relation to multi-homing across consoles is likely to indicate closeness of competition to a certain degree, with consumers being more likely to own another console if they consider it to be sufficiently differentiated to their current console.
- 7.73 We described the evidence on multi-homing across consoles above. While the exact figures by which gamers multi-home across consoles varied based on the timing of the analysis, the sample considered and the console generation, overall, most of the evidence suggests that people tend to multi-home more often between the Switch and PlayStation/Xbox than between PlayStation and Xbox (within the same generation). This supports the view that Switch is less substitutable to the PlayStation or Xbox.
- 7.74 On the other hand, evidence showed that the extent of multi-homing between the PlayStation and Xbox was fairly low, indicating that these are closer substitutes.

³¹¹ [redacted] response to the CMA's RFI.

Provisional conclusion on closeness of competition among consoles

- 7.75 The evidence shows that Xbox, PlayStation and Nintendo all compete in the console market on the basis of technical specifications, content (including range and type), and price.
- 7.76 The evidence also shows, however, that whilst Xbox and PlayStation compete closely with each other, Nintendo competes less closely with Xbox and PlayStation:
- (a) Microsoft and SIE offer non-portable consoles with similar technical specifications. Nintendo's flagship console, the Nintendo Switch, offers a portable console for a lower price and with significantly lower technical specifications.
 - (b) Whilst Nintendo offers some content for a mature audience, its most popular titles are targeted at a family audience.
 - (c) Gamers more often own a Nintendo console and an Xbox or PlayStation than own an Xbox and a PlayStation. This suggests that Nintendo is less substitutable with Xbox or PlayStation than the latter are with each other.

Availability of Activision's content on MGS services

- 7.77 As previously explained, MGS services have become a feature in the offering of gaming console providers and an additional lever for these providers to compete in the gaming consoles market.
- 7.78 Activision has previously made some of its content available on console MGS services. In that context, this section focuses on the following question: To what extent would Activision's content be made available on console MGS services absent the Merger?
- 7.79 The greater the extent to which Activision's content would be made available on these services, the more relevant these services would be for foreclosure of gaming console rivals. In other words, if absent the Merger, Activision's games would be available on rivals' console MGS services (eg PS+), the Merged Entity could use that as an additional lever to foreclose those rivals. For example, the Merged Entity could do that by making either current and/or future Activision content unavailable on rival console MGS services (ie exclusive to XGP). Instead, if Activision's games would not have been available on those services at all absent the Merger, the Merged Entity would be unable to foreclose rival gaming consoles using content on MGS services as a foreclosure mechanism.

7.80 In this and the following sections, we focus on console MGS services and use the phrase ‘MGS services’ to mean console MGS services, unless specified otherwise.

Parties’ submissions

- 7.81 Microsoft submitted that subscription services are expected to coexist and compete alongside other payment models, whilst remaining only a limited segment of the broader gaming industry.³¹² Microsoft submitted that [REDACTED]. Microsoft also submitted that, although MGS services were growing, the vast majority of gaming revenues would still come from gamers purchasing individual games.³¹³
- 7.82 The Parties submitted that Activision currently makes only limited back-catalogue titles available on subscription, and only on a limited time-period basis.³¹⁴ Microsoft also submitted that Activision has never published any newer content on MGS services and has no intention to do so in the future.³¹⁵ The Parties also submitted that Activision does not currently offer and has no current plans to offer an MGS service similar to XGP.³¹⁶
- 7.83 Microsoft submitted that an important reason for Activision not offering current content on MGS is because MGS sales would cannibalise Activision’s B2P sales, which are a key source of and driver of revenue for Activision. It submitted that the [REDACTED]. According to Microsoft, in the rare cases where Activision has contemplated placing its content on MGS services, its ordinary course documents consistently reflect Activision’s view that MGS services, regardless of platform, severely cannibalise B2P sales, particularly in the case of newer releases.³¹⁷
- 7.84 Activision submitted that [REDACTED] for several other reasons, including that it would [REDACTED] which, according to Activision, is important to ensure a high-quality experience in its games.³¹⁸ Activision submitted that these considerations apply even if [REDACTED], and that Activision’s incentives as an independent game developer and publisher will remain the same.³¹⁹

³¹² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.25.

³¹³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.9.

³¹⁴ CMA, [Phase 1 Decision](#), 12 October 2022, paragraph 212(e).

³¹⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.35.

³¹⁶ CMA, [Phase 1 Decision](#), 12 October 2022, paragraph 210.

³¹⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.28.

³¹⁸ Activision response to the working paper.

³¹⁹ Activision response to the working paper.

7.85 Activision also submitted that Activision's senior leadership has never supported [REDACTED].³²⁰

7.86 Microsoft also submitted that [REDACTED].³²¹

Our assessment

Future growth of MGS services

7.87 In this section, we assess the growth prospects of MGS services based on evidence from independent third party forecasts, the Parties' forecasts and internal documents, and views and evidence provided by third parties during our investigation.

Forecasts

7.88 Microsoft provided independent third party forecasts relating to the growth prospects of MGS services. One of these is a report by IDG (an industry analysis firm), which estimated that the share of MGS services relative to B2P would grow from [REDACTED]% in 2021 to [REDACTED]% in 2026.³²² We note that these IDG estimates might include any subscription services, including single-game subscriptions and services like PS+ Essential, which mainly offer access to online multiplayer and only a few monthly games. We do not consider these services to fall into our definition of MGS services for the purpose of our assessment (ie services which offer a relatively wide range of games through a subscription). Therefore, in the context of our assessment the IDG estimates might overstate the share of MGS relative to B2P.

7.89 Microsoft submitted its own estimates showing that MGS services are likely to show [REDACTED] growth relative to B2P over the next few years. It estimates that the share of MGS services relative to transactional revenue—including B2P and in-game transactions—will grow from [REDACTED]% in 2022 to [REDACTED]% in 2030.³²³

7.90 We note, however, that Microsoft's estimate may not accurately capture the growth of MGS Services relative to B2P. A more accurate comparison would either exclude in-game transactions on B2P or include them for both B2P and MGS Services. We also note that in the same estimate, Microsoft predicts the

³²⁰ Activision response to working paper.

³²¹ Microsoft response to working papers.

³²² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.24 and [REDACTED] Internal Document; these estimates are for console gaming only, ie they exclude PC, mobile, and cloud gaming; we calculated the share of MGS relative to B2P by dividing 'subscription' by the sum of 'subscription', 'digital full game', and 'physical SW' (physical software).

³²³ Parties, FMN; Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.24 and Microsoft Internal Document.

number of XGP subscribers will grow from [REDACTED] million to [REDACTED] million over the period 2022-2030. Microsoft submitted that actual realised figures for XGP subscribers demonstrated that [REDACTED].³²⁴

- 7.91 Taken together, these forecasts suggest some growth in MGS services relative to B2P in the next 5-8 years. Although it is difficult to arrive at a precise estimate, these suggest that MGS services will continue to grow and represent a higher proportion of the overall console gaming market over time. However, these forecasts also suggest that MGS will remain smaller than B2P over the same time period.

Parties' internal documents

- 7.92 Several of the Parties' internal documents suggest that, along with the traditional B2P model, the importance of MGS services in the gaming industry is increasing:

(a) One Microsoft internal email from October 2018 states that [REDACTED].³²⁵ This document suggests that [REDACTED]. This is in line with the IDG forecast discussed above, although the email is relatively dated compared to other documents presented in this section.

(b) One Activision internal document from 2020 states that [REDACTED]. The document adds that MGS services are increasing on console and mobile and that the free to play, premium and subscription business models will coexist at scale.³²⁶

(c) A document from late 2021 submitted by Microsoft states that [REDACTED].³²⁷

(d) Another Microsoft document from 2020 explains that [REDACTED].³²⁸

- 7.93 Microsoft submitted that these documents are [REDACTED]. Microsoft submitted its more recent Gaming Strategy documents show that [REDACTED], citing an internal document which states that '[REDACTED]'.³²⁹

- 7.94 According to Activision, the document in (b) above shows that Activision [REDACTED] for gaming content. According to Activision, the document does not suggest that [REDACTED].³³⁰

³²⁴ Email from Microsoft to CMA.

³²⁵ Microsoft Internal Document.

³²⁶ Activision Internal Document.

³²⁷ Microsoft Internal Document.

³²⁸ Microsoft Internal Document.

³²⁹ Microsoft response to working papers; Microsoft Internal Document.

³³⁰ Activision response to working paper.

- 7.95 Third party reports submitted by the Parties also suggest MGS services will be increasingly important:
- (a) A third party report from July 2020 held by Activision and shared with the CMA states that the expansion of new business models has boosted monetisation in the gaming industry, one of those models being MGS services.³³¹
 - (b) Another third party report from 2022 provided to the CMA by Activision states that MGS services are one ‘key development’ for the gaming industry. The document explains that the gaming industry is going through a transition towards digital services, particularly MGS services, and that gamers will be attracted to these services because they would have a lower cost access point and a large game library.³³²
 - (c) A third party report from October 2021 submitted by Microsoft states that cloud gaming and subscriptions will become an increasingly important part of the games market.³³³
- 7.96 Activision submitted that the third party reports it provided above [REDACTED] – and in any case any such assertion has not been borne out in practice, where in fact, free-to-play games account for the vast majority of growth in the gaming industry today.³³⁴ We note that the relevant question in this section is whether MGS is growing compared to B2P, not F2P. In particular, adding a F2P game to an MGS service does not lead to cannibalisation, as there is no upfront sale on that game by definition.
- 7.97 Some of Microsoft’s internal documents also talk about the future importance of XGP to its business, which is relevant to the potential prospects of growth in MGS services generally. For example:
- (a) One Microsoft internal document suggests [REDACTED].³³⁵
 - (b) Another Microsoft document from August-November 2021 indicates [REDACTED].³³⁶ This suggests that [REDACTED].
- 7.98 These documents show that Microsoft was confident in a significant growth of MGS services and XGP in the future.

³³¹ Activision Internal Document.

³³² Activision Internal Document.

³³³ Microsoft Internal Document.

³³⁴ Activision response to working paper.

³³⁵ Microsoft Internal Document [REDACTED]; [REDACTED].

³³⁶ Microsoft Internal Document [REDACTED].

Third party evidence

7.99 We received third party evidence showing that subscription-based gaming is expected to grow relative to B2P, even though the precise extent and pace of such expected growth was unclear from the evidence:

- (a) A publisher [REDACTED] submitted that it believed that in the future consumers would still want to purchase individual games but noted that the percentage of consumers purchasing subscription services was increasing. It added that subscription services would become a sizeable part of the game industry ([REDACTED]) and that it wanted to be present in it. It also explained that, although some players spent time on a limited number of games per year, the subscription model was likely to become increasingly attractive as the publishers' first-party catalogues strengthen each year. It stated that even casual gamers would find the subscription model interesting.³³⁷
- (b) One internal document from a gaming platform supplier [REDACTED] shows that this competitor is expecting the MGS market to grow and, as a consequence, is investing in its subscription services. The document notes that [REDACTED]. [REDACTED].³³⁸
- (c) One competitor [REDACTED] speculated that the gaming sector had already seen a recent shift from purchasing individual games (either digitally or physically) towards MGS services, and it thought that this was as a result of consumers' desire to access a wide variety of content.³³⁹
- (d) One publisher [REDACTED] told the CMA that MGS services are still nascent and that it believes that they may become a more notable way for players and consumers to experience new ways of accessing more games.³⁴⁰
- (e) One competitor [REDACTED] explained that the gaming industry was gradually moving towards MGS service business models.³⁴¹

Provisional conclusion on future growth of MGS services

7.100 We consider that the evidence from industry analysts, Microsoft's forecasts, the Parties' internal documents and most third party evidence indicates that MGS services are growing in importance within gaming, and will become a

³³⁷ [REDACTED] response to the CMA's RFI.

³³⁸ [REDACTED] Internal Document.

³³⁹ [REDACTED] call note.

³⁴⁰ [REDACTED] call note.

³⁴¹ [REDACTED] call note.

sizeable part of the gaming industry. However, we note that the available estimates of MGS growth vary significantly depending on the source.

7.101 The evidence also suggests that, while MGS is expected to grow relative to B2P, MGS is likely to remain a smaller part of the console gaming services market in the foreseeable future.

7.102 This expected growth could still make placing games on MGS services more attractive, as it would reduce the rate of cannibalisation of B2P sales (as the proportion of B2P sales shrinks). However, whether this would be enough to change Activision's incentives depends on the starting point, ie Activision's current incentives and its current stance and behaviour towards MGS. This is assessed below.

Publishers' behaviour on adding content to MGS services

7.103 The behaviour of rival publishers in relation to the supply of content, including their AAA titles, is a potential indicator of Activision's incentives to supply CoD and other Activision content to MGS services.

7.104 Rival publishers such as Ubisoft and Electronic Arts already offer a selected portfolio of their games as part of their own MGS service on PC, console or cloud, either on a standalone basis or as part of third party MGS services. In particular:

- (a) Electronic Arts currently offers its EA Play MGS service as part of XGP, including some latest releases and AAA game franchises like FIFA and Battlefield. However, we note that the latest version of FIFA is not available on the service.³⁴² We also note Electronic Arts' submission that the games it offered as part of EA Play on XGP are added to EA Play around 8-12 months after their release.³⁴³
- (b) Ubisoft currently offers some of its AAA games as part of XGP – these are mostly older releases with the exception of Tom Clancy's Rainbow Six Extraction, although this was not released day and date on XGP.³⁴⁴
- (c) Ubisoft also offers its Ubisoft+ MGS service as part of Amazon Luna, including some AAA game franchises and latest releases like Assassin's Creed Valhalla, Far Cry 6, and Tom Clancy's Rainbow Six Extraction.³⁴⁵

³⁴² See [EA Play | Xbox](#), accessed by the CMA on 16 January 2023.

³⁴³ [redacted] response to the CMA's s109 notice.

³⁴⁴ See [Xbox Game Pass Games Library | Xbox](#), accessed by the CMA on 16 January 2023.

³⁴⁵ See [Amazon.com: Play Ubisoft+](#), accessed by the CMA on 16 January 2023.

We note this example is not relevant to console, but rather to cloud gaming services.

- 7.105 Microsoft submitted that, unlike Ubisoft and Electronic Arts, Activision does not have a wide portfolio of games to leverage. Microsoft also submitted that Activision cannot use its main franchise on console to attract gamers that it can monetise on other titles, simply because it does not have other titles to benefit from.³⁴⁶
- 7.106 Activision submitted excerpts from public interviews by the CEOs of SIE and Take-Two, which expressed reservations about adding their major titles day-and-date to MGS services.³⁴⁷
- 7.107 We consider that the evidence from publishers' behaviour is mixed. On the one hand, some large publishers like Electronic Arts and Ubisoft are addingtheir games, including AAA content and some latest releases to third party MGS services. On the other hand, these games were almost never added to the service day and date and, in the case of some big franchises (eg FIFA), they are older releases. We also note based on public sources that some publishers (eg Take-Two) seem to be more cautious in their approach towards MGS services.

Parties' internal documents

- 7.108 Activision's internal documents suggest that Activision was [REDACTED]. For example:
- (a) One document dated May 2020 discusses [REDACTED].³⁴⁸ The document assumes [REDACTED].³⁴⁹
 - (b) Another document dated May 2020 discusses similar [REDACTED]. The document notes that [REDACTED]. However, the document suggests that [REDACTED].³⁵⁰
 - (c) In a document dated August 2021, Activision was at that time [REDACTED]. The document also explains that [REDACTED].³⁵¹

³⁴⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 4.31-4.32

³⁴⁷ Activision response to working paper.

³⁴⁸ [REDACTED]

³⁴⁹ Activision Internal Document [REDACTED].

³⁵⁰ Activision Internal Document [REDACTED].

³⁵¹ Activision Internal Document [REDACTED].

- 7.109 One internal Activision email from [REDACTED] suggests that Activision saw [REDACTED]. The same employee also notes that third party publishers putting their games on XGP [REDACTED].³⁵² Activision submitted that this document is written by [REDACTED].³⁵³
- 7.110 Despite this [REDACTED], Activision's internal documents show that it [REDACTED]. These [REDACTED] included [REDACTED]. However, we note that the most advanced negotiations [REDACTED]. In particular:
- (a) One internal document shows that Activision had presented to [REDACTED].³⁵⁴
 - (b) One document dated April 2020 shows that [REDACTED].³⁵⁵
 - (c) One Activision document dated October 2021 shows that [REDACTED]. This document states that [REDACTED].³⁵⁶
 - (d) Another document dated December 2021 discusses [REDACTED]. The document shows that [REDACTED]. The document notes that, [REDACTED]. The document also notes that [REDACTED].³⁵⁷ Activision submitted that this document presents [REDACTED].³⁵⁸
 - (e) [REDACTED] – one Activision document [REDACTED] shows that [REDACTED]. The document also notes that [REDACTED].³⁵⁹ A [REDACTED] document from May 2022 confirmed that [REDACTED]. However, the document also notes that [REDACTED].³⁶⁰
- 7.111 It is not entirely clear why [REDACTED]. The documents suggest that the main reason was that Activision [REDACTED] and that [REDACTED].
- 7.112 The documents also show that Activision has [REDACTED] and might have [REDACTED]. [REDACTED] Activision has submitted that the position of Activision's senior leadership, including its CEO, has always been [REDACTED] these internal documents [REDACTED].
- 7.113 Microsoft submitted that [REDACTED].³⁶¹ In support of this statement, Microsoft submitted a document dated March 2020 that [REDACTED]. The document shows that [REDACTED].³⁶²

³⁵² Activision Internal Document.

³⁵³ Activision response to working paper.

³⁵⁴ Activision Internal Document.

³⁵⁵ Activision Internal Document.

³⁵⁶ Activision Internal Document.

³⁵⁷ Activision Internal Document.

³⁵⁸ Activision response to working paper.

³⁵⁹ Activision Internal Document.

³⁶⁰ Microsoft Internal Document.

³⁶¹ Microsoft response to working papers.

³⁶² Microsoft Internal Document.

7.114 This was not, however, [REDACTED]. Subsequent internal documents from Microsoft [REDACTED]. For example, one document [REDACTED] shows that [REDACTED]. The document notes that [REDACTED]. The same document shows that, [REDACTED].³⁶³

7.115 Activision's internal documents also show that it considered [REDACTED]:

(a) One internal document shows that Activision [REDACTED].³⁶⁴

(b) Another document presents a detailed analysis of a possible [REDACTED]. The document notes that [REDACTED].³⁶⁵

(c) One Activision document [REDACTED].³⁶⁶

7.116 Activision submitted that the documents identified by the CMA are isolated examples of business people discussing potential ideas for the business, and that they [REDACTED]. Activision also submitted that no version of [REDACTED].³⁶⁷

7.117 These documents show, however, that Activision was actively considering [REDACTED]. Its discussions [REDACTED] concerning MGS services [REDACTED]. The documents also show that senior employees within Activision [REDACTED].

Provisional conclusion on availability of Activision content on MGS services

7.118 This evidence suggests that Activision is open to making at least some of its back catalogue and older games available on MGS services. [REDACTED].

7.119 The evidence also shows, however, that Activision is concerned about the potential impact on its B2P revenues of placing any games – especially newer games and day and date releases – on MGS services. [REDACTED]. Up until now, Activision has made its content available on subscription only to a limited extent, both in terms of the type of content available – namely, older titles – and for a limited time period.

7.120 We consider it relevant context that other AAA games (facing similar cannibalisation effects) already make some of their content available on console MGS services (eg XGP). However, we note this is almost always limited to back catalogue or older games. We also note that some large publishers do not currently add their games to MGS services.

³⁶³ Microsoft Internal Document.

³⁶⁴ Activision Internal Document.

³⁶⁵ Activision Internal Document.

³⁶⁶ Activision Internal Document.

³⁶⁷ Activision response to working paper.

- 7.121 Based on this evidence, we consider it unlikely that Activision would make its most valuable games – such as CoD – available on MGS services on the date of release in the foreseeable future absent the Merger. We believe the evidence indicates, however, that Activision would likely place increasingly valuable parts of its gaming catalogue on MGS services as these services continue to grow. This would likely include back-catalogue games, as well as Activision’s latest releases, although some time after they are released (ie, not on the date of release).
- 7.122 This therefore implies that the Merged Entity has the option of denying some or all of Activision’s gaming catalogue on MGS services to rival gaming consoles. Further, the likelihood of more valuable content appearing on MGS services would increase, over time, any ability and incentive of the Merged Entity to foreclose rivals. However, given our provisional conclusion on the market definition of console gaming services, we assess the significance and relevance of any such content on MGS services in relation to the Merged Entity’s ability and incentive to foreclose rival consoles collectively alongside B2P content in the sections that follow.

Framework for assessment

- 7.123 Vertical theories of harm involve the merged entity harming the ability of its rivals to compete post-Merger, for example through input foreclosure; raising effective prices or worsening non-price aspects, such as quality, of an input to its rivals (partial input foreclosure); or refusing to supply them completely (total input foreclosure). Such actions may harm the ability of the merged entity’s rivals to provide a competitive constraint on the merged entity, and thereby lead to higher prices, worse quality or less choice for consumers. The CMA only views foreclosure as anticompetitive where its effect is to reduce competition sufficiently to give rise to an SLC in the affected market, not where it merely disadvantages one or more competitors.
- 7.124 The concern under an input foreclosure theory of harm is that the Merger may lead to Microsoft using Activision’s games to foreclose rival console providers, harming their current and future ability to compete in the supply of consoles; thereby leading to lower quality, higher prices or less choice for consumers. Specifically, we consider whether Microsoft could harm its rivals’ competitiveness and thus lessen current and future competition in gaming consoles through the following foreclosure strategies (which could be used in isolation or combination):
- (a) **total foreclosure:** making either current and/or future Activision content unavailable on rival consoles (ie exclusive to Xbox);

(b) **partial foreclosure**, which includes several potential strategies such as:

- (i) making Activision content available for release on rival console gaming platforms at a later date compared to Xbox (ie timed exclusivity);
- (ii) degrading the graphical quality (eg resolution and framerate) of Activision gaming content available to rival console gaming platforms;
- (iii) making features or upgrades of Activision games unavailable to other console gaming platforms (ie content exclusivity); and/or
- (iv) raising the wholesale price of Activision content on rival console gaming platforms.

7.125 We are assessing overall whether the Merged Entity would have the ability and incentive to engage in partial and/or total foreclosure strategies and the effect of these strategies. We note, however, that our assessment does not presuppose any specific foreclosure strategy. The Merged Entity may focus first on partial foreclosure strategies with the expectation of shifting users to its platform over a period of time, gradually shifting to a total foreclosure strategy. Our assessment does not assume any particular combination or order of foreclosure strategies but considers more generally whether the Merged Entity would have the ability and incentive to engage in these strategies, and how that would affect competition.

7.126 Our assessment below focuses on the strategies that the Merged Entity could engage in using CoD, as CoD constitutes [X] % of Activision revenue on consoles.³⁶⁸ We note, however, that Activision makes other games available on PlayStation and other consoles (such as Overwatch, another shooter game and Diablo, an action role-playing game). To the extent that the Merged Entity could use these other Activision games to foreclose rivals, our assessment below underestimates the effect on competition that the Merger could have in the market for gaming consoles.

7.127 We consider that any foreclosure of Microsoft's console rivals would affect console hardware and the related storefronts (including subscription services). This is because gaming consoles are integrated in terms of their offer of hardware and digital storefronts (as discussed in the market definition section above).

³⁶⁸ Parties, submission to the CMA.

7.128 As noted above, we consider that Nintendo competes less closely with Xbox as compared to PlayStation. Therefore, we consider that SIE is the currently binding competitive constraint on Microsoft, and to assess whether competition is affected as a result of the Merger, we are assessing whether this closest rival in the console gaming market would be foreclosed. This theory of harm, therefore, focuses on the potential impact of the Merger on SIE. In our assessment of whether Microsoft may harm SIE's ability to compete in consoles by denying or worsening its access to Activision's games, we follow the framework set out in the Merger Assessment Guidelines for assessing input foreclosure theories of harm.³⁶⁹ We consider whether three cumulative conditions are satisfied:³⁷⁰

- (a) Would the Merged Entity have the ability to use its control of inputs to harm the competitiveness of SIE?
- (b) Would it have the incentive to actually do so, ie would it be profitable in the short-term and/or long-term?
- (c) Effects of foreclosure: would the foreclosure of SIE substantially lessen overall competition between console gaming providers?

Ability to foreclose

7.129 In order to assess whether the Merged Entity will have the ability to foreclose rivals in the downstream gaming console market, we have considered evidence on the following factors:

- (a) the importance of content to a gaming platform such as a console, including SIE's PlayStation;
- (b) the importance of Activision content, particularly CoD, to SIE; and
- (c) the extent to which rival gaming consoles, particularly SIE, can substitute CoD with effective alternatives.

7.130 The MAGs explain that the CMA will typically focus on two issues when assessing whether the Merged Entity will have the ability to foreclose its rivals, namely: (i) market power upstream (looking at *inter alia* the structure of the upstream market and ability of downstream rivals to switch to a range of effective alternatives); and (ii) the importance of the input (assessing whether the input the merged entity will supply plays an important role in shaping

³⁶⁹ CMA129, paragraphs 7.9-7.22.

³⁷⁰ CMA129, paragraph 7.9.

downstream competition). In this case, this involves assessing whether Activision's content has market power in the upstream market for console publishing, and whether Activision content is an important input to PlayStation in particular, which we explore below through the three factors set out above.

7.131 The three factors above allow us to assess both the upstream market power of Activision's content, and in particular CoD, to the console gaming market and its importance to PlayStation in particular, and are discussed for the rest of this section. We then assess contractual arrangements in relation to the Merged Entity's ability to foreclose.

Importance of content

Parties' views

7.132 The Parties submitted, based on a detailed conjoint analysis conducted in the ordinary course of business, that the most important factor in the choice of console is the price of the console. That is followed by the type of console which the gamer currently owns (ie, whether the owner already has an Xbox or PlayStation), with content offered by the new console being further down the list.³⁷¹ The Parties, however, also acknowledge in other submissions that content plays a role in the success of a gaming platform like a console. For example, in response to the CMA's issues statement, Microsoft refers to the gaming industry as 'content-focused' while discussing content exclusivity.³⁷²

Our assessment

Third parties' views and internal documents

7.133 Overall, third parties have stated that content is one of the main reasons for consumers' choice of platform:

- (a) One third party [REDACTED] told the CMA that the key driver for consumers is content. The same company also added that if a user is going to switch to another platform, content will generally be the motivation for that. The third party explained that it attracts and retains new customers by marketing to consumers that it offers the best range of content.³⁷³
- (b) Another gaming platform supplier [REDACTED] also explained that the quality and number of games as well as the franchises offered are the most important

³⁷¹ Microsoft response to working papers.

³⁷² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.66.

³⁷³ [REDACTED] call note.

factor driving consumers' decisions.³⁷⁴ In particular, this competitor stated that “quality of games” is the single most influential driver of engagement for a platform, above other attributes including graphics, interface, and hardware. It submitted that, for most gamers, popular content is more important than any customer loyalty towards a particular platform.³⁷⁵

7.134 Various internal documents from a third party [REDACTED] further show the importance of content, [REDACTED].

- (a) An internal document dated [REDACTED] emphasises that the game library available on a platform is an important element of the gaming experience and thus it is highly important to consumers. The document says that the size [REDACTED], and this is also not likely to change following Xbox’s significant investments.³⁷⁶
- (b) The same document emphasises the importance of exclusives, mentioning that for Xbox to increase its software strength it needs to [REDACTED].³⁷⁷

7.135 Another internal document produced by the same third party [REDACTED] also discusses how the quality and variety of content is a key factor in consumers’ satisfaction with their console. It assesses the factors that contribute to user satisfaction [REDACTED] and shows that ‘quality of games’ is the most important factor contributing to gamers’ satisfaction [REDACTED], which is closely followed by ‘Variety of games’.³⁷⁸

Evidence from the Parties’ internal documents

7.136 Various internal documents from Microsoft indicate that the company considers content (especially large game franchises and exclusive content) to be an important factor affecting both customers’ choice of console and the attractiveness of Xbox’s subscription service:

- (a) For example, in an interview with the US's Federal Trade Commission (**FTC**) [REDACTED].³⁷⁹ In the same interview he added that, [REDACTED].³⁸⁰

³⁷⁴ [REDACTED] submission to the CMA.

³⁷⁵ [REDACTED] response to the CMA's RFI.

³⁷⁶ [REDACTED] Internal Document.

³⁷⁷ [REDACTED] Internal Document.

³⁷⁸ [REDACTED] Internal Document.

³⁷⁹ FTC transcript.

³⁸⁰ FTC transcript.

- (b) An internal email exchange between members of Microsoft's PR team that discusses Microsoft's strategy for the next generation of consoles notes that [REDACTED]. The document states that [REDACTED].³⁸¹
- (c) One Microsoft internal document highlights [REDACTED],³⁸² [REDACTED].³⁸³
- (d) A report prepared by IDG Consulting and submitted by the Parties confirmed that [REDACTED]. The report also outlined that [REDACTED].³⁸⁴
- (e) A Microsoft internal document explains that [REDACTED].³⁸⁵
- (f) Finally, in reference to the importance of content to Microsoft's future gaming offerings, one Microsoft internal document explains that [REDACTED].³⁸⁶ We note the Parties' submission that [REDACTED].³⁸⁷ However, we consider that franchises with annual releases of sophisticated graphically-intensive multiplayer titles (such as CoD) are well placed to offer [REDACTED] given their strong brand recognition.

7.137 We also reviewed documents which suggest content, especially AAA day and date releases, drives the success of MGS services (including on consoles). These documents suggest that acquiring a big publisher would have a severe impact on the ability of rival MGS services to succeed:

- (a) One email from [REDACTED].³⁸⁸
- (b) One Microsoft email dated January 2022 contains [REDACTED].³⁸⁹

7.138 Internal documents from Activision also emphasise the importance of large game franchises in driving consumer engagement and spend. For instance, an Activision strategy document, in discussing the competitive landscape in publishing, notes that [REDACTED]. The document also noted that developers are increasingly [REDACTED].³⁹⁰

Evidence from the CMA survey

7.139 The CMA survey responses provided some information on the importance of the content available on a console as a choice factor when purchasing a

³⁸¹ Microsoft Internal Document.

³⁸² [REDACTED]

³⁸³ Parties Internal Document.

³⁸⁴ Parties Internal Document.

³⁸⁵ Microsoft Internal Document.

³⁸⁶ Microsoft Internal Document.

³⁸⁷ Microsoft, response to working papers.

³⁸⁸ Microsoft Internal Document.

³⁸⁹ Microsoft Internal Document.

³⁹⁰ Activision Internal Document.

console. A total of 89% of respondents to the CMA survey said that the available games were quite important (32%) or very important (57%) as a choice factor.

7.140 The other factors that respondents considered quite important or very important in their choice of purchasing a PlayStation were

- (a) the possibility of playing with friends and/or family members who also own a PlayStation (87%) and with other PlayStation gamers in general (67%);
- (b) PlayStation's superior technical specifications, performance, visual appeal and features (89%); and
- (c) the better value for money of PlayStation's offer compared to other consoles (75%).

7.141 We note that the CMA survey was targeted at CoD gamers and therefore may not be representative of console gamers more broadly—we consider this evidence in the round along with the other evidence on the importance of content.

Provisional conclusion on the importance of content

7.142 We consider that the evidence indicates that content is a very important factor affecting the choice of a console (including its MGS services offering) and driving consumer engagement. This is supported by evidence from internal documents from both Parties, third parties' submissions and evidence from the CMA survey.

Importance of CoD to SIE

7.143 Having provisionally found that content is important for console providers, we now consider the importance of Activision's content – and in particular CoD.

7.144 The CMA's Merger Assessment Guidelines (**MAGs**) explain that, if downstream rivals can easily switch away from the upstream party to a range of effective alternative suppliers, they will be less likely to suffer harm than if the merged entity occupies an important position upstream.³⁹¹ The starting point for this assessment will be the structure of the upstream market. As such, we consider upstream shares of supply in this section, as well as the alternative content available. The MAGs also explain that 'The merged entity could only harm the competitiveness of its rivals if the input it supplies plays

³⁹¹ [CMA129](#), paragraph 7.14(a).

an important role in shaping downstream competition. In assessing this the CMA will have regard to all foreclosure mechanisms, so will consider not only the proportion of rivals' costs that the input accounts for, but also for example the role it plays as a determinant of product quality or the rate of innovation. Its focus will be not on predicting the precise impact of each possible deterioration on rivals' businesses, but on the overall question of whether in aggregate they could be foreclosed.³⁹² We therefore consider in this section the role Activision's content, and in particular CoD, plays in shaping downstream competition by looking at the evidence on the importance of CoD to SIE's PlayStation.

Parties' views

- 7.145 Microsoft submitted that the Merged Entity will not have upstream market power, given Activision's low shares in terms of various metrics both in overall console game publishing and within the narrower segment of shooter games for consoles.³⁹³ Microsoft further submitted that CoD's popularity varies over time and does not equate to market power (eg CoD Vanguard saw drops in purchases and player engagement).³⁹⁴
- 7.146 Microsoft submitted that CoD is not an important input to consoles because (i) gaming platforms like Nintendo and Steam have prospered without access to CoD; (ii) CoD did not drive platform adoption; (iii) a majority of Xbox users did not play CoD; (iv) for the vast majority of gamers, CoD was a small component of their overall gaming consumption;³⁹⁵ and (v) gamers play multiple games and were not likely to be influenced to switch by a single game.³⁹⁶
- 7.147 Microsoft further submitted that SIE had overstated the importance of CoD to its viability because (i) CoD represented a small share of PlayStation's digital sales and total MAUs worldwide in 2021,³⁹⁷ and (ii) CoD's significance to SIE was fuelled by SIE's marketing efforts and that it would be misleading to compare CoD with games that SIE does not market.³⁹⁸

³⁹² CMA129, paragraph 7.14(b).

³⁹³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.5.

³⁹⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.27.

³⁹⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.7.

³⁹⁶ Parties, submission to the CMA.

³⁹⁷ Microsoft [response to the phase 1 decision](#), 11 October 2022, paragraph 3.17.

³⁹⁸ Microsoft [response to the phase 1 decision](#), 11 October 2022, paragraph 3.18.

Our assessment

7.148 In order to assess the importance of CoD to PlayStation, we have assessed evidence on the following aspects:

- (a) First, we have considered evidence on shares of supply, including (i) upstream game publishing shares of supply across consoles and on PlayStation; and (ii) shares of supply within the narrower segment of shooter games on PlayStation.
- (b) We then consider other evidence the importance of CoD to PlayStation, including (i) the level of engagement and spend by CoD gamers on PlayStation; (ii) evidence on CoD's role in console adoption, (iii) the success and longevity of the CoD franchise; (iv) evidence from revenue sharing agreements of consoles with various publishers including Activision; and (v) evidence from the Parties' valuation model.

Shares of supply

- *Introduction*

7.149 The share of gamers' time and money spent on playing CoD is an indicator of the relative value they derive from playing CoD as compared to other games. In that sense, the greater CoD's share of supply within console game publishing, the more significant CoD is likely to be in influencing gamers' perception of how good the range of games on PlayStation would be.

7.150 Given the various cuts of shares of supply available, we first assess which metrics are the most informative of CoD's upstream market power and its importance to PlayStation:

- (a) First, we consider Activision's share of supply in the overall upstream console game publishing market.
- (b) Second, we consider whether Activision's shares of supply in publishing on PlayStation are more relevant to our assessment of the importance of CoD to PlayStation than the shares in overall game publishing on all consoles. As noted above, shares of consumers' time and money spent on playing CoD on PlayStation would help us understand what proportion of SIE's range is currently accounted for by CoD, and therefore the impact on its competitive offering if it were no longer available or available on worse terms. While shares across all consoles are indicative of CoD's upstream market power within the console publishing market, they may understate the importance of CoD to PlayStation in particular because

they will include (i) games that are popular to gamers that play on other consoles such as Nintendo which, as set out above, has a differentiated offer and is not as close a competitor to Xbox and PlayStation, and (ii) first-party content held by Microsoft and Nintendo that may not be available to PlayStation.

- (c) Third, we consider whether it is appropriate to assess shares of supply within genres (the shooter genre for CoD) or across all genres. As evidenced above, there is a certain degree of differentiation between genres in terms of their product offering, with games within a genre being considered most substitutable than across genres. The evidence also indicates that, whilst some users play games across genres, others are likely to prefer shooter games (and therefore may not find other games substitutable for that proportion of money or time spent). This means that shares of supply across all game genres might understate the importance of games that are within a genre (and that further matters if the genre itself is important, which is true for shooters as evidenced above). Therefore, whilst we consider the shares of supply across genres, we also look at the shares within the segment of shooter games to understand the extent to which shares across all genres may be an underestimate of the true importance of CoD to PlayStation.
- (d) Fourth, we consider the relevance of shares of supply on a global and UK basis. As discussed in Chapter 5, we provisionally consider the geographic market for console game publishing to be global, whereas we provisionally consider the appropriate geographic market for console gaming services to be the UK (while taking account of broader evidence where relevant). In assessing whether the Merged Entity has the ability to foreclose, given our focus on whether PlayStation could be foreclosed (weakened) as a competitor in the UK, we consider UK shares to be more relevant.³⁹⁹ In addition, global figures may include sales patterns for regions where CoD may be less important and may therefore include constraints that are not really going to recapture sales if CoD is hypothetically foreclosed. As such, we discuss UK shares in the below assessment, but we also consider global shares where they are significantly different.

7.151 Finally, we have not considered shares of supply in isolation. In a highly differentiated market such as console game publishing, some games may be more or less important than their shares of supply suggest. We therefore

³⁹⁹ On the other hand, when we assess the Merged Entity's incentives to foreclose, our assessment is mainly at a global level as we recognise that decisions on game exclusivity etc are often made globally.

consider other evidence on the importance of CoD before concluding on the importance of CoD to SIE.

- *Shares of supply by consumer spend and gametime*

7.152 In this section, we consider the shares of supply by consumer spend and gameplay time constituted by CoD.

7.153 **Share of supply of games on all consoles:** First, we consider Activision's share of supply in the overall upstream console publishing market. The Parties' submissions and data from third party market testing (for revenues only) show that Activision's share in console game publishing in the UK is [REDACTED]% by revenue, [REDACTED]% by digital downloads and [REDACTED]% by gameplay time.⁴⁰⁰ The other publishers and their shares (by revenue in console publishing in the UK) were EA ([REDACTED]%), Nintendo ([REDACTED]%), Take-Two ([REDACTED]%), Ubisoft ([REDACTED]%), SIE ([REDACTED]%) and Epic Games ([REDACTED]%)—we discuss them further in the section on available alternatives to CoD below.

7.154 However, as discussed above, we are of the view that shares of supply across all consoles are likely to underestimate Activision's strength in publishing and its importance to PlayStation. We therefore consider other relevant metrics of shares of supply below.

7.155 **Share of supply within all games to PlayStation:** Second, we consider the share of supply accounted for by Activision content, particularly CoD, as a proportion of all games currently available on SIE's PlayStation platform, without differentiating between genres.

7.156 Activision games, and CoD in particular, constituted a significant share of PlayStation consumer spend and gameplay time. Data from [REDACTED]⁴⁰¹ showed that:

- (a) Activision had a share of [REDACTED]% by consumer spend in 2021 globally and in the UK (with Microsoft representing a further [REDACTED]%).⁴⁰² In particular, CoD constituted [REDACTED]% of PlayStation consumer spend in the UK and globally.⁴⁰³

⁴⁰⁰ Parties, FMN. Globally, Activision's shares in console game publishing are [REDACTED]% by revenue, [REDACTED]% by digital downloads and [REDACTED]% by gameplay time.

⁴⁰¹ [REDACTED] Internal Document; and [REDACTED] Internal Document.

⁴⁰² Consumer spend includes digital spend and in-game purchases on B2P games. While we exclude physical spend, including it does not make a material difference to the shares of CoD on PlayStation.

⁴⁰³ All Activision games constituted [REDACTED]% of PlayStation spend in the UK and globally, with Microsoft representing a further [REDACTED]%.

(b) Activision constituted [REDACTED]% of gameplay time on PlayStation, with CoD alone accounting for [REDACTED]% in the UK. Globally, CoD's share was [REDACTED]%.

7.157 Additionally, we note that both consumer spend and gameplay time were concentrated on a few large game franchises including CoD on PlayStation, with a long tail of other games with lower shares of spend/gameplay time. Data from [REDACTED] showed that, in the UK, [REDACTED] of PlayStation's consumer spend and [REDACTED] of PlayStation's gameplay time was on three franchises in 2021, including CoD. There were only two other titles—[REDACTED] and [REDACTED]—at similar levels of spend and gameplay time as CoD on PlayStation.⁴⁰⁴ We discuss this further in the section on available alternatives to CoD below.

7.158 We note that the above shares of spend and gameplay time are consistent with the Parties' submission that CoD represented [REDACTED]% of SIE's digital sales worldwide in 2021.⁴⁰⁵

7.159 **Share of supply of shooter games to PlayStation:** Shares of supply within the shooter genre indicate that CoD is particularly important to PlayStation in this genre. Data from [REDACTED] showed that CoD accounted for a large share of PlayStation's revenue from shooter games in the UK, constituting [REDACTED]% of total spend and [REDACTED]% of gameplay time on PlayStation's shooter games in 2021.⁴⁰⁶ CoD similarly was important to PlayStation in shooter games globally, accounting for [REDACTED]% of consumer spend ([REDACTED]% if we only considered first-person shooters) and [REDACTED]% of gameplay time ([REDACTED]% for first-person shooters) in 2021.⁴⁰⁷

7.160 The only other shooter game that was similar to CoD in terms of consumer spend shares of supply was [REDACTED] ([REDACTED]% in the UK), with the next highest share being that of [REDACTED] ([REDACTED]%⁴⁰⁸). As above, we discuss alternative shooters further below.

- *Size and engagement of CoD gamers on PlayStation*

7.161 In this section, we assess the number of PlayStation gamers who play CoD, and the extent of their engagement with the game.

7.162 Microsoft submitted that [REDACTED]% of Xbox gamers did not play CoD in a specific year. According to Microsoft, amongst those gamers that do play CoD, the majority only do so for a short period of time.⁴⁰⁹ In particular, among gamers

⁴⁰⁴ [REDACTED] Internal Document; and [REDACTED] Internal Document.

⁴⁰⁵ Microsoft [response to the phase 1 decision](#), 11 October 2022, paragraph 3.17.

⁴⁰⁶ [REDACTED] Internal Document.

⁴⁰⁷ [REDACTED] Internal Document.

⁴⁰⁸ [REDACTED] Internal Document.

⁴⁰⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.7(c).

that played at least one hour of Call of Duty on Xbox in 2021, more than [redacted]% played it for less than [redacted]% of their total gaming time and [redacted]% of Call of Duty gamers spent less than [redacted]% of their gaming time on the game.⁴¹⁰ The Parties also submitted that gamers play multiple games. More than [redacted]% of gamers on Xbox played at least three games during 2021, with only [redacted]% of total game time accounted for by gamers that played two or fewer games throughout the year.⁴¹¹

7.163 [redacted] data shows that CoD has a large and fairly engaged user base on PlayStation globally:

- (a) [redacted]% of PlayStation's yearly active users on PS4 or PS5 with gameplay played a CoD game in 2021.⁴¹² In terms of the number of PlayStation devices, [redacted]% of devices played a CoD game in 2021.
- (b) In terms of engagement, out of the PlayStation devices that played a CoD game in 2021, [redacted]% played it for all their time, [redacted]% played it for more than 80% of their time, and [redacted]% played CoD for a significant amount of time (>20%).⁴¹³

7.164 While we acknowledge that the above figures are largely consistent with the Parties' submissions that a majority of PlayStation gamers do not play CoD and some CoD gamers are not highly engaged, we note that the shares of supply figures that we present above (eg [redacted]% by consumer spend, [redacted]% by gametime) already take that into account. Additionally, the shares are indicative of how much of PlayStation's 'range' of game offering is accounted for by CoD, and this is relevant to how much scope there is for PlayStation's overall range to be affected by CoD. It is not necessary for a majority of consumers to consume a product in a retailer's range for that product to contribute substantially to the overall attractiveness of that range and therefore to that rival's competitive offering.

Other evidence on the importance of CoD

7.165 In the previous sections we looked at the share of spend and gameplay time that CoD accounts for and the size and engagement of the CoD gaming community. However, as noted above, shares do not capture everything because (i) there is differentiation even within the segments considered, and

⁴¹⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.7(f).

⁴¹¹ Parties, submission to the CMA. [redacted].

⁴¹² PlayStation's YAU are defined as the de-duplicated number of PlayStation accounts on the PS4 or PS5 that had any gameplay in 2021. CoD's YAU are defined as the de-duplicated number of accounts that played any CoD game on the PS4 or PS5 in 2021. The percentage of PlayStation's YAU that played CoD across all devices (including PS3 and those with no gameplay and only multimedia usage) is [redacted]%.

⁴¹³ [redacted] submission to the CMA.

(ii) some games with equal spend or time spent may have a greater or lesser influence on console choice than others. We therefore consider additional evidence on the importance of CoD.

- *Overall spend and gameplay of CoD gamers on PlayStation*

7.166 In this section, we assess whether CoD drives engagement and spend on other games on PlayStation.

7.167 SIE submitted estimates purporting to show the importance of CoD to their overall business. In particular, SIE submitted that CoD gamers on PlayStation generated estimated annual platform spending of around [REDACTED] billion on hardware, peripherals, subscriptions, games, and other PlayStation services and that this represented around [REDACTED]% of total spending on hardware, peripherals, subscriptions, games, and other PlayStation services.⁴¹⁴

7.168 However, we consider that SIE's estimate overstates CoD's importance. The figure above includes spend of every user who played CoD regardless of the time spent on it. We consider that it would be more relevant to assess the importance of CoD by reference to users' engagement with CoD and the proportion of overall spend on PlayStation.

7.169 As shown in the table below, the evidence provided by [REDACTED] showed that:⁴¹⁵

- (a) Gamers that spent more than 80% of their time on CoD accounted for [REDACTED]% of total platform spend (including [REDACTED]% of all B2P game spend, [REDACTED]% of hardware spend and [REDACTED]% of subscription spend) and [REDACTED]% of total gameplay time on PlayStation;
- (b) Gamers that spent more than 50% of their time on CoD accounted for [REDACTED]% of total platform spend (including [REDACTED]% of all B2P game spend, [REDACTED]% of hardware spend and [REDACTED]% of subscription spend) and [REDACTED]% of total gameplay time on PlayStation; and
- (c) Gamers that spent more than 20% of their time on CoD accounted for [REDACTED]% of total platform spend (including [REDACTED]% of all B2P game spend, [REDACTED]% of hardware spend and [REDACTED]% of subscription spend) and [REDACTED]% of total gameplay time on PlayStation.

7.170 Therefore, we consider the evidence above shows that customers that spent a significant amount of time playing CoD accounted for a substantial proportion of revenue across PlayStation's business, including customer

⁴¹⁴ SIE [response to the Issues Statement](#), 28 October 2022, paragraph 12.

⁴¹⁵ [REDACTED] Internal document.

spending on other games, hardware, and subscription on PlayStation. These customers also accounted for a significant fraction of total gameplay time on PlayStation across all games.

- *Diversion of spend and gameplay time based on survey evidence*

7.171 Along with the above evidence of overall spend and gametime by CoD gamers, evidence from the CMA survey is likely to be indicative of the actual spend and gametime that PlayStation would lose based on stated diversions of CoD gamers.

7.172 Our survey asked CoD gamers on PlayStation to think about the time when they bought their most recent PlayStation. The survey asked what they would have done if the most recent CoD game they owned at that time had not been available on PlayStation, but had been available on Xbox and PC.

7.173 Results indicated that 24% of respondents would have bought an Xbox, a PC, or no gaming device at all instead of a PlayStation. Adjusting this figure to account for all PlayStation users rather than the respondents considered in the survey, we found that withholding CoD from PlayStation would have made [X]% of UK PlayStation users move away from PlayStation.⁴¹⁶

7.174 Adjusting this diversion of PlayStation gamers to diversion of spend/ gametime, we found that the impact on PlayStation amounts to at least [X]% of spend and [X]% of gametime. This is because we found that globally, the average 'non-casual' CoD gamer in 2021 spent between 1.6 and 1.8 times more than the average gamer that did not play CoD on PlayStation.⁴¹⁷ This is even higher (2.1) when we look at gametime.⁴¹⁸

7.175 There are reasons why this [X]% is an underestimate of the real impact. For example:

- (a) Some of the CoD gamers that decided to stay on PlayStation will likely reduce their spend and gametime on PlayStation generally in the absence of CoD. Assuming all CoD gamers that stay on PlayStation reduce their

⁴¹⁶ Microsoft submitted an alternative calculation that indicates that less than [X]% of PlayStation gamers would move away (Microsoft response to working papers, response to respondent level survey data). However, this is based on three adjustments we do not consider appropriate: excluding gamers who play only the free Warzone game, calculating the percentage of respondents who would buy an Xbox instead (excluding those who would buy a PC instead or no gaming device) and then re-scaling this percentage to reflect the proportion of the total PlayStation gamer population that Microsoft submitted the CMA's survey took as its research population ([X]%; using published Monthly Average User statistics rather than annual figures).

⁴¹⁷ We classify gamers with engagement levels of 5-100% on PlayStation globally to be a 'non-casual' CoD gamer, ie we exclude gamers with engagement of 0-5% (whose average CoD gaming hours were equal to [X] globally in 2021).

⁴¹⁸ CMA analysis of [X] data.

spend to the same level as the average gamer that did not play CoD would lead to a further reduction in spend of [X]% of spend and [X]% of gametime. This leads to a potential total impact of [X]% on consumer spend, and [X]% on gameplay time. We note that not all gamers will reduce their spend and gameplay time in the absence of CoD, but to the extent that gamers reduced their spend even by a fraction of their average CoD spend, there would still be a significant impact on PlayStation's spend and gametime.

(b) We are assuming all gamers who are part of the wider PlayStation user base that were ineligible for and hence excluded from our survey sample (because, for example, they do not play CoD) do not move away from PlayStation at all. In fact, some gamers might decide to move away from PlayStation because, for example, their friends (who play CoD) did in reaction to foreclosure. This will increase the overall impact of foreclosure on PlayStation.

7.176 On the other hand, multi-homing may decrease the impact that foreclosure has on PlayStation. Our survey indicates that, of those who owned more than one gaming device, 38% spent some of their game time using more than one gaming device (while the rest spent most of their time on one primary device). For consoles, this multi-homing can be within the same generation or with consoles across different generations. These gamers are likely to maintain some of their game time on PlayStation, at least in the short term. However, we consider it is likely that gamers will progressively switch more of their game time onto their new device, particularly for gamers that multi-home across devices of different generations, eg an old PlayStation and new Xbox.

7.177 Results from the CMA survey in relation to partial foreclosure are similar, albeit slightly lower than the diversion in the total foreclosure scenario described above. Results indicated 16% of our survey respondents, ie [X]% of UK PlayStation users move away from PlayStation in the event of a specific type of partial foreclosure strategy (ie content exclusivity). We have reservations on the results of our survey in relation to partial foreclosure, and discuss these below when we discuss our modelling of the Parties' incentive to foreclose.

7.178 We therefore provisionally consider that the above evidence shows that PlayStation is likely to lose a significant share of its spend and gametime based on CoD gamers switching away from it.

- *CoD's role in console adoption*

7.179 Microsoft submitted that CoD does not drive platform adoption. It submitted that between 2016 and 2022 only [redacted]% of gamers played CoD as their first game on their new Xbox console, and [redacted]% of new Xbox gamers never played or purchased Call of Duty content on Xbox. The Parties stated that [redacted] was the most common first played game, with [redacted], [redacted] and numerous other titles being played first.⁴¹⁹

7.180 Evidence from third party internal documents suggests that CoD is a major driver of console sales.

(a) For example, one [redacted] document prepared in [redacted] stated that over [redacted].⁴²⁰ Based on third party data, we note that this constitutes at least [redacted]% of PS4's installed console base.⁴²¹ The document also stated that CoD titles represented [redacted], and that [redacted].

(b) Another [redacted] internal document prepared in [redacted] shows that, based on [redacted], CoD is the second most important game in the UK for driving purchase interest [redacted].⁴²² The same internal document finds that for more engaged consumers, the importance of CoD is even bigger. [redacted].⁴²³ [redacted].⁴²⁴

7.181 We considered additional evidence to understand how relevant CoD is in the adoption of PlayStation consoles:

(a) First, we considered the proportion of PlayStation gamers globally who played CoD on the first day of buying the console. Data from [redacted] showed that [redacted]% of PlayStation gamers played CoD on the first day of gameplay on their new console in 2021, followed by [redacted] ([redacted]%), [redacted] ([redacted]%), [redacted] ([redacted]%) and [redacted] ([redacted]%).⁴²⁵ CoD was also the most played franchise on the first day of gameplay in 2020 globally, and ranked 3rd in 2018 and 2019 and 2nd in 2017.⁴²⁶

(b) Second, we considered the proportion of PlayStation consoles sold in a year globally that were used to play CoD in the first month following their

⁴¹⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.25(a).

⁴²⁰ [redacted] submission to the CMA.

⁴²¹ IDG data submitted by the Parties indicated an installed console base of [redacted] million PlayStation 4 in the US. Whilst the time period over which the [redacted] figure is measured over is unclear, considering the entire PS4 console base would be a lower bound of the share of console sales driven by CoD.

⁴²² [redacted] Internal Document.

⁴²³ [redacted] Internal Document.

⁴²⁴ [redacted] Internal Document.

⁴²⁵ [redacted] submission to the CMA.

⁴²⁶ [redacted] Internal Document.

purchase. Data from [REDACTED] showed that [REDACTED]% of PlayStation consoles sold in 2021 were used to play CoD in the first four weeks of gameplay, followed by [REDACTED] ([REDACTED]%), [REDACTED] ([REDACTED]%) and [REDACTED] ([REDACTED]%). CoD was also the most played game in the first four weeks following console purchase in 2020, ranked third in 2018 and 2019 and second in 2017.⁴²⁷

7.182 The above statistics show that a significant proportion of PlayStation gamers play CoD as one of their first games on buying a PlayStation, indicating that CoD is a key driver of platform adoption.

7.183 Evidence from the CMA survey also showed that the availability of CoD was an important factor in choice of console for survey respondents.

(a) Among the respondents who stated that the availability of content on a console is important (89% of our sample), 73% of them said that the availability of CoD influenced them towards buying a PlayStation.

(b) At an aggregate level, this was similar to those that were influenced by the availability of one or more PlayStation exclusive games (69%). However, individual PlayStation exclusives influenced smaller fractions of respondents—in particular, respondents were influenced by God of War (41%), Last of Us (39%), Marvel's Spider-man (37%) and Ghosts of Tsushima (25.5%).

(c) A significantly smaller share of respondents picked other games as being important in their choice of consoles: these games included GTA (45%), Assassin's Creed (23%), Fortnite (17%), Star Wars (15%) and Other (15%).

7.184 We note that evidence from the CMA survey in relation to the availability of games in driving console choice is likely to overstate the importance of CoD given the CMA survey was targeted at CoD gamers—we therefore place less weight on this piece of evidence but consider it in the round along with the other evidence on the importance of CoD.

7.185 Microsoft submitted that the success of platforms that do not offer CoD, such as Nintendo and Steam (on PC), show that CoD is not important to the success and adoption of a platform.⁴²⁸ However, we note that:

(a) Nintendo is not a close competitor to Xbox or PlayStation (as set out above).

⁴²⁷ [REDACTED] Internal Document.

⁴²⁸ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.40(a) and (b).

(b) Steam is not a gaming console, and the competitive dynamics of PC are different to consoles as noted in Chapter 5. PC gamers can access a range of content from different PC stores, including Steam and others, which they can then play on the same PC. This is different to the market for consoles, where most customers typically select one console, and that choice is driven in large part by the content available on the storefront for that console.

7.186 Microsoft also submitted that making CoD exclusive on Battle.net on PC since 2018 [redacted].⁴²⁹ We however note the following points in relation to the above:

- (a) The comparison is not analogous because the alternative available to CoD PC gamers when it was withdrawn from Steam was Battle.net, which only offered Activision games. On the other hand, in the event of a withholding from or material degradation of CoD on PlayStation, CoD gamers on console would have the choice of Xbox, which offers a significantly larger catalogue of games relative to Battle.net. Therefore, it is likely to induce greater switching relative to Battle.net.
- (b) Notwithstanding the above, making CoD exclusive on Battle.net allowed Activision to compete with Steam by offering fewer than 10 games, whilst Steam offered c.8000 games in 2018.⁴³⁰ The fact [redacted] shows the strength of the Activision portfolio, particularly CoD.⁴³¹

- *Success and longevity of the CoD franchise*

7.187 In this section, we consider additional evidence on the overall performance of CoD over time.

7.188 Evidence shows that CoD has been one of a small number of large and consistently successful game franchises available to gamers for many years. As can be seen from the figure below, CoD has had a new release every year since 2012, with each title selling at least [redacted] units worldwide (except CoD Vanguard, which sold [redacted] units).⁴³²

Figure 7.1: Sales of CoD titles (millions of units)

[redacted]

Source: Activision, 'Activision – Call of Duty: CMA Site Visit'.

⁴²⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.40(b).

⁴³⁰ [statista.com](#), accessed by the CMA on 19 December 2022.

⁴³¹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, Figure 31.

⁴³² Prior to 2012, CoD had a release at least once every two years, starting in 2003.

7.189 Microsoft submitted that CoD's popularity varies over time and success in the previous release does not guarantee the success of future titles (eg CoD Vanguard saw drops in purchases and player engagement).⁴³³ We agree that there was a drop in the total number of monthly active users across all CoD titles after the Vanguard release turned out not to be as successful (no change in the first 3 months after the release of CoD Vanguard, however an overall decrease of [X] % in the first ten months of 2022 relative to the first ten months of 2021).⁴³⁴ However, given the huge success of the latest release, CoD Modern Warfare II in November 2022, we infer that the fall in MAUs at the franchise level was temporary. For instance, Activision stated publicly that Modern Warfare II 'has become the #1 top-selling opening weekend ever in the franchise, delivering more than \$800 million worldwide in sell-through following the first three days from its release on October 28, 2022'.⁴³⁵

7.190 In relation to PlayStation in particular, CoD has consistently performed well over the past few years. For example, data from Activision shows that [X] in 2020 and 2021 compared to prior years due to the success of Warzone as a free-to-play title.⁴³⁶ CoD titles, released annually, [X]. For example, CoD World War 2 2017 made [X] % of its total revenue to date in the [X] months post release, with the figures for Black Ops 4 2018 ([X] %) and Cold War 2020 ([X] %) being similar.⁴³⁷ Data also shows that add-on sales are [X] part of CoD sales in recent years, indicating that the game is able to monetise in different ways.⁴³⁸

7.191 We further consider evidence from the Parties' internal documents, third party views and industry reports on the importance of the CoD franchise below.

7.192 **Internal documents:** Several internal documents discuss the relative size and importance of the CoD franchise overall to a platform, including its consistent and long-lasting success:

- (a) A 2019 letter to Activision shareholders noted that the CoD franchise has been the number one console franchise globally for 10 of the last 11 years' based on third party data and Activision's estimates of upfront console sales.⁴³⁹ Similarly, a 2021 letter to Activision shareholders refers to CoD as 'one of the most successful entertainment franchises of all time', but also notes that CoD Vanguard 'didn't meet our expectations'.⁴⁴⁰

⁴³³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.27.

⁴³⁴ Parties Internal Document.

⁴³⁵ '[investor.activision.com](#)', accessed by the CMA on 14 December 2022.

⁴³⁶ Activision, response to the CMA's s109 notice.

⁴³⁷ Microsoft, response to working papers.

⁴³⁸ Activision, response to the CMA's s109 notice.

⁴³⁹ [Activision Blizzard 2019 Annual report](#), p5, accessed by the CMA on 17 January 2023.

⁴⁴⁰ [Activision Blizzard 2021 Annual report](#), p2, accessed by the CMA on 17 January 2023.

We also note the Parties' submission that the estimates in the 2019 letter did not include free-to-play games or post-sale monetisation, many of which are also popular.⁴⁴¹

- (b) One Activision internal document from 2020 shows that Activision had [redacted] franchises generating revenues greater than USD [redacted] based on owned IP across platforms and demos (including mobile and PC). Of these, CoD was the [redacted]. The document states that there is '[redacted] for Activision content across new distribution outlets and devices'.⁴⁴²
- (c) Several of the third party consultancy reports submitted by the Parties prepared in 2020 show that CoD: Modern Warfare ranked second in 'Console Top Titles' in the UK by physical and digital unit sales in 2019 and 2020.⁴⁴³ We additionally note the Parties' submission that the chart in the first document cited below did not include free-to-play games or in-game revenues; and included other successful games such as FIFA, one SIE exclusive and two Nintendo exclusive games.⁴⁴⁴

7.193 Whilst we note that the above documents do not provide a comprehensive list of the importance of every game by every metric, they still point to CoD being amongst the top franchises on consoles consistently.

7.194 Internal documents also highlight the factors that make a large franchise like CoD successful, durable, and, therefore, important to a platform. These include the high level of brand awareness and loyal user base it commands. For example, one Activision document prepared in 2020 noted that the top-grossing game charts are dominated by established franchises, with multiple factors driving the durability of game franchises. These factors included [redacted]. The document noted that CoD had '[redacted]'; and stated that Activision's strengths lie in its '[redacted]'; and '[redacted]'. Other reasons highlighted for Activision Blizzard's success were its [redacted].⁴⁴⁵

7.195 In relation to the above document, Activision submitted that, even if big gaming franchises taken together are important to a console when looked at in aggregate, an individual franchise may not be as important by itself.⁴⁴⁶ We agree with Activision that it is important for platforms to have access to a suite of franchises (which both Xbox and PlayStation currently do), and we also consider that taking away one of those major franchises from a console is

⁴⁴¹ Microsoft response to working papers.

⁴⁴² Activision Internal Document.

⁴⁴³ For example, see Microsoft Internal Documents.

⁴⁴⁴ Microsoft, response to working papers.

⁴⁴⁵ Activision Internal Document.

⁴⁴⁶ Activision response to working paper.

likely to impact its ability to compete. There are very few franchises with all or most of the features listed above.

7.196 Internal documents also discuss the importance of CoD to PlayStation in particular, including the revenue and sales it has brought to PlayStation and the impact on sales of PlayStation hardware:

- (a) One Activision internal document shows that in 2020 the CoD franchise [REDACTED] on PlayStation in multiple categories, including full game sales and standalone add-on revenue. The document also shows that CoD remains [REDACTED], with [REDACTED] games in the Top 10 best-selling games list.⁴⁴⁷
- (b) Another Activision internal document states that Activision's content [REDACTED] and would continue to do so. The document explains that a [REDACTED] CoD partnership between SIE and Activision [REDACTED] since the launch of PlayStation 4. The document concludes that Activision [REDACTED] in the next generation.⁴⁴⁸

7.197 Activision submitted that both of the above documents were prepared [REDACTED], and that the information presented in these documents are [REDACTED] and presented in order to [REDACTED].⁴⁴⁹ Whilst we acknowledge that Activision may have [REDACTED], we believe that these documents are nonetheless useful context around the success of CoD on PlayStation.

7.198 **Third party views:** Third parties also noted that Activision games, including CoD, are strong franchises and important to competition in high-end gaming (whether in console, PC, or cloud gaming services):

- (a) One third party [REDACTED] stated that Activision games are 'critical to competition in high-end gaming'; are 'must have' games for many consumers of gaming platforms and have no meaningful substitute; and that CoD games help drive sales of the gaming platform.⁴⁵⁰
- (b) Another third party [REDACTED] stated that successful titles [like CoD] attract customers to their platform and impact on smaller titles; and that it was noticeable when new releases of Call of Duty were not available on their platform.⁴⁵¹
- (c) One gaming platform supplier [REDACTED] submitted that CoD has the highest awareness and ownership of all third party franchises on their platform.

⁴⁴⁷ Activision Internal Document.

⁴⁴⁸ Parties Internal Document.

⁴⁴⁹ Activision, response to working paper.

⁴⁵⁰ [REDACTED] response to the CMA's RFI.

⁴⁵¹ [REDACTED] call note.

They argued that having access to the CoD franchise is likely to be a priority for a larger number of players.⁴⁵²

7.199 **Third party industry reports:** Third party analyst and industry reports further point to the strength and endurance of the CoD franchise:

(a) An analyst report prepared by a third party media and telecommunication research company in 2021 noted that ‘the Call of Duty franchise could hardly be stronger, with free-to-play (F2P) entry Call of Duty: Warzone driving a structural step-up of in-game monetization’. The document also noted that Call of Duty: Mobile, one of the biggest mobile launches in the West, should continue to grow.⁴⁵³

(b) Another public article stated that CoD had the most passionate fan base amongst top gaming brands in 2019. It explained that CoD’s significance to entertainment could not be overstated, with it being the only game in the top 10 of all entertainment brands amongst the most avid gamers.⁴⁵⁴

- *Evidence from revenue-share agreements*

7.200 We have seen evidence that Activision has been able to negotiate [REDACTED] of B2P sales on both Xbox and PlayStation storefronts as compared to [REDACTED]:

(a) Activision keeps [REDACTED] and [REDACTED]% for other third party games on average (including [REDACTED]).⁴⁵⁵

(b) Similarly, Activision has negotiated a revenue share of [REDACTED]% for CoD on PlayStation,⁴⁵⁶ [REDACTED]% for other third party games on average.⁴⁵⁷ This suggests that Xbox and PlayStation are willing to make a more attractive offer to CoD in order to attract it to their platform.

7.201 Microsoft submitted that publishers’ contractual terms with Xbox include [REDACTED]. Based on this, Microsoft submitted that Activision’s [REDACTED] is [REDACTED]%. In comparison, [REDACTED] of [REDACTED].⁴⁵⁸ Whilst we acknowledge that an assessment of bargaining power should consider all aspects of the contractual relationship with publishers, we note that the above evidence still indicates that Activision [REDACTED].

⁴⁵² [REDACTED] response to the CMA’s RFI.

⁴⁵³ Activision Internal Document.

⁴⁵⁴ ‘Report: Call of Duty has the most passionate fan base among 2019’s top gaming brands’, accessed by the CMA on 3 August 2022.

⁴⁵⁵ Parties response to the CMA’s RFI [REDACTED].

⁴⁵⁶ [REDACTED] response to the CMA’s RFI.

⁴⁵⁷ [REDACTED] submission to the CMA.

⁴⁵⁸ Microsoft, response to working papers.

7.202 The greater bargaining power of Activision in relation to CoD was also confirmed in testimonial evidence by Microsoft's executives. The Corporate Vice President of Xbox, stated in an FTC interview that [REDACTED], and stated that [REDACTED].⁴⁵⁹ [REDACTED]. In the same FTC interview, [REDACTED] also stated that [REDACTED].⁴⁶⁰ [REDACTED] also stated that [REDACTED].⁴⁶¹

- *Evidence from the valuation model*

7.203 In addition to valuing Activision's existing business at \$[REDACTED], the valuation model used by the Parties in relation to the Transaction places [REDACTED].⁴⁶²

7.204 First, the valuation model includes [REDACTED].⁴⁶³ [REDACTED].⁴⁶⁴ We also note that this [REDACTED] implying that to the extent that adding CoD makes a difference even in the context of other games being available, taking CoD away from a rival is also likely to have a substantial impact.

7.205 Microsoft submitted that [REDACTED].⁴⁶⁵

7.206 In relation to the above, we note that [REDACTED].⁴⁶⁶

7.207 Second, [REDACTED]:

(a) [REDACTED];

(b) [REDACTED]; and

(c) [REDACTED].⁴⁶⁷

7.208 Whilst we note Microsoft's submission that the increase in ASP is an industry factor not specific to Activision,⁴⁶⁸ we nevertheless consider that [REDACTED] demonstrate its continued importance to gaming platforms, including consoles.

Provisional conclusion on the importance of CoD

7.209 Based on the above evidence, our provisional view is that CoD is strong in the upstream market for console game publishing and is an important input to

⁴⁵⁹ FTC transcript.

⁴⁶⁰ FTC transcript.

⁴⁶¹ FTC transcript.

⁴⁶² Parties Internal Document.

⁴⁶³ Specifically, on Game Pass, the model [REDACTED].

⁴⁶⁴ Parties Internal Document.

⁴⁶⁵ Microsoft, response to working papers.

⁴⁶⁶ The Parties submitted that [REDACTED]. See Parties Internal Document.

⁴⁶⁷ Parties Internal Document.

⁴⁶⁸ Microsoft, response to working papers.

PlayStation. It is one of the three largest franchises on PlayStation. It contributed a significant share of PlayStation's consumer spend and gameplay time in 2021.

7.210 There are additional factors that make CoD an important input to PlayStation:

- (a) CoD is particularly important to PlayStation within shooter games, an important segment of the market.
- (b) CoD is important in driving console sales and a significant proportion of PlayStation console sales are associated to sales of CoD. Nearly a quarter of respondents to the CMA survey stated that they would switch away from PlayStation if CoD were not available on it.
- (c) Gamers that spend more than a fifth of their gametime on CoD generate a significant amount of revenue on PlayStation in the form of spend on third party games. Evidence from our survey indicated that PlayStation could lose up to [X]% of its overall consumer spend based on diversion of CoD gamers.

7.211 There are other features that are unique to CoD (and possibly few other titles, as discussed further in the section below) that increase this importance:

- (a) CoD is one of the largest game franchises available to consoles currently and has been for a long time. As evidenced above, game franchises are instrumental in driving demand to a gaming platform like a console.
- (b) Data on units sold and revenues show CoD has had consistently successful annual title releases for at least the past 10 years.
- (c) CoD has a high level of awareness among gamers and brand loyalty, and is a multiplayer game with a social component which induces network effects, making it less likely that gamers will unilaterally switch away from the franchise.

7.212 Overall, we provisionally conclude that CoD is an important input in the consoles gaming services market.

Alternatives to CoD

7.213 In this section, we assess the alternatives to CoD that are available to PlayStation, and the implications of these alternatives for the ability of the Merged Entity to foreclose SIE.

7.214 Before considering evidence on the availability of alternatives to CoD, we make the following observations relating to how this evidence fits into our wider assessment:

- (a) The loss of CoD would represent a net reduction in SIE's range. A foreclosure strategy would move SIE from a scenario where all of its current games are available to a scenario where one of its most important games is no longer available.
- (b) In that context, the purpose of assessing evidence on the alternative games and franchises available to SIE is not to examine to what extent those games could use these games to 'replace' CoD and maintain a range of equal quality to the range it would have had absent any foreclosure. Rather, the purpose is twofold:
 - (i) First, to the extent the range of other games is sufficiently large and popular, this would reduce the overall significance of CoD to SIE's range. The question we are assessing is therefore not whether other popular games exist, but rather whether the number and popularity of other games is sufficiently great that the elimination of the CoD franchise from PlayStation's range would not represent a significant reduction in range in relative terms.
 - (ii) Second, to the extent there is differentiation between games, the inability of a console supplier to offer more of those differentiated games will tend to be more significant by contributing to a worse range and less consumer choice. Conversely, where games are not significantly differentiated from each other, the removal of any individual game or franchise would be less likely to make a significant difference to range or choice.

7.215 We therefore consider below evidence on the alternatives to CoD, as well as the extent of differentiation between them. This section focuses on the availability of alternatives that already exist. We consider the scope for entry and expansion by other alternatives (including SIE's first-party games) in response to the Merger in Chapter 9.

Parties' views

7.216 The Parties submitted that Activision's shares in the upstream publishing market indicated that the market was highly fragmented, with gamers playing the games of many different publishers, and with each of those publishers having a limited position overall. They submitted that Activision games had a modest share; that Activision had a share of MAU of [X] % globally in 2021;

and that other publishers were of equal or comparable scale, including Electronic Arts (eg FIFA, Apex Legends, Star Wars) at [X]% globally, Epic Games (eg Fortnite), with a share of [X]% globally and Take Two (eg GTA, Red Dead Redemption) with a share of [X]% globally.⁴⁶⁹

7.217 The Parties also submitted that there were several other franchises that gamers play. They stated that whilst Fortnite and CoD account for a significant proportion of game-time played on Xbox ([X]% and [X]% in 2021, respectively), gamers also play popular games such as GTA, FIFA, Minecraft, NBA2K, Tom Clancy, ROBLOX, Apex Legends and Rocket League, which account for a significant proportion of the remaining game-time.⁴⁷⁰

7.218 The Parties submitted that Activision's internal documents also consistently recognise the strength of other franchises as a competitive constraint on CoD, reflecting the fact that CoD is not an important input to SIE. Activision's documents monitor games in the 'shooter' genre, [X]; along with other games [X].⁴⁷¹

7.219 The Parties further submitted that SIE had a large portfolio of high-quality exclusive first-party content that would continue to attract users to its platform. This included prominent titles such as The Last of Us, Ghosts of Tsushima, God of War, Spider-Man and Demon's Souls. The Parties said that these exclusive first-party titles accounted for approximately 17% of consumer spend on PlayStation over the period 2019-2021.⁴⁷²

7.220 As a preliminary point, as noted above, the availability of other strong franchises on PlayStation may not be inconsistent with CoD being important to the range of PlayStation's offer, particularly because PlayStation gamers already have access to these other franchises. We discuss the rest of the Parties' arguments in our assessment below.

Our assessment

Third party views and internal documents

7.221 As noted in Chapter 5, we received mixed evidence from third party publishers on CoD's closest rivals, indicating that while CoD competed most closely with other shooter games, it is also constrained by titles from large franchises across genres such as FIFA, Grand Theft Auto, Assassin's Creed

⁴⁶⁹ Parties, submission to the CMA.

⁴⁷⁰ Parties, submission to the CMA.

⁴⁷¹ Parties, submission to the CMA.

⁴⁷² Microsoft [response to the Phase 1 decision](#), paragraph 3.9.

etc. We consider the evidence from third parties and their internal documents on the effectiveness of these competitors in helping PlayStation continue to compete.

7.222 Third party views indicate that existing alternatives available to PlayStation, including other shooters and its first-party content, were not as strong as CoD. One competitor [REDACTED] submitted that console gamers are more interested in purchasing a new CoD title than any other third party franchise.⁴⁷³ The competitor also stated that third party developers and/or publishers, who already have strong incentives to develop an alternative to CoD, have not managed to do so. The competitor provided the example of Electronic Arts' Battlefield, stating that despite the apparent similarities between Battlefield and CoD (eg Battlefield games have been set in both WWII and the modern era; may contain story-driven campaigns with rich cinematics; and include large-scale multiplayer modes with similar game types, etc), and despite developing other successful AAA franchises (such as FIFA, Mass Effect, Need for Speed, and Star Wars: Battlefront), Electronic Art's Battlefield had failed to achieve CoD's level of user engagement.⁴⁷⁴ The competitor submitted that as of August 2021, more than 400 million CoD games had been sold, while Battlefield had sold just 88.7 million copies.⁴⁷⁵ The competitor also submitted that [REDACTED] first-party content was not of the same scale and importance as CoD.⁴⁷⁶

7.223 Third party internal documents however also suggested that titles like [REDACTED], [REDACTED], [REDACTED] and [REDACTED] performed similarly to (and sometimes outperformed) CoD in terms of sales and gameplay time. For example:

- (a) One third party internal document suggested that there are alternative games, such as FIFA, with a similar impact on [REDACTED] as CoD.⁴⁷⁷
- (b) Another internal document of the same third party showed that as of February 2022, only [REDACTED] attracts more gaming hours than CoD.⁴⁷⁸ No shooter game attracts similar levels of gaming hours to CoD.⁴⁷⁹ Other games that ranked below CoD in terms of hours included [REDACTED], [REDACTED] and [REDACTED].
- (c) Another third party industry report stated that in terms of pure physical and online sales (with no in-game purchases), [REDACTED] had the largest sales

⁴⁷³ [REDACTED] submission to the CMA.

⁴⁷⁴ [REDACTED] submission to the CMA.

⁴⁷⁵ [REDACTED].

⁴⁷⁶ [REDACTED] response to the CMA's RFI.

⁴⁷⁷ [REDACTED] Internal Document.

⁴⁷⁸ [REDACTED] Internal Document.

⁴⁷⁹ [REDACTED] Internal Document.

in 2021, with CoD games in second and fourth place. CoD is the only shooter-genre game in the top 10.⁴⁸⁰

Evidence from the Parties' internal documents

- 7.224 As noted above, Activision's internal documents list and track [REDACTED] as competitive constraints to CoD (and *Overwatch*), before considering other games. We also discussed in the Chapter 5 the evidence as regards closeness of competition within the shooter segment.
- 7.225 In terms of the effectiveness of these competitors, the Parties' documents show that CoD is one of the top performing games on Xbox, with [REDACTED], [REDACTED] being closest to it in terms of revenue and MAU. Other games such as [REDACTED]. For example:
- (a) A Microsoft document analysing sales of third party titles shows that [REDACTED].⁴⁸¹ Multiple documents also showed that [REDACTED].⁴⁸²
 - (b) An Activision document comparing premium and F2P first-person shooter games shows that [REDACTED]% of revenues of the set of premium first-person shooter games considered were from CoD in 2020, with *Destiny*, *Overwatch*, *PUBG*, *Rainbow Six* and *Battlefield* each being less than [REDACTED]%. In the F2P sector, *Fortnite* was at [REDACTED]% of revenues of the set of F2P games considered, with *CoD Warzone* at [REDACTED]%, and other competitors like *Apex Legends* and *Valorant* were less than [REDACTED]%.⁴⁸³
- 7.226 Activision's internal documents also show that other shooters, such as [REDACTED], do not perform as well as CoD in terms of revenues and engagement:
- (a) An Activision document assessing the impact of CoD's expansion on Steam in 2022 uses the shares of [REDACTED] on PC as a proxy for CoD, indicating that these games are considered to be close competitors.⁴⁸⁴
 - (b) Another Activision document comparing the performance of [REDACTED] and CoD at the time of their respective season releases shows that CoD had significantly greater revenues and MAU than [REDACTED].⁴⁸⁵ For example, CoD (*Black Ops Cold War* and *Warzone*) made USD [REDACTED] million in the first 5 days after the release of its Season 3 (in April 2021) whereas [REDACTED] made

⁴⁸⁰ [REDACTED] Internal Document.

⁴⁸¹ Microsoft Internal document.

⁴⁸² Microsoft Internal document; and Microsoft Internal document.

⁴⁸³ Activision Internal Document.

⁴⁸⁴ Activision Internal Document.

⁴⁸⁵ Multiplayer games have temporary 'seasons' wherein the developers can make changes in the game and introduce new content (such as maps, weapons, etc), and often will cover a few months and/or have special themes.

USD [redacted] million after its Season 8 release (in February 2021). Similarly, CoD had [redacted] million MAU in the first month while [redacted] had [redacted] million.⁴⁸⁶

Other evidence

- 7.227 Data from [redacted] showed that the top 100 games on PlayStation by consumer spend are published by more than 30 publishers globally. However, only four third party publishers had a share of spend greater than 5% on PlayStation globally in 2021: [redacted] ([redacted]%), [redacted] ([redacted]%), [redacted] ([redacted]%) and [redacted] ([redacted]%). In addition, SIE publishes successful exclusives which collectively account for [redacted]% of the total spend on PlayStation.⁴⁸⁷
- 7.228 In assessing whether there are any games that are effective alternatives to CoD, we look at (i) other game franchises across genres available on PlayStation; (ii) other ‘shooter’ games on PlayStation that are likely to compete with CoD; and (iii) exclusive games on PlayStation that are likely to draw gamers to the platform.
- 7.229 In relation to assessing the extent of differentiation between CoD and these available alternatives, we note that evidence presented in Chapter 5 shows that there is a certain differentiation between genres, making shooter games different to other games such as FIFA, Grand Theft Auto, etc. We therefore do not reassess the differentiation between CoD and non-shooter games. However, we consider where relevant the extent to which CoD differs from other shooters.

- *Alternative franchises on PlayStation*

- 7.230 There are two games/franchises that in recent years have performed on the same scale as CoD in terms of spend and gameplay time on PlayStation. 2021 data from [redacted] indicated that:⁴⁸⁸
- (a) In terms of share of consumer spend in the UK, FIFA ([redacted]%) is larger than CoD ([redacted]%) and Fortnite is of a similar size ([redacted]%).
- (b) In terms of share of gameplay time, FIFA ([redacted]%) is the only game bigger than CoD ([redacted]%) in 2021 in the UK. Fortnite is the only game bigger than CoD at a global level ([redacted]%).⁴⁸⁹

⁴⁸⁶ Activision Internal Document.

⁴⁸⁷ [redacted] Internal Document; and [redacted] Internal Document.

⁴⁸⁸ [redacted] Internal Document; and [redacted] Internal Document.

⁴⁸⁹ The shares of consumer spend at a global level were [redacted]% for FIFA and [redacted]% for Fortnite in 2021. In terms of gameplay time, the shares of FIFA and Fortnite were [redacted]% and [redacted]% respectively globally.

- 7.231 Other games/franchises on PlayStation include NBA, Genshin Impact, Apex Legends, Grand Theft Auto and Assassin's Creed. However, their consumer spend and gameplay times are significantly lower than CoD. For example, in 2021, none of these franchises had a share of revenue greater than [REDACTED]% in the UK; nor a share of gametime greater than [REDACTED]%.⁴⁹⁰
- 7.232 FIFA, Fortnite and CoD also have the highest levels of engagement of gamers on PlayStation. Account-level data from [REDACTED] for 2021 showed that:⁴⁹¹
- (a) [REDACTED]% of PlayStation gamers played FIFA for more than 40% of their total gametime, and [REDACTED]% played it for more than 80% of their total gametime;
 - (b) [REDACTED]% of PlayStation gamers played Fortnite for more than 40% of their total gametime, and [REDACTED]% played it for more than 80% of their total gametime.
 - (c) By comparison, [REDACTED]% of PlayStation gamers played CoD for more than 40% of their total gametime, and [REDACTED]% played it for more than 80% of their total gametime.
 - (d) There was a substantial gap with the level of engagement reached by other games. Apart from GTA (and to a lesser extent Apex Legends and Minecraft), not more than [REDACTED]% of gamers played any of the other games available on PlayStation for more than 40% of their total gametime. Similarly, not more than [REDACTED]% of gamers played any of the other games for >80% of their total gametime
- 7.233 Microsoft submitted that CoD is not the most popular franchise; and submitted data on playtime share and various user rankings (such as on Metacritic, PlayStation user polls) and game reviews of top video games (such as those by IGN, Business Insider etc) to evidence that CoD does not feature highly on these lists, and is consistently outranked by other games.⁴⁹² Whilst we have considered this evidence, we believe that data on actual revenue and gameplay time on PlayStation provides a better indication of its importance to SIE and should be given more weight.
- 7.234 The Parties also submitted that there is a wide range of studios that have produced a hit title, and that SIE would have the ability to work with these third party developers. These studios included Epic Games, Electronic Arts, Riot Games, Konami, TakeTwo Interactive, Ubisoft, etc.⁴⁹³ The Parties also

⁴⁹⁰ [REDACTED] Internal Document; and [REDACTED] Internal Document.

⁴⁹¹ [REDACTED] Internal Document.

⁴⁹² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.44.

⁴⁹³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.43(e).

submitted that new titles often reach the top of game-time charts. They stated that each month, at least [REDACTED] new titles are released on Xbox, and over the past five years almost [REDACTED] of those new titles have risen into the top 25 games, and that [REDACTED]% of those had done so within [REDACTED] of their release.⁴⁹⁴

7.235 We acknowledge that there are a range of studios that have produced hit titles over the years. However, we consider there are few franchises as enduring and as significant in terms of PlayStation's revenue and gameplay time as CoD. In relation to the new titles that reach the top of game charts, the Parties' data above indicates the low chance of success – the data above shows that [REDACTED]% of titles have made it to the top 25 games over the past five years.

- *Alternative shooters on PlayStation*

7.236 Alternative games from the shooter genre are smaller than CoD and/or offer a differentiated experience. We discuss below three games that could broadly be considered as shooters and that compete with CoD: Fortnite, Battlefield, and Apex Legends.

7.237 **Fortnite** is a free-to-play multiplayer shooter game published by Epic Games, which contributes significantly to PlayStation's range of spend and gameplay time.⁴⁹⁵ Data from [REDACTED] showed that Fortnite represented [REDACTED]% of gameplay time on PlayStation, and [REDACTED]% in the shooter genre in the UK. This is similar to CoD, whose gameplay time contribution was [REDACTED]% in the UK (and [REDACTED]% within shooters).⁴⁹⁶ Results from our survey of CoD users on PlayStation indicate that among those respondents to whom content on a console is important (89% of our sample), 17% of them would be influenced to buy a PlayStation by the availability of Fortnite, versus 73% for CoD. However, we note that this survey was targeted at CoD gamers and therefore will over-represent console gamers with a preference for CoD. We therefore consider this evidence in the round along with the other evidence on the importance of content.

7.238 Moreover, as set out above, to the extent two products are differentiated, PlayStation's ability to offer both games will tend to be of value to consumers.

⁴⁹⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.43(f).

⁴⁹⁵ Fortnite was initially developed as an independent game with a small team and budget and released in 2017; however, it soon became successful with millions of players playing the game in the first few months, and earning more than \$1 billion in its first year. See for example, [How Fortnite became the most successful free-to-play game ever – The New Economy](#), accessed 28 December 2022.

⁴⁹⁶ [REDACTED] Internal Document.

In this context, we have identified a number of aspects of Fortnite's gameplay that are substantially differentiated from CoD. In particular:

- (a) **Gameplay mode:** Fortnite has different modes that are not always first-person shooter (unlike CoD), and its main mode is battle royale, with CoD Warzone being the only CoD title with this mode available.
- (b) **Game features:** The overall theme of Fortnite is more casual/cartoon-like, and has fewer elements of serious combat as in CoD and the additional build element. The game therefore targets a younger demographic because of the above—Fortnite's age rating is 13+, whereas CoD has an age rating of 18+.
- (c) **Business model:** The game is largely free to play (similar to CoD Warzone but not other CoD titles), with a single title that gets regularly updated/expanded.

7.239 **Battlefield** is a multi-player shooter franchise published by Electronic Arts, which is significantly behind CoD in terms of user spend and gameplay time. Data from [REDACTED] showed that in 2021, Battlefield contributed to less than [REDACTED]% of overall gameplay time in the UK (CoD at [REDACTED]%) and [REDACTED]% within shooters (CoD was at [REDACTED]%).⁴⁹⁷ We note that though Battlefield releases its titles less frequently than CoD (normally in 3-year cycles), CoD and Battlefield both released a title in late 2021—CoD Vanguard and Battlefield 2042 respectively.

7.240 Battlefield however is the closest game to CoD in terms of gameplay features and settings. For example:

- (a) **Gameplay mode:** Similar to CoD, Battlefield is a first-person shooter game. In its latest release, Battlefield offers an online multi-player game mode like CoD.
- (b) **Game features:** Similar to CoD, Battlefield is a first-person shooter whose context is either the Second World War or a modern world. Also, like CoD, Battlefield contains story-driven campaigns with rich cinematics.

7.241 Various publishers also listed Battlefield as being the most similar to and the closest competitor to CoD, as evidenced above.

7.242 **Apex Legends** is another battle royale shooter game published by Electronic Arts, and is also smaller than CoD in terms of consumer spend and gameplay time on PlayStation. [REDACTED] data showed that Apex Legends was the third biggest shooter game in the UK after CoD and Fortnite, and contributed to

⁴⁹⁷ [REDACTED] Internal Document.

[REDACTED]% of overall gameplay time on the PlayStation in the UK as compared to [REDACTED]% of CoD, and [REDACTED]% within shooters (CoD being at [REDACTED]%).⁴⁹⁸

7.243 In relation to differentiation, we note that Apex Legends is more battle-royale focused, whilst premium CoD titles are multiplayer games with different modes (though we note CoD Warzone is battle-royale focused). However, Apex Legends offers some similarities in graphics style and war settings to CoD, though its mechanisms and gameplay are significantly different.

7.244 Overall, there are limited alternative shooter games comparable in both size and experience to CoD. Fortnite is similar or bigger in terms of user spend on PlayStation, but its gaming experience is significantly differentiated. Battlefield and Apex Legends provide a more comparable experience but are [REDACTED] less successful than CoD on PlayStation (indicating that given the choice, players prefer CoD over these other similar games). Therefore, we provisionally consider that any withholding or material degradation of CoD is likely to affect consumers that game on PlayStation in terms of the range and quality of games available to them.

- *SIE's first-party and third party exclusive catalogue*

7.245 Microsoft submitted that SIE has a strong catalogue of first and third party exclusive games: SIE publishes bestselling first-party titles such as God of War, The Last of Us, Marvel's Spider-Man, Uncharted, Ghost of Tsushima, etc. The Parties submitted that SIE also has a portfolio of high-quality exclusive third party content including Genshin Impact, Final Fantasy 16, Bloodborne, Sackboy: A Big Adventure, Street Fighter V, Sifu and the Silent Hill 2 remake.⁴⁹⁹

7.246 Results from our survey indicate that exclusives are one of the main factors that drive console choice (noting above the point that our survey was targeted CoD gamers and needs to be interpreted accordingly). Among those respondents to whom content on a console is important (89% of our sample), 69% of them indicated that the availability of exclusive games would influence their choice of purchasing a PlayStation.

7.247 However, data from [REDACTED] shows that SIE exclusive titles are each significantly smaller than CoD in terms of consumer spend on PlayStation. For example, SIE's best performing exclusive title in 2021 globally was [REDACTED]. Its total consumer spend for SIE was [REDACTED] of that from CoD in 2021, [REDACTED]. Another successful title is SIE's first-party title Marvel's Spider-Man which generated a

⁴⁹⁸ [REDACTED] Internal Document.

⁴⁹⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.43c.

consumer spend of c.\$ [REDACTED] million across all its titles over the period 2019-2022, ie [REDACTED] of the revenues generated by CoD only on PlayStation in 2021.⁵⁰⁰

7.248 [REDACTED] if we consider all SIE's (fully) exclusive content portfolio in aggregate, their size in consumer spend terms is [REDACTED] than CoD in 2021.⁵⁰¹

Provisional conclusion on alternatives to CoD

7.249 As noted above, the loss of CoD would represent a net reduction in SIE's range, which cannot be fully offset by games that are already available on PlayStation.

7.250 Based on the above evidence, we provisionally conclude that there are few other games—including franchises, shooter games and SIE's exclusives—with comparable consumer spends and gameplay time as CoD that are available on PlayStation. This therefore means that the elimination of the CoD franchise from PlayStation's range would represent a significant reduction in range in relative terms.

7.251 We also provisionally conclude that most of the above games offer a differentiated experience to CoD:

(a) Non-shooter games (including SIE's top exclusive games) like FIFA, GTA, NBA, Marvel's Spider-man etc are a different genre to that of CoD; and these games would not be a close substitute for CoD games in the absence of CoD on PS.

(b) Within shooter games, the closest alternative to CoD is Battlefield – however, it was significantly behind CoD in terms of consumer spend and gameplay time in 2021. There are other shooter games like Fortnite and Apex Legends that are comparable to CoD in terms of performance, but there is sufficient differentiation between them and CoD that these cannot be considered close alternatives to CoD.

7.252 The extent of differentiation, including within shooters, of CoD's closest alternatives means that any foreclosure strategy will significantly impact PlayStation's ability to offer more of those differentiated games by contributing to a worse range and less consumer choice.

7.253 We note that PlayStation also has the option of expanding an existing game or creating a new game, either using SIE's first party studios or by tying up

⁵⁰⁰ [REDACTED] Internal Document.

⁵⁰¹ [REDACTED] Internal Document.

with third party publishers, in response to the Merger. We discuss this in Chapter 9.

Contractual arrangements and negotiations

7.254 In this section, we assess the impact that the Merging Parties' contractual arrangements and negotiations could have on the Merged Entity's ability to foreclose SIE. Activision has an existing contract with SIE covering the arrangements between the two entities with regards to the availability of CoD, to Sony PlayStation. This contractual arrangement lasts until the end of 2024 [REDACTED].

7.255 In addition, Microsoft has made a separate offer to Sony to keep CoD on PlayStation post-Merger.⁵⁰² Microsoft has also noted that it has entered into a legally binding commitment with Nintendo to bring CoD to Nintendo platforms post-Merger.⁵⁰³ Microsoft added that a similar offer was made to Steam that was ultimately declined.⁵⁰⁴ As this theory of harm is focused on SIE for the reasons already discussed, we have focussed our assessment on any potential impact on the Merged Entity's ability stemming from contractual arrangements and negotiations with SIE.

Parties' and SIE's views

7.256 Microsoft submitted that contractual arrangements limit the Merged Entity's ability to foreclose because Sony has more than ample time to adapt its commercial strategy. Microsoft initially stated that this is because access to CoD is guaranteed through to [REDACTED] the end of 2024 under Sony's existing agreement with Activision and through at least the end of 2027 if it were to accept Microsoft's contractual offer.⁵⁰⁵ Microsoft also submitted that the existing agreement between Sony and Activision includes [REDACTED].⁵⁰⁶

7.257 Since those submissions, the offer to SIE [REDACTED] to cover a ten-year period [REDACTED].⁵⁰⁷ As far as we are aware, this offer from Microsoft has not been

⁵⁰² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 3.47 and 3.50(g). See also letter from Microsoft to the CMA and Microsoft, letter from [REDACTED] to the CMA.

⁵⁰³ Microsoft explained that on 7 December 2022 Microsoft and Nintendo signed [REDACTED] that includes a 10 year commitment from Microsoft. Microsoft explained that the [REDACTED] provides *inter alia* that: (i) Microsoft will [REDACTED]. Microsoft, letter to the CMA.

⁵⁰⁴ Microsoft, letter to the CMA. We note that Valve has commented publicly that it does not consider it needs to accept Microsoft's offer to keep CoD available on Steam. See, for instance, [videogameschronicle.com](https://www.videogameschronicle.com), accessed by the CMA on 17 January 2023.

⁵⁰⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.43(g).

⁵⁰⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.10. See also Microsoft, email from Microsoft to CMA.

⁵⁰⁷ See Microsoft, letter to the CMA. See also Microsoft, response to working papers.

accepted by SIE. While SIE [REDACTED],⁵⁰⁸ Microsoft submitted that [REDACTED],⁵⁰⁹ we understand that [REDACTED].⁵¹⁰

7.258 SIE submitted that no contractual protections can ever provide proper protections against a foreclosure strategy.⁵¹¹ SIE also stated that Microsoft has mischaracterised its initial offer to SIE,⁵¹² [REDACTED].⁵¹³

7.259 Both Microsoft and SIE have provided detailed chronologies to the CMA of the negotiations between Microsoft and SIE, providing their own commentary on why certain aspects of certain offers should or should not have been accepted by the other party.⁵¹⁴

Our assessment

7.260 The MAGs state that:

'The CMA's assessment of the ability of the merged entity to foreclose its rivals is unlikely to place material weight on contractual protections, for example, to continue supplying both the current version and future upgrades of the input. In practice, such contracts may not completely remove a firm's ability to harm its rivals, given that certain rivals might not be covered by these contracts, the contracts might not protect all ways in which the competitiveness of rivals could be harmed, and the contracts may be of limited duration. Moreover, over time contracts may be renegotiated or terminated, and firms may waive their rights to enforce any breaches in light of their overall bargaining position (reflecting the change in market structure brought about by a merger). However, the CMA may consider any financial or reputational costs of terminating contracts in its assessment of foreclosure incentives.'⁵¹⁵

7.261 In our view, these considerations apply to the present case. Contractual protections: (i) may not account for all the possible foreclosure mechanisms that could be available to the Merged Entity, (ii) may be renegotiated or terminated early, or (iii) may not be enforced depending on the respective parties' bargaining positions. Nor can we be sure that SIE (or any other third

⁵⁰⁸ [REDACTED].

⁵⁰⁹ See Microsoft, letter to the CMA.

⁵¹⁰ Microsoft response to working papers.

⁵¹¹ SIE [response to the Issues Statement](#), 28 October 2022, paragraph 16.

⁵¹² SIE [response to the Issues Statement](#), 28 October 2022, paragraph 16. See also SIE response to the CMA's s109 notice.

⁵¹³ See SIE response to the CMA's s109 notice.

⁵¹⁴ See for instance, Microsoft, letter to the CMA; and SIE response to the CMA's s109 notice.

⁵¹⁵ [CMA129](#), paragraph 7.15.

party) would be able to enforce the terms of any relevant contracts should it need to do so.

- 7.262 In any case, and notwithstanding the general position on contracts set out in the MAGs, the relevant SIE protections that are currently in place with Activision only last until end-2024.⁵¹⁶ Moreover, the statement by Microsoft that the agreement,⁵¹⁷ [REDACTED].
- 7.263 While we acknowledge that the existing contractual arrangements between SIE and Activision may provide SIE with some protection in the short-term, the relevant protections are clearly of limited duration. As a result, even if they did impact the Merged Entity's ability to foreclose in the short term, they are not of sufficient duration to have a material impact on our competitive assessment, which considers potential concerns with a longer time horizon.
- 7.264 As Microsoft's separate offer to SIE remains under negotiation, and there is currently no agreement in place, we do not currently consider this has any impact on the Merged Entity's ability to engage in foreclosure. We also do not consider it appropriate or relevant to comment on the various motivations and behaviour of Microsoft and SIE during these negotiations.
- 7.265 Likewise, regardless of whether [REDACTED] with Nintendo may be legally binding, notwithstanding that this theory of harm is primarily focussed on SIE for reasons already explained, there is also no certainty that this will lead to CoD becoming available on Nintendo. As stated above, the Nintendo Switch has certain technical limitations compared to the latest PlayStation and Xbox consoles (including, for instance, storage capacity). These limitations would need to be overcome for Call of Duty to become available for Nintendo Switch. This is notwithstanding any further disagreements or issues that may become apparent as both parties further develop [REDACTED]. Further, it is not clear at this stage the degree to which the CoD experience would differ on Nintendo Switch. This is acknowledged [REDACTED].⁵¹⁸ We are therefore unable to place material weight on this in terms of the Merged Entity's ability and/or incentive to foreclose given the early stage of the process and unforeseeable impacts on the market, and the more general limitations around contractual protection as noted above.
- 7.266 As such, our provisional view is that Microsoft's contractual arrangements are not likely to have any significant impact on its ability to foreclose SIE.

⁵¹⁶ Parties Internal Document.

⁵¹⁷ See email from Microsoft to CMA.

⁵¹⁸ Microsoft Internal Document.

Provisional conclusion on the Merged Entity's ability to foreclose

7.267 Our current view is that the above evidence shows that the Merged Entity would have the ability to foreclose PlayStation, including its distribution storefront and subscription services:

- (a) CoD is currently an important component of PlayStation's range of game offerings. It is one of the three largest franchises on PlayStation and contributes a significant share of PlayStation's revenue and gameplay, particularly within shooter games. CoD is important in driving console sales, with nearly a quarter of our survey respondents stating that they would divert away from PlayStation if CoD were no longer available on there. These gamers would likely spend less time and money on the console than they did previously, and are likely to induce further diversion due to the presence of strong direct network effects.
- (b) There are insufficient alternatives available on PlayStation that could offset any reduction in PlayStation's range caused by a withholding or material degradation of CoD. The remaining games available on PlayStation, including alternative large franchises, shooter games and PlayStation's exclusives, are either (i) sufficiently differentiated from CoD that their availability would not compensate for the reduction in PlayStation's range, or (ii) are significantly smaller than CoD in terms of spend and gameplay, indicating that they are less preferred by gamers relative to CoD and would be unable to fill the void created by a withholding or material degradation of CoD.

7.268 With respect to Microsoft's submission that a range of other games would be available for gamers to play on PlayStation, the impact of foreclosure would be to move from a scenario where gamers already have a choice of those games in addition to CoD to one in which they have more limited choice. This would represent a reduction in the game range available to them. The time spent by PlayStation gamers playing CoD when given a free choice between CoD and other games is a highly relevant measure of the significance of that reduction in range. The observation that CoD accounts for [X] % of PlayStation's gameplay time in the UK, and that its removal would trigger consumers to switch away in substantial numbers is—alongside other evidence on the importance of CoD in consumer choice—evidence of an ability to materially weaken PlayStation as an alternative.

7.269 We consider that a range of foreclosure mechanisms are available to the Merged Entity, including the complete withholding of current and/or future Activision titles, releasing Activision titles on rival consoles at a later date or with fewer features, degrading the graphical quality of Activision content on

rival consoles or raising the wholesale price. The Merged Entity could use some or all of these foreclosure mechanisms to foreclose PlayStation in the longer-term.

Incentive to foreclose

Introduction

- 7.270 In this section, we assess whether a partial and/or total foreclosure strategy (as described above) would be profitable and, therefore, whether the Merged Entity would have an incentive to engage in such strategies. As part of this assessment, we consider the extent to which the Merger increases the incentives to foreclose downstream competitors relative to the situation absent the Merger.
- 7.271 The MAGs state that ‘the assessment of incentives typically involves a combination of quantitative and qualitative evidence, though the balance will vary between cases. The CMA may undertake more extensive quantitative analysis in simple markets with high quality data, but it will focus on a qualitative assessment in complex and dynamic markets, where firms’ current positions and margins may not be a good guide to the future, and strategic considerations may play a greater role. In any event, its focus will be on the relative magnitude of the overall cost and benefit of foreclosure, not on predicting the exact size of each element.’⁵¹⁹
- 7.272 We have assessed the incentives to foreclose with a mix of both qualitative and quantitative evidence. This is because financial modelling can quantify some gains and losses of foreclosure (ie, short-term profitability), but it ignores others (ie, long-term strategic objectives). Qualitative evidence can, therefore, be equally or more important, depending on the context. In this case, we considered Microsoft behaviour in relation to previous acquisitions, its long-term strategic objectives, and the relevance of potential contractual arrangements.
- 7.273 For simplicity, we focus much of our quantitative assessment on the gains and losses that would arise out of a total foreclosure strategy. We recognise, however, that the choice between partial and total foreclosure strategies is not a binary one: there is a wide range of potential strategies leading up to total foreclosure, and they can be applied incrementally over time to maximise profit and foreclose rivals. We set out in the previous section examples of

⁵¹⁹ [CMA129](#), paragraph 7.18.

potential partial foreclosure strategies and, in this section, we explain where we think the evidence applies to total or partial foreclosure strategies.

7.274 The rest of this section presents:

- (a) the Parties' views,
- (b) third parties' views,
- (c) our assessment of qualitative and quantitative evidence.

Parties' views

7.275 Microsoft submitted that it does not intend to remove CoD from PlayStation or degrade access to the franchise.⁵²⁰ Microsoft said its incentives to continue distributing CoD to Sony are clear from the deal valuation, its public statements and correspondence with Sony, public statements by Sony, the strategic rationale for the Merger, and Microsoft's internal documents in relation to the Merger.⁵²¹

7.276 Microsoft further submitted that:

- (a) its past business practices are consistent with its stated position;⁵²²
- (b) cross-platform play is a powerful disincentive to foreclosure;⁵²³
- (c) contractual protections provide a powerful disincentive to withdraw content;⁵²⁴ and
- (d) the CMA's survey of PlayStation users suffers from design flaws which bias its results, and in any case, the CMA survey results strongly support absence of incentive to foreclose,⁵²⁵ and show that foreclosure of Sony is not possible.⁵²⁶

7.277 In addition, Microsoft submitted a quantitative analysis which models the financial gains and losses of withdrawing CoD from PlayStation.⁵²⁷

⁵²⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.50.

⁵²¹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.49.

⁵²² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph (ii), p54.

⁵²³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph (iii), p57.

⁵²⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph (iv), p60.

⁵²⁵ Microsoft response working papers.

⁵²⁶ Microsoft submission to the CMA.

⁵²⁷ Parties response to the RFI.

Third parties' views

7.278 SIE submitted that Microsoft would have the incentive to withhold CoD from Sony, its closest competitor.⁵²⁸

7.279 SIE also submitted an economic analysis which showed that the Parties would have an incentive to withhold the CoD franchise from PlayStation. The analysis concluded that a total foreclosure strategy would be profitable for the Merged Entity if more than [X] % of current PlayStation users were to switch to Xbox.⁵²⁹

7.280 SIE provided evidence that suggests the switching rate is higher than [X] %. In particular, SIE presented four possible switching rate scenarios based on gamers' 'engagement level' with CoD (ie the share of time spent playing CoD relative to the total time spent playing on PlayStation). In all scenarios, the switching rate was higher than [X] %.⁵³⁰ SIE also submitted an additional analysis based on survey data of PlayStation users that suggested a switching rate of [X] % if *Call of Duty* were to become exclusive to Xbox.⁵³¹

7.281 More details on this analysis are presented in Appendix E.

Our assessment

7.282 In this section, we discuss:

- (a) Microsoft's behaviour in past acquisitions of game publishers,
- (b) gains and losses from foreclosure,
- (c) evidence from quantitative analyses, and
- (d) any protections offered by contracts.

Past acquisitions

7.283 We consider it informative to look at the strategy that Microsoft has adopted following previous gaming acquisitions. The Parties stated that decisions regarding past mergers, which involved mid-sized games, are not evidence of

⁵²⁸ SIE, submission to the CMA.

⁵²⁹ SIE, submission to the CMA.

⁵³⁰ SIE, submission to the CMA.

⁵³¹ SIE, submission to the CMA. We note that, based on the information provided, we have reservations about the survey methodology. For example, there is no indication that the sample is representative; the selected answers are not a measure of diversion; awareness of CoD does not imply the respondent played CoD; and the survey approach does not meet the evidence standards set out in our published good practice guide. For these reasons, we have not given weight to this evidence.

Microsoft's incentives in this Merger because they are fundamentally different.⁵³² We recognise that there are some differences but nonetheless consider Microsoft's past behaviour to be indicative of its broader commercial strategy in gaming. In particular:

- (a) We acknowledge that any comparison with CoD will not be perfect. The Parties stated that the value from making a title exclusive does not have a linear relationship with the popularity of the game but does not suggest what form this non-linearity takes.⁵³³ We consider that both gains and losses change with the popularity of the game, and that other factors including its game modes (single-player, multi-player, live service) may affect the gains and losses from foreclosure.
- (b) This Merger would be the largest-ever gaming acquisition. CoD's popularity is matched only by a small set of other games whose studios have never been acquired by console providers and whose incentives and commercial decisions remain independent from console platform owners.

7.284 For these reasons, we consider any differences or similarities between CoD and previous game acquisitions to be relevant in seeking to anticipate Microsoft's future behaviour.

7.285 The Parties said Minecraft is the most comparable franchise previously acquired by Microsoft to CoD, and that Microsoft kept it available on PlayStation and expanded its reach to other platforms after its 2014 acquisition of Minecraft's publisher Mojang.⁵³⁴ We note, however, that Minecraft has certain key differences to CoD. Before being acquired by Microsoft, Mojang Studios sold Minecraft for a one-time fee, after which users received lifetime updates and content. Following the acquisition, Microsoft continued to charge a one-time fee (of around \$30) and developed other ways of monetising the game, including subscription payments for multi-player functionality, merchandise from the Minecraft Shop (eg, t-shirts, lamps, mugs, etc), and game-enhancing features from the Minecraft marketplace (eg, skin packs, texture packs, adventure maps, etc). This legacy monetisation model of a one-time fee for lifetime access and updates, which predated Microsoft's acquisition, differs significantly from CoD, where users buy the new premium iteration of the game every year for a higher fee.

7.286 Having reviewed Microsoft's strategy following its previous acquisitions of game studios and publishers, we found that it typically makes games

⁵³² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.55(c).

⁵³³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.55(c).

⁵³⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 3.55(a).

exclusive to Xbox. Microsoft has acquired nine studios and one publisher (ZeniMax) since 2002. Existing versions of games that were available on both Xbox and PlayStation have remained available on both. However, several future releases of these games have been announced to be Xbox exclusives.

7.287 For example, in 2021 Microsoft acquired ZeniMax:

- (a) Prior to the acquisition, 24 of the 26 games ZeniMax released on PlayStation or Xbox consoles since 2010 were released on both consoles.⁵³⁵
- (b) ZeniMax has published two games since its acquisition by Microsoft: Deathloop in September 2021 and Ghostwire: Tokyo in March 2022⁵³⁶. Both games were released under one-year exclusive contracts with PlayStation which were agreed prior to the acquisition. Therefore, it seems that Microsoft has honoured existing contractual agreements and acted in accordance with the statements it made on the ZeniMax acquisition.⁵³⁷ Deathloop has since been released on Xbox (and Game Pass) in September 2022 with the addition of new content available across all platforms.
- (c) Microsoft and ZeniMax have confirmed some future releases of games from Zenimax studios will be Xbox exclusives (which includes Windows PC version). Microsoft has also confirmed that all future releases will be in Xbox Game Pass on release.⁵³⁸ Microsoft has publicly confirmed that new games Starfield and Redfall expected in 2023 will be Xbox/PC exclusives.⁵³⁹
- (d) Microsoft Gaming's CEO has publicly alluded to the next Elder Scrolls (Elder Scrolls VI) release being an Xbox exclusive.⁵⁴⁰ Both Starfield and Elder Scrolls: VI were announced in 2018, before Microsoft's acquisition,

⁵³⁵ [Wikipedia | List of Bethesda Softworks video games](#), accessed by the CMA on 23 January 2023. The two games not published on both consoles were Quake III Arena Arcade released only on Xbox 360 and Fallout Shelter released only on Xbox One, android and iOS.

⁵³⁶ Deathloop is a single player first-person shooter (FPS) game with a 2-person campaign mode. Ghostwire: Tokyo is a single-player action-adventure game.

⁵³⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 3.55(a)-(b).

⁵³⁸ '[Microsoft News | Get The Facts: How Microsoft is Committed to Growing Gaming Communities](#)' accessed by the CMA on 7 February 2023.

⁵³⁹ Starfield is a single player role-play game (RPG). Redfall is a FPS with a 4-person co-operative multiplayer mode. 'Gamerant | Xbox three exclusive Bethesda games explained', accessed by the CMA on 19 January 2023. See also <https://www.xbox.com/en-US/games/starfield> and <https://www.xbox.com/en-GB/games/redfall>.

⁵⁴⁰ Elder scrolls is a role-playing game (RPG) all releases in the franchise (except for Elder scrolls online) have been single player, Elder Scrolls VI is expected be single player. Microsoft gaming's CEO publicly eluded to Elder Scrolls VI being an Xbox exclusive in an interview in November 2021. [GQ magazine | xbox Phil Spencer Todd Howard interview](#), accessed by the CMA on 30 January 2023.

and were not anticipated to be Xbox exclusives (which includes Windows PC version).⁵⁴¹

- (e) ZeniMax also publishes Elder Scrolls Online, a live service massively multiplayer online role-playing game within the Elder Scrolls franchise. It was first released in 2014 but receives annual content releases. The game continues to be available on Xbox, PC and PlayStation.

7.288 We note that, in the context of the European Commission merger investigation in the Microsoft/ZeniMax acquisition whose report was published in March 2021, Microsoft submitted it had strong incentives to continue making ZeniMax games available for rival consoles (and their related storefronts).⁵⁴² Microsoft's decisions described above regarding new titles Starfield and Redfall, and the suggestion of future exclusive releases in the Elder Scrolls franchise on Xbox, which reveal its real-world incentives, strongly suggest that static incentives analyses developed in the context of a merger inquiry may fail to capture significant unstated commercial incentives.

7.289 The Parties submitted that, as of October 2022, from the development studios Microsoft has acquired, there are [REDACTED] upcoming titles, [REDACTED] of which are not planned to be available on PlayStation or Nintendo.⁵⁴³ Examples as of October 2022 include:

- (a) [REDACTED].
- (b) [REDACTED].
- (c) [REDACTED].
- (d) [REDACTED].⁵⁴⁴

7.290 Microsoft submitted that the evidence from past acquisitions is not a good predictor of incentives in relation to CoD, in particular because CoD is a multiplayer franchise,⁵⁴⁵ and because mid-sized games are not evidence of Microsoft's incentives related to CoD.⁵⁴⁶ We do not consider this argument sufficiently persuasive to significantly reduce the weight we attach to the evidence set out above.

⁵⁴¹ 'E3 2018: Bethesda's Press Conference News Recap – Fallout 76, Elder Scrolls 6, Starfield, and More' accessed by the CMA on 5 January 2023.

⁵⁴² Case M.10001 – Microsoft / ZeniMax, paragraph 107.

⁵⁴³ Microsoft Internal Document.

⁵⁴⁴ Wasteland 3 was released on Xbox, PlayStation and Windows in August 2020 and on Linux and Mac in December 2020.

⁵⁴⁵ Microsoft response to working papers.

⁵⁴⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.55(c).

- (a) First, the observation that a game is multiplayer may imply that there are significant direct network effects. While this may increase the losses when removing a game from PlayStation, it should also increase the gains from gamers that divert to Xbox. There is no evidence that the losses would scale up disproportionately compared to the gains in a way that would make the incentives in this case significantly different from the pattern observed in past acquisitions, as set out above.
- (b) Second, while multiplayer games may benefit from cross-play, the Parties' submission in relation to its impact on the quality of experience in CoD would appear to suggest a relatively limited impact. This is discussed below in relation to the gains and losses from foreclosure.
- (c) Third, there is a variety of games that are exclusive to only one console. They vary across several dimensions, including whether they are single or multiplayer (or a mix). For example, Halo, Forza and Gears of War are games with multiplayer modes which are exclusive to Xbox. Therefore, we consider that being a multiplayer game does not necessarily prevent a game from becoming an exclusive.

7.291 Overall, the evidence indicates that, with limited exceptions, Microsoft's typical strategy is to honour existing contractual agreements with rival consoles, but to redirect the efforts of any acquired studios to produce Xbox exclusives. The most notable exception is the strategy pursued with Minecraft by Mojang; however, as discussed above, the specific features of Minecraft business model do not make it a good comparator to CoD.

Gains and losses from foreclosure

7.292 In this section, we consider some of the gains and losses that the Merged Entity would face if it were to pursue either a strategy that involves total or partial foreclosure using CoD.

7.293 One component of the gains to the Merged Entity would arise from customers switching away from PlayStation to Xbox (whether immediately or at a future point in time, eg when they are planning their next CoD or console purchase). The losses would include lost sales of CoD titles to gamers that would have bought the game on PlayStation but decide to stop buying it and do not switch to Xbox. These gains and losses are the focus of quantitative analysis carried out by the Parties and a third party, as well as our own quantitative analysis, which are explored in more detail later.

7.294 We note that there is a range of other potential gains and losses from a foreclosure strategy that are more difficult to quantify on a comparable basis.

They include (i) furthering Microsoft's strategy of expanding Game Pass, (ii) any reputational impacts (good or bad), (iii) the strength of the Xbox brand and user loyalty, (iv) the impact of network effects (including for games that allow cross-play), and (v) the potential for entry, expansion, or repositioning by rivals to disincentivise foreclosure. We discuss some of these broader strategic considerations below.

Expansion of Game Pass

7.295 Microsoft intends to include Activision content on Game Pass on a 'day and date' basis.⁵⁴⁷ This is relevant to our assessment of incentives. Indeed, any analysis that ignores this feature of the Merger would understate the attractiveness of Xbox. In particular, this is likely to have three effects on the Merged Entity's incentives to foreclose:

- (a) It may increase the number of gamers who switch from PlayStation to Xbox. This is because CoD's addition to Game Pass would add a way for gamers to pay for CoD titles, which to some gamers may be preferable to purchasing them on a B2P basis.⁵⁴⁸ For example, our survey does not account for the fact that CoD will be available on Game Pass. On the other hand, Microsoft and SIE attempt to capture this through the use of assumptions on profits made by Xbox for customers who switch to Game Pass.
- (b) On the other hand, CoD's addition on Game Pass may cannibalise some of the B2P sales of CoD. In its valuation model, Microsoft estimated this cannibalisation to be [X]%, [X].⁵⁴⁹ The fact that Microsoft is nonetheless adopting this strategy suggests that it expects it to be profitable in the long run. This would also apply to overall revenue from customers switching from PlayStation to Xbox.

7.296 Consistent with this, the valuation model prepared by Microsoft in anticipation of the Transaction suggests that it expects its impact on Game Pass to be positive:

- (a) Microsoft assumed CoD and other Activision content would increase both the number of subscribers and the revenue spent on Game Pass.⁵⁵⁰ In particular, the model assumes an additional [X] users will subscribe to Game Pass as a result of the Transaction. This represents an increase of

⁵⁴⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.8(e).

⁵⁴⁸ We recognise that this may be beneficial to some customers. Here, our focus is on the impact on the Merged Entity's incentives only. We discuss benefits from Game Pass in our chapter on Countervailing factors.

⁵⁴⁹ Microsoft Internal Document; and Microsoft Internal Document.

⁵⁵⁰ Microsoft Internal Document.

[REDACTED]% in the subscriber base.⁵⁵¹ The model also assumes an increase [REDACTED] played on Game Pass.

(b) The net impact of the shift in mix from B2P to subscription is [REDACTED].⁵⁵²

7.297 The growth of Game Pass appears to be an important strategic objective for Xbox. The valuation model prepared by Microsoft assigns [REDACTED]% of the valuation assigned to Activision to [REDACTED].⁵⁵³ This synergy amounts to \$[REDACTED].⁵⁵⁴ Given the valuation is taken over [REDACTED] years, this amounts to a \$[REDACTED] valuation in net present value terms per annum, on average. Without applying the discount rate to generate an NPV (and, therefore, on a comparable basis to the quantitative analysis presented later in this chapter), the annual value of this synergy is \$[REDACTED].

7.298 This valuation does not include the effects of any foreclosure of PlayStation. However, we consider it reasonable to expect that the benefits to Game Pass of including CoD would be larger if it were not available on another console. Given [REDACTED], even a relatively small incremental benefit from foreclosing PlayStation would likely be significant. As such, we consider this to be relevant when assessing the profitability of a foreclosure strategy.

7.299 Overall, we consider the potential for expansion of Game Pass represents an important part of Microsoft's strategy. To the extent a foreclosure strategy contributes to expansion of Game Pass, we consider that this would have significant strategic value to Microsoft that would represent a gain that goes beyond the sale of consoles and games to the cohort of customers that would switch in response to a foreclosure strategy. We consider the value of an expansion in Game Pass alongside the quantitative analysis set out below.

Reputation

7.300 Microsoft submitted that it would suffer reputational damage arising from non-compliance with Activision's contracts with SIE if it were to engage in a foreclosure strategy. Microsoft said that withholding CoD from PlayStation would result in backlash from gamers on social media.⁵⁵⁵

7.301 For the avoidance of doubt, we are not considering a foreclosure strategy that would require the Merged Entity to breach existing contracts with SIE. However, we assessed Microsoft's arguments in relation to the reputational

⁵⁵¹ Microsoft Internal Document.

⁵⁵² CMA analysis of: Microsoft Internal Document. [REDACTED].

⁵⁵³ Microsoft Internal Document.

⁵⁵⁴ Microsoft Internal Document.

⁵⁵⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.58(d).

costs associated with a foreclosure strategy in relation to prospective contracts and/or new releases.

7.302 We recognise that withholding CoD from PlayStation could have some reputational consequences for Microsoft. For example, an industry report stated that Activision and Sony faced some backlash in the past over temporary exclusivity of a CoD game mode. The third party report states that, when CoD Spec Ops: Survival was released exclusively on PlayStation for the first year, there was some backlash on social media. The document links this backlash to the gamers' expectation of playing CoD: Modern Warfare on cross-play.⁵⁵⁶

7.303 However, evidence indicates that reputational effects may not prevent a foreclosure strategy:

(a) First, we note that any negative impact on Microsoft's reputation did not prevent it from making some ZeniMax games exclusive to Xbox. In response to the backlash due to Microsoft's decision of making ZeniMax's game Starfield exclusive to Xbox and PC, ZeniMax's head of marketing apologised.⁵⁵⁷ This reputational cost did not result in Microsoft making the game available on other platforms. While CoD [~~is~~] than any ZeniMax games, such that any reputational effect may reasonably be expected to be larger in absolute terms, so too would the other gains and losses from making it exclusive. We have not seen reasoning or evidence to suggest that reputational effects would 'scale' disproportionately with size in a way that would eliminate Microsoft's incentive to foreclose CoD, even though it had an incentive to make new ZeniMax games exclusive to Xbox.

(b) Second, in addition to reputational costs, there are also potential reputational gains from a foreclosure strategy. Given CoD's popularity, Xbox would benefit from an increased expectation that Microsoft would in future be willing to invest in successful studios and release more games exclusively on Xbox.

(c) Third, negative reputational effects can often be managed. For example, exclusivity can be presented as a positive differentiating factor for Xbox, and any limitations of CoD on PlayStation may be attributed to technical reasons. In a scenario where no agreement is reached to supply CoD on PlayStation, it would be difficult for consumers to discern whether this is as the result of a foreclosure strategy or the failure to reach a deal on

⁵⁵⁶ [~~is~~] Internal Document.

⁵⁵⁷ 'Bethesda Apologizes for Starfield Xbox Exclusivity: Can Be 'Frustrating' For PlayStation Owners – IGN', accessed by the CMA on 22 November 2022.

reasonable terms for both parties. Given this ambiguity, a proportion of affected consumers may not blame Microsoft.

- (d) Fourth, we have no evidence of where a reputational impact would arise or how it would affect customer behaviour. For example, if any backlash against Microsoft were primarily emanating from loyal PlayStation gamers who are in any event less inclined to switch to Xbox, it would not significantly affect Microsoft's incentives to engage in a foreclosure strategy (since it would be unlikely to gain these consumers in any event).

7.304 Overall, we consider that any negative reputational effect can be mitigated and offset by commercial and strategic objectives. Therefore, we do not consider them likely to be significant within the overall assessment of the Parties' incentives.

Loyalty and switching costs

7.305 Microsoft submitted that, once the choice of console has been made, gamers tend to remain loyal to their choice. Microsoft stated that rival consoles have built a strong reputation and enjoy a high degree of brand loyalty.⁵⁵⁸ Microsoft also submitted that there are switching costs for gamers on PlayStation due to the backward compatibility of its games and the fact that not all Sony's games are available on PC.⁵⁵⁹

7.306 We note that, according to the survey referred to by Microsoft, not only rival consoles, but also Xbox has built a significant degree of brand loyalty.⁵⁶⁰

7.307 We acknowledge the Parties' submissions that a degree of loyalty to gamers' platforms is likely to exist. Such loyalty is likely to have two effects:

- (a) First, loyalty to a platform will tend to reduce the total amount of switching in response to a total or partial foreclosure strategy using CoD. Our survey nonetheless shows that a significant proportion of PlayStation customers would be willing to switch to Xbox. This suggests that the value of being able to continue playing CoD (or the full version of CoD) can outweigh loyalty to a given platform and associated switching costs.
- (b) Second, if customers are loyal to their platforms, this increases the value of consumers that eventually do switch from PlayStation to Xbox in response to a foreclosure strategy. This is because inducing a switch to

⁵⁵⁸ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.78(b).

⁵⁵⁹ Microsoft response to working papers.

⁵⁶⁰ 'The Best SEO Companies' survey [Generational Brand Loyalty](#)', accessed by the CMA on 5 January 2023.

Xbox will give rise to an opportunity to engender loyalty among those new Xbox customers.

7.308 Evidence provided by a third party [redacted] showed that as gamers played more of Microsoft's first-party games, they were less likely to upgrade from PlayStation 4 to PlayStation 5 than other gamers. This held true even when accounting for total gametime spent on PlayStation 4.⁵⁶¹ This suggests that switching post-Merger may be higher than suggested by our survey. Given the potential to generate strong brand loyalty, this also suggests that the value of each switch may be higher (because each switch raises the chance of future console sales).

Cross-play and network effects

7.309 Microsoft stated that cross-play represents a disincentive to total and partial foreclosure. According to Microsoft, a foreclosure strategy in a cross-play enabled game like CoD would hurt gamers' playing experience on all platforms, cause severe reputational damage and gamer backlash (we considered this above), and lead to significant financial damage.⁵⁶² In particular, Microsoft submitted that:

- (a) cross-play benefits gamers on all platforms because it leads to improvements in user experience due to more efficient matchmaking. Gamers benefit from shorter waiting times to find a match, lower disparity in the average level of experience across gamers in the online match, and improvements in the overall stability of the internet connection to the server hosting the online match;⁵⁶³
- (b) a larger user base due to cross-play amplifies the impact of direct network effects which operate at the market level, not the individual console or platform level;⁵⁶⁴ and
- (c) CoD game titles have allowed gamers to cross-play since 2019, and cross-play is now widespread. For example, over the last twelve months, [redacted]% of [redacted] of CoD: Modern Warfare and CoD: Warzone had cross-play enabled while playing online, which allowed them to play with gamers on Xbox and PC.⁵⁶⁵

⁵⁶¹ Based on account-level data. [redacted] response to the CMA's RFI.

⁵⁶² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.56.

⁵⁶³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.56.

⁵⁶⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.56.

⁵⁶⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.56.

7.310 As discussed above under features of the console gaming market, the gaming industry is characterised by strong direct network effects. They are especially strong for large multiplayer franchises like CoD. Strong direct network effects at a game level have two opposite effects on the Parties' incentives to foreclose:

- (a) Some gamers will switch from PlayStation to Xbox because other gamers (including their friends) have switched, and they want to remain on the same platform. This would increase the Merged Entity's gains from foreclosure.
- (b) The presence of cross-play means that withholding CoD from PlayStation could in principle also worsen the experience of Xbox users. A total foreclosure strategy would reduce CoD's overall user base. If some Xbox gamers stopped playing CoD as a result of the foreclosure strategy, the Merged Entity's losses would be higher than estimated in our short-term financial modelling. Moreover, if the lack of cross-play means that gamers will reduce their overall level of engagement with Xbox because they cannot connect with gamers (eg friends) on PlayStation, then Xbox's losses would increase. However, partial foreclosure mechanisms would mitigate this risk.

7.311 Evidence suggests that any impact from the second point above is likely to be limited:

- (a) Microsoft submitted that cross-play leads to shorter matchmaking times, lower skill disparity, and better online match stability.⁵⁶⁶ However, data from the Parties indicates [REDACTED].⁵⁶⁷ Comparing the average time to search for a user with cross-play relative to one without cross-play across platforms in Europe, the difference between the quickest and slowest matchmaking time is [REDACTED]. For context, global data from the Parties shows that the waiting time for a match is [REDACTED]. Only after [REDACTED].⁵⁶⁸ UK data shows that search times for users are [REDACTED] for [REDACTED] cross-play and non-cross-play users.⁵⁶⁹ Even if the impact on wait times were more significant, it is unclear that this would have an impact on Microsoft's profits on Xbox and induce gamers to switch away from Xbox or significantly reduce their overall engagement with the platform.
- (b) Our survey estimates that [REDACTED]% of PlayStation gamers will buy an Xbox, either in addition or instead of a PlayStation. This increases CoD's user

⁵⁶⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.56.

⁵⁶⁷ Activision response to the CMA's RFI.

⁵⁶⁸ [REDACTED]

⁵⁶⁹ Activision response to the CMA's RFI.

base on Xbox, somewhat reducing the benefits from a larger user base across platforms.

- (c) Cross-play is a tool introduced by Activision in 2019. CoD's popularity was established well before then, indicating that its success is not dependent on cross-play. In fact, there are successful games on both Xbox and PlayStation that support cross-play (between console and PC) and yet are not available on the other console, for example Halo, Genshin Impact, and Forza. This suggests commercial and strategic considerations may override any potential benefits from cross-play.

7.312 Given the evidence above, we consider the impact of cross-play to be limited. As such, direct network effects are still likely to have a positive impact on the Parties' incentives to foreclose by inducing some gamers to follow others in their choice of console.

7.313 Indirect network effects also exist, with publishers wanting to publish their games on the platform with the most users. However, most publishers choose to make their games available on as many platforms as possible. Publishers told us that their incentives in this respect would not change as a result of a potential withholding of CoD from PlayStation.⁵⁷⁰ Therefore, we do not consider indirect network effects to be central to our assessment.

Entry, expansion, and repositioning of other games

7.314 When considering the long-term incentives of the Parties, we have also considered the long-term incentives of other game publishers to take advantage of the gap left from CoD on PlayStation following a foreclosure strategy. Without CoD on PlayStation (or with a reduced CoD offering on PlayStation), other publishers may be incentivised to develop new games, expand, or reposition existing games to gain users. If Microsoft expected this to occur, it would be less incentivised to engage in foreclosure strategies.

7.315 In our section below on Countervailing Factors, we assess this possibility of entry and expansion in response to the Merger including barriers to entry and expansion for game publishers. We provisionally find that barriers to entry and expansion are high, especially to achieve a similar success as that of CoD. Barriers include development costs, staff and franchise loyalty. We have not seen any evidence of entry and/or expansion plans of rivals who will enter or expand irrespective of whether the Merger proceeds.

⁵⁷⁰ [REDACTED] response to the CMA's RFI; and [REDACTED] response to the CMA's RFI.

7.316 On this basis, we provisionally consider entry, expansion, and repositioning of other games would not be sufficiently likely to result in a lack of incentive on the part of the Merged Entity to engage in a foreclosure strategy.

Quantitative modelling

7.317 In this section, we assess the economic analyses received during our inquiry and we present our own financial modelling.

7.318 Quantitative analyses provide only a partial assessment of the incentives to foreclose. Several gains and losses described above are not captured by any financial analyses. Microsoft acknowledged this and stated that these analyses will be a static comparison of the potential costs and benefits of a withholding strategy while holding everything else equal, and therefore do not capture dynamic considerations.⁵⁷¹

Parties' submissions

7.319 The Parties submitted an economic analysis of incentives to engage in total foreclosure (they did not address partial foreclosure). They submitted that the Merged Entity would have no financial incentive to withhold the CoD franchise from Sony's console gaming platform [X].⁵⁷² Based on this analysis, the Parties estimated that more than [X]% of current CoD players on PlayStation would have to switch to Xbox for it to be profitable for Microsoft to make CoD exclusive to Xbox. This is called the 'critical diversion ratio'. The Parties submitted that a rate of consumer switching in excess of the critical diversion ratio of [X]% found in their analysis would be 'implausibly high'.⁵⁷³ More details on this analysis are presented in Appendix E.

7.320 The Parties relied on inputs and data from Activision and Microsoft. The model has some advantages:

- (a) it accounts for the presence of multi-homers, ie gamers who own both a PlayStation and Xbox and therefore might switch console without facing the cost of buying a new one;
- (b) it accounts for gamers potentially switching from consoles to PC; and
- (c) it accounts for the possibility of gamers choosing between B2P and subscription options.

⁵⁷¹ Microsoft response to working papers.

⁵⁷² Parties, submission to the CMA; and Parties Internal Document.

⁵⁷³ Parties, submission to the CMA.

7.321 However, we have material doubts about whether some of the inputs to the economic model used by the Parties are appropriate, and the model appears to rely on some modelling choices that we consider to be counterintuitive. In particular:

- (a) The Parties perform a sensitivity analysis in which they consider the impact on the critical diversion ratio if gamers were to switch to Xbox only (and not to PC). They estimate that the share of CoD users who would need buy an Xbox for the foreclosure strategy to be profitable increases to [REDACTED]%. However, [REDACTED]⁵⁷⁴ [REDACTED], it is not clear why the critical diversion ratio would increase under this assumption. The Parties state that this is because the revenues recouped from multi-homers decrease, but we find no reason why this should be the case. We consider this casts doubt on the reliability of the baseline results.
- (b) Changing the diversion to PC and Xbox by a significant amount (eg increasing the share of CoD gamers on PC by 10% and decreasing those on Xbox by 10% or *vice versa*) changes the critical diversion ratio only by [REDACTED]%. Given that the revenues recouped on Xbox and PC are very different on the Parties' model, the corresponding low impact on the critical diversion ratio seems unjustified.
- (c) In the ordinary course of business, Microsoft estimates the value of an Xbox customer and calls this their "lifetime value" (**LTV**), based on actual purchase data of Xbox Series X/S owners. The LTVs are essentially [REDACTED].⁵⁷⁵ As part of its analysis, Microsoft used LTVs as an input to capture the value of gamers that would hypothetically switch in response to the withholding of CoD releases from PlayStation. These LTVs are based on [REDACTED] and, the Parties submitted, they reflected the LTVs of customers who bought [REDACTED]. In order to estimate the trend of console LTVs for later years, Microsoft has [REDACTED].⁵⁷⁶ In relation to the above, we note that:
 - (i) While we recognise the reasoning behind the adjustments, we are of the view that it does not seem sufficient to justify the large magnitude adjustment.
 - (ii) Given these LTVs are used, unadjusted, in the ordinary course of business, we consider that they are likely to be more reflective of customer value when not adjusted, and we expect that Microsoft's

⁵⁷⁴ Parties Internal Document.

⁵⁷⁵ Microsoft response to the CMA's s109 notice.

⁵⁷⁶ Parties, submission to the CMA.

adjustments are likely to cause a significant underestimate in the Merged Entity's incentive to foreclose.

- (iii) We consider there is no reason to believe switching would not happen at the beginning of the next console generation. Therefore, the downward adjustment applied by Microsoft seems unjustified.

7.322 Overall, we consider these limitations have the effect of understating the Merged Entity's gains and overestimate the critical diversion ratio. As such, we place no material weight on these results and focus instead on our analysis, which takes into account the Parties' submissions and data, but adjusts for its apparent weaknesses.

7.323 Microsoft also presented a more stylised model during the CMA's site visit considering the incentive to engage in total foreclosure. Microsoft described this analysis as a 'mini', 'stylised', and 'simplified' version of their original incentives analysis which should not be preferred to their original analysis which accounts for additional potential benefits.⁵⁷⁷ We provide further details on this analysis in Appendix E. However, in light of Microsoft's preference for the Parties' more detailed analysis discussed above, the limitations identified with the site visit model which are discussed in Appendix E, and that we rely instead on our own analysis, we place no material weight on the results of this analysis and therefore do not discuss it further here.

Third parties' submissions

7.324 An analysis submitted by SIE estimated that [X] % of PlayStation users need to switch to Xbox for total foreclosure to be profitable.⁵⁷⁸ To make this result comparable to the Parties' submissions and our own survey, we converted this as the share of CoD gamers on PlayStation that need to switch to Xbox.⁵⁷⁹ The resulting equivalent critical diversion ratio is [X] %. SIE's analysis considered only total foreclosure, not partial foreclosure.

7.325 More details on this analysis are presented in Appendix E.

7.326 We consider that this analysis has the following limitations:

- (a) **Absence of multi-homing:** there is no recoupment through sales of CoD on Xbox consoles and PCs already owned by PlayStation gamers. As

⁵⁷⁷ Microsoft response to working papers.

⁵⁷⁸ Based on device-level data. SIE, submission to the CMA.

⁵⁷⁹ Data from [X] indicates that [X] % of PlayStation gamers played CoD in 2021, as noted in our assessment of Ability above. We therefore divided 8% by [X] % to obtain the share of CoD gamers that would need to switch for total foreclosure to be profitable.

explained above, in theory the effect of multi-homing is ambiguous; however, in this analysis SIE assumed all spend of diverted gamers on PlayStation is lost and transferred to Xbox. This likely overestimates PlayStation's losses and Xbox's gains.

- (b) **No option to switch to a new PC:** there is no recoupment through sales of CoD on a PC. By ignoring a potential source of recoupment, the analysis underestimates the foreclosure gains.
- (c) **Switching rates:** when calculating the expected switching rate of users from PlayStation to Xbox, it is assumed that the probability of a user switching is equal to that user's current engagement level with CoD. While we believe that the two may be correlated, we do not have any evidence that supports a perfect link between the probability of switching and engagement.
- (d) **Inconsistent profit margin:** the analysis assumed a third-party revenue-share of [X] % with CoD on PlayStation, which is larger than the current third-party margin of [X] %. This therefore underestimates the losses the Merged Entity would incur by withholding CoD from Sony by [X], all else equal. A sensitivity analysis examined the impact of using the effective margin SIE currently generates for CoD, after taking into account all payments from SIE to Activision. This results in a SIE margin of [X] %.⁵⁸⁰ The proportion of PlayStation users that need to switch to Xbox for foreclosure to be profitable under this scenario increases from [X] % to [X] %.
- (e) **Overestimates Xbox Game Pass spending:** weak evidence supports the [X] % uplift applied to overall user spending to account for the additional spending that Game Pass is reported to generate. This is likely to overestimate the additional gains that Microsoft will receive from spending on Game Pass, as subscription spend on PlayStation is already incorporated. Removing the uplift in spending for XGP increases the critical switching rate at which it becomes profitable to withhold CoD from [X] % to [X] %.⁵⁸¹
- (f) **Data:** The analysis uses data from PlayStation as a proxy for Xbox. The effect this has on the estimated gains and losses depends on the relative profitability of CoD and other games on PlayStation and Xbox.

⁵⁸⁰ SIE submission to the CMA.

⁵⁸¹ SIE submission to the CMA.

7.327 Overall, we consider that the analysis includes various factors that could either increase or decrease the Parties' gains (or the Parties' losses) from the input foreclosure strategy. Therefore, it is difficult to unambiguously say whether the estimated critical diversion ratio is likely to be under- or over-estimated. As with the Parties' model, we place no material weight on the results of this analysis and rely instead on our own analysis, which incorporates SIE's submissions and data.

CMA modelling

7.328 We carried out two separate quantitative analyses to assess the Parties' incentives to foreclose.

7.329 As with the analyses submitted by Microsoft and by SIE, our analyses have advantages and disadvantages. However, our analyses account for some of the drawbacks of the analyses submitted by Microsoft and SIE. For example, we account for switching to PC and multi-homing, and we rely on diversion ratios estimated directly from our survey. For these reasons, we consider our model to warrant greater evidential weight than those of Microsoft and SIE. We discuss the relative advantages and disadvantages of our quantitative model in detail in Appendix E.

7.330 While we consider our model has some advantages relative to the other models we have reviewed, both our models are subject to the caveats mentioned above, namely they cannot take account of all possible gains and losses emerging from a foreclosure strategies. An additional issue that our model necessarily faces is that it can be difficult to cross-check the accuracy of the profit margin estimates submitted by the Parties and third parties (other than checking their methodology for producing it, which we have done where possible).

7.331 With this in mind, we summarise below the main results of our quantitative analyses.

7.332 First, we use the Parties' submitted LTVs and our survey results to estimate gains and losses of a potential total foreclosure strategy. Using LTVs allows us to capture the gains from all revenue streams for Xbox. We also allow for switching to PC, while we consider multi-homing is already reflected in the LTV estimates. Indeed, we use the same LTV estimates as those used in the normal course of business for Xbox,⁵⁸² this has the advantage of basing our analysis on the same data used by Xbox for its internal decisions. In absence

⁵⁸² Parties, submission to the CMA. We use LTVs for the 2021 cohort.

of such measure for Activision, we used the LTV for CoD on PlayStation computed by the Parties as part of their analysis.⁵⁸³ We combine these with our survey results.

7.333 The analysis indicates a net profit between of \$[X] billion and \$[X] billion.⁵⁸⁴ Using Microsoft's "curated" LTVs (where Microsoft adjusted the LTVs downwards for the purpose of the incentives analysis it submitted), results indicate a net loss ranging from \$[X] million to \$[X] million. These numbers sum five years' worth of profits and losses on Xbox (including hardware, subscription, and games) and Activision. The overall picture arising from this analysis is that, on balance, although subject to uncertainty, it is consistent with foreclosure being profitable.

7.334 Second, we use 2021 data from Activision and SIE, as well as our survey results, to estimate the gains and losses that would result from a total foreclosure strategy, and in particular those gains and losses that would result from customers switching away from PlayStation (and some of those being recaptured by the Merged Entity). We allowed for multi-homing, both within and across consoles generations, as well as switching to PC. We also distinguish between profits made on other first-party and third-party games. This analysis has also the advantage to allow for the modelling of a partial foreclosure strategy, something not done in any of the analyses previously described.

7.335 The analysis provides a range of results. Depending on the assumption made on the switching rate of CoD gamers out of our sample and whether we weight responses by revenue or gametime, results range from an annual loss of \$[X] million to an annual gain of \$[X] million. For context, Xbox's annual revenues from hardware, digital distribution, and subscription (ie excluding game publishing) in 2021 were \$[X] billion,⁵⁸⁵ meaning the values in this range amount to a loss equivalent to [X]% of Xbox's revenues, or a gain equivalent to [X]% of its revenues in 2021. As such, this analysis straddles zero and is subject to underestimation for the reasons outlined above (ie, they cannot take account of all possible gains and losses emerging from a foreclosure strategies). We provide more details in Appendix E.

7.336 Financial modelling of partial foreclosure has two key features:

⁵⁸³ Parties, submission to the CMA. We use LTVs for the 2021 cohort.

⁵⁸⁴ The range is due to the assumption made on the switching rate of CoD users not sampled from our survey. Our survey sampled [X]% of CoD users. For the remaining [X]%, we assumed that either they switch at the same rate as sampled CoD users, or they do not switch at all.

⁵⁸⁵ Microsoft response to the CMA's s109 notice.

- (a) The financial losses would be substantially lower as CoD sales on PlayStation would not be foregone in their entirety. The Merged Entity would lose sales on CoD only for those gamers that would stop playing CoD as a result of the partial foreclosure strategy. Our survey indicates this would be [X]% of all CoD gamers, or about [X]% of all PlayStation users.
- (b) The gains would be similar to total foreclosure. Our survey indicates that, while [X]% of PlayStation gamers would buy an Xbox as a result of total foreclosure, only a slightly lower proportion, namely [X]%, of PlayStation gamers would do that as a result of partial foreclosure.⁵⁸⁶

7.337 This suggests that the Parties may have a stronger incentive to adopt or at least start with a partial foreclosure strategy. Indeed, one third party [X] explained that titles released by studios recently acquired by Microsoft, including Psychonauts 2, Minecraft, Wasteland 3, and We Happy Few, have generated complaints from customers on rival consoles over lower gameplay performance, delays in the release of content or a lack of support, compared to that on Xbox.⁵⁸⁷ However, we are cautious in interpreting these results for two reasons:

- (a) First, our survey results on partial foreclosure might be affected by some upward bias. Our survey questionnaire contained only one question on partial foreclosure, while the rest of the questions related to total foreclosure. This means that, when responding to the partial foreclosure question, respondents are likely to have a total foreclosure scenario fresh in their minds, and their responses may be affected by it (so called 'framing bias').
- (b) Second, the question of partial foreclosure included in the survey questionnaire included only one partial foreclosure mechanism, namely the withholding of certain features of CoD (including specific levels, maps or gameplay modes) from PlayStation. The direction of the resulting bias is not clear here, because some partial foreclosure mechanisms can induce a higher diversion ratio (eg temporary exclusivity) and others a smaller diversion ratio (eg delaying fixing minor bugs).

7.338 Overall, we consider our analyses suggest the Merged Entity has the incentive to foreclose, or at least is broadly neutral. Our LTV-based analysis indicates strong incentives to foreclose, as does the modelling of partially foreclosing based on 2021 revenue data. Our financial modelling of total

⁵⁸⁶ Figures weighted by gametime.

⁵⁸⁷ [X] response to the CMA's RFI.

foreclosure based on 2021 data indicates the Merged Entity's incentives to foreclose are broadly neutral.

- 7.339 In interpreting the results from our modelling as well as that provided by the Microsoft and SIE, we are conscious that quantitative modelling is inherently subject to uncertainties and has to rely on assumptions where information is imperfect. This limits the weight we can give to this type of evidence. For this and the reasons explained above (ie, these analyses cannot take account of all possible gains and losses emerging from a foreclosure strategies), we consider it particularly important in this case to assess the Merged Entity's incentive to foreclose rivals by considering all the available evidence in the round, including of Microsoft's behaviour following previous acquisitions and its stated strategy as reflected in internal documents.
- 7.340 In particular, we are conscious of the following elements that our financial modelling does not account for (see above for a more thorough explanation of their overall effect on the Parties' incentives to foreclose):
- (a) Our survey ignores the fact that Microsoft plans to add Activision content to Game Pass. This is likely to underestimate the diversion ratio from PlayStation to Xbox, and therefore, the Merged Entity's incentive to foreclose.
 - (b) Our survey results account for reputational considerations to an extent. Respondents will have taken into account their perception of Microsoft if it were to engage in a foreclosure strategy when responding to, for example, a question on whether they would switch to Xbox in those circumstances. The fact that some gamers responded that they would still switch suggests that, at least for some gamers, any such reputational consequences would not prevent them from switching. Nonetheless, we recognise that there could be an element of collective backlash from the gaming community that may influence gamers' choices in the future and that may not be reflected in our survey results.
 - (c) Strong direct network effects at a game level have two opposite effects on the Parties' incentives to foreclose:
 - (i) Diversion ratios estimated in our survey are likely to be an underestimate. While some PlayStation gamers responded that they would not switch to Xbox in response to a foreclosure strategy using CoD, these same gamers may have been willing to switch if they were to realise that other gamers (including their friends) would do so. In this case, the Parties' gains would be greater than estimated in our short-term financial modelling.

- (ii) Another secondary effect that our survey does not capture is the effect of cross-play. As explained above, we believe this to have a limited impact on the gaming experience and, therefore, on the Merged Entity's gains and losses from foreclosure.

Contractual arrangements and negotiations

7.341 In this section, we assess the impact that the Merging Parties' contractual arrangements (and negotiations that might end up in contractual arrangements) could have on the Merged Entity's incentive to foreclose SIE. As explained above, Activision has an existing contract with Sony which will expire in the short term covering the arrangements between the two entities with regards to the availability of CoD to Sony PlayStation. Microsoft has also made a separate offer to Sony to keep CoD on PlayStation for a period of ten years post-Merger.⁵⁸⁸ Microsoft also explained that it has entered into a legally binding commitment with Nintendo to bring CoD to Nintendo platforms post-Merger and a similar offer was made to Steam.⁵⁸⁹ As this theory of harm is focused on SIE for the reasons already discussed, we have focussed our assessment on any potential impact on the Merged Entity's incentives stemming from contractual arrangements and negotiations with SIE.

Parties' and SIE's views

7.342 Microsoft submitted that Sony's existing contractual arrangements with Activision, as well as Microsoft's separate offer to Sony to keep CoD on PlayStation post-Merger, limit the Merged Entity's incentive to foreclose.⁵⁹⁰

7.343 Microsoft submitted that the financial and reputational damage arising from non-compliance with Activision's contracts with Sony would be severe. Microsoft explained that, given [REDACTED] Activision's existing contracts with Sony of ca. [REDACTED] per annum, there would be costly penalties for breaching these contracts. Microsoft also submitted that the reputational damage would be even worse.⁵⁹¹

7.344 Microsoft referred the CMA to its acquisition of ZeniMax. Microsoft submitted that, post-acquisition, it honoured ZeniMax's existing contractual commitments with SIE.⁵⁹² Microsoft also referred the CMA to public comments

⁵⁸⁸ Microsoft [response to the phase 2 Issues Statement](#). See also letter from [REDACTED] to the CMA; and Microsoft, letter from [REDACTED] to the CMA.

⁵⁸⁹ Microsoft, letter from [REDACTED] to the CMA.

⁵⁹⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 3.58(a)-(d). See also letter from [REDACTED] to the CMA and Microsoft, [REDACTED] to the CMA.

⁵⁹¹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.58(d).

⁵⁹² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.47.

made by Sony that it expects Microsoft to abide by existing contractual commitments post-Merger.⁵⁹³

7.345 SIE submitted that Microsoft's past conduct shows that its 'public utterances' should be treated with 'extreme scepticism'.⁵⁹⁴ However, SIE did not suggest that Microsoft has breached existing contractual arrangements following previous acquisitions; instead, it referred to new releases made by particular game studios post-acquisition.⁵⁹⁵ This is consistent, for instance, with the fact pattern outlined by Microsoft regarding the ZeniMax acquisition where Microsoft states it has honoured existing contractual arrangements in place between SIE and ZeniMax at the time of the acquisition. Microsoft explained that two titles (Deathloop and Ghostwire: Tokyo) were released first on PlayStation post-acquisition in accordance with the terms of the relevant contractual arrangements.⁵⁹⁶

Our assessment

7.346 As Microsoft's offer to SIE remains under negotiation, and there is currently no agreement in place, we do not currently consider this has any impact on the Merged Entity's incentive to engage in foreclosure.

7.347 As regards the existing agreement between Activision and SIE, the MAGs make clear that the CMA may consider any financial or reputational costs of terminating contracts in its assessment of foreclosure incentives.⁵⁹⁷ The question of reputational impacts and the financial implications of foreclosing CoD from SIE has already been incorporated into our assessment above. We also consider that the points discussed above in relation to Ability to foreclose, are relevant to the CMA's assessment on the Merged Entity's incentives to engage in foreclosure of rival console and MGS providers.

7.348 Even assuming that the Merged Entity complies with its existing contractual obligations (and as explained above we are not considering a foreclosure strategy that would require the Merged Entity to breach existing contracts with SIE), we note that:

- (a) While the existing contractual arrangements between SIE and Activision provide SIE with some protection in the short-term, the relevant protections are of limited duration. We do not consider they are of sufficient duration to have a material impact on our competitive

⁵⁹³ Microsoft, [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 3.47(c), 3.50(h).

⁵⁹⁴ SIE [response to the Issues Statement](#), 28 October 2022, paragraph 17.

⁵⁹⁵ SIE [response to the Issues Statement](#), 28 October 2022, paragraph 17.

⁵⁹⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.47. See also Microsoft, [response to the working papers](#).

⁵⁹⁷ [CMA129](#), paragraph 7.15.

assessment, which considers potential concerns with a longer time horizon.

- (b) A range of foreclosure mechanisms would be available to Merged Entity and not all of these mechanisms would necessarily require the Merged Entity to explicitly renege on its contractual commitments or statements of intention to enter into new contracts.

7.349 As such, our provisional view is that Microsoft's contractual arrangements are not likely to have any significant impact on its incentive to foreclose SIE, at least beyond the short term once the existing contract comes to an end.

Preliminary conclusion

7.350 Our assessment above shows that Microsoft has acquired a range of gaming studios and, with very few exceptions, has systematically redirected the efforts of those studios to produce exclusive Xbox games. Although we recognise that Activision is a bigger studio than any acquired by Microsoft before, we believe this pattern of behaviour is reflective of Microsoft's broader commercial strategy. While foreclosure of a game that is much bigger than previous games would entail a larger loss of profits on the foreclosed platform, the upside on Xbox would also be commensurately larger. In almost all previous acquisitions, this balance has worked out in favour of exclusivity over new titles, and we have not seen clear reasoning supported by evidence to suggest that the size of CoD should move the balance towards continued supply to PlayStation.

7.351 We have also seen that there are longer-term strategic benefits that are difficult to quantify, but which nonetheless are likely to contribute to Microsoft's incentive to engage in foreclosure strategies. These include Microsoft's plans to grow Game Pass, which Microsoft's own valuation model estimates to be significant. Longer-term strategic benefits also include the potential to acquire new loyal customers, and the reputational benefits from owning a console with exclusive (or at least superior) CoD content than rivals. We consider that these strategic benefits are not sufficiently mitigated by concerns of backlash from the gaming community (which it has been able to manage in the past), the damage from eliminating cross-play (which does not seem to be significant), and potential entry and expansion from rivals (which the evidence suggests would be weak or non-existent).

7.352 We recognise that any model attempting to estimate financial gains and losses by focusing only on direct switching from PlayStation to Xbox can be subject to important limitations (as are all the models that we have considered in this case). In particular, all financial models we considered (both ours and

those submitted by the Parties and SIE) do not account for the strategic benefits described above. Our LTV-based analysis, which has the advantage of using data used by Xbox in the ordinary course of business, indicates strong incentives to foreclose. Similar results are produced when we model partial foreclosure based on 2021 revenue data. This is corroborated by some examples of past partial foreclosure behaviour. However, we have some reservations on the survey results related to partial foreclosure questions. Our financial modelling of total foreclosure based on 2021 data, which accounts for all revenue streams but relies only one year of data, indicates the Merged Entity's incentives to foreclose are broadly neutral.

7.353 We have also assessed the Parties' submissions that existing contractual agreements between Sony and Activision, as well as Microsoft's separate offer to keep CoD on PlayStation post-Merger, would limit its incentive to foreclose. For the reasons stated above, we do not currently consider that Microsoft's offer to SIE has any impact on the Merged Entity's incentive to engage in foreclosure and we believe that the existing contractual agreements are not likely to have any significant impact on its incentive to foreclose SIE.

7.354 Based on our assessment above, and placing particular weight on Microsoft's strategic objectives in this Merger and its approach to exclusivity following previous gaming acquisitions, we provisionally conclude that the Merged Entity would have an incentive to use CoD to foreclose PlayStation.

Effect of foreclosure on competition

7.355 The MAGs explain that in this part of the assessment the CMA will consider whether the harm to competitors it has identified will result in substantial harm to overall competition in the downstream market. In practice, this will build on the same evidence as the assessment of the ability and incentive to foreclose. When it has been established that there will be harm to competitors this will often directly imply there will be harm to overall competition, where the foreclosed firms play a sufficiently important role in the competitive process on the downstream market.⁵⁹⁸

Parties' views

7.356 Microsoft submitted that it is implausible for foreclosure to "substantially limit" Sony's ability to compete because it is the market leader.⁵⁹⁹ It stated that even in the hypothetical scenario in which some gamers were to divert to

⁵⁹⁸ CMA 129, paragraphs 7.20-7.21.

⁵⁹⁹ Microsoft [response to the phase 1 decision](#), 11 October 2022, paragraph 3.52.

Microsoft's platforms as a result of foreclosure, it is highly implausible that PlayStation could be anti-competitively foreclosed in a way that would hurt consumers.⁶⁰⁰

7.357 Microsoft also stated that the CMA should take into account Sony's ability to respond competitively, across a number of dimensions, which would enhance overall competition.⁶⁰¹

7.358 The Parties submitted that the CMA must take into account Microsoft's legally binding commitment with Nintendo which will bring CoD to the Nintendo platform, increasing competition or at least ensuring CoD gamers would continue to have multiple console platforms to choose between.⁶⁰² We have provisionally found, however, that Microsoft's Xbox competes closely with SIE's PlayStation. Nintendo, on the other hand, provides a differentiated product and provides a weaker constraint on Microsoft.

Our assessment

7.359 In the sections above, we provisionally concluded that Microsoft would have the ability and incentive to foreclose SIE in the market for gaming consoles. We provisionally found that there are several mechanisms available for Microsoft to foreclose SIE.

7.360 In this section, we assess whether any such foreclosure strategy by the Merged Entity would result in substantial harm to overall competition in the market for console gaming in the UK. In this respect, we take into account the importance of Sony to competition in the downstream market.

7.361 The MAGs explain that 'the CMA will consider whether the harm to competitors it has identified will result in substantial harm to overall competition in the downstream market. ... In practice, this will build on the same evidence as the assessment of the ability and incentive to foreclose. When it has been established that there will be harm to competitors this will often directly imply there will be harm to overall competition, where the foreclosed firms play a sufficiently important role in the competitive process on the downstream market.'⁶⁰³

⁶⁰⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.71.

⁶⁰¹ Microsoft response to working papers.

⁶⁰² Microsoft response to working papers.

⁶⁰³ [CMA129](#), paragraphs 7.20-7.21.

Impact on competition with Sony

- 7.362 In our section on Competitive landscape in consoles, we have provisionally concluded that Microsoft competes with both Sony and Nintendo in the gaming consoles market. Gamers have benefitted from this competition through lower prices, higher product quality, larger games range, and higher level of investment in innovation.
- 7.363 We have also provisionally found that Xbox and PlayStation compete closely with each other, while Nintendo competes less closely with Xbox and PlayStation. In particular, Microsoft and SIE offer non-portable consoles with similar technical specifications, and content targeted to similar audiences. We considered SIE to be the largest console supplier both globally and in the UK. Depending on how market shares are calculated, PlayStation is [X] times the size of Xbox globally and about [X] times the size of Xbox in the UK. We considered this as evidence that PlayStation provides a strong competitive constraint on Xbox.
- 7.364 In the sections above, we provisionally concluded that the Merged Entity would have the ability and incentive to foreclose SIE in the gaming consoles market. Given the importance of the competitive constraint provided by SIE on Microsoft, and the important role SIE plays in the competitive process in the downstream market, we consider that a substantial weakening of SIE's ability to compete (such that it would be a substantially less effective competitor than it would be absent the Merger) would result in substantial harm to overall competition in the supply of gaming consoles. This is especially the case in the B2P segment of the market where SIE provides the strongest competitive constraint.

Impact on consumers

- 7.365 It is not necessary for the CMA to trace the impact on competition in the gaming consoles market through to effects on consumers. However, in this case, our investigation has produced some evidence relevant to consumer outcomes, which we consider is indicative of the likely harm to competition and which we set out below.
- 7.366 A strategy that affects CoD or that culminates with the withholding CoD from PlayStation is, at its core, a concern about a reduction in the range of games that SIE can offer on its PlayStation platform. Within that context, the CoD franchise currently constitutes [X]% of all game time spent on PlayStation. Game time is a particularly useful metric because it provides a measure of the extent to which consumers derive value and enjoyment from their gaming consoles. Therefore, we consider that the direct effect of a strategy

culminating in total foreclosure would amount to a [X]% reduction in the range of games offered by PlayStation.

7.367 The Parties submitted that there were several other franchises that gamers play.⁶⁰⁴ We agree with this. However, we consider the evidence in this chapter has shown that an important aspect of competition between console operators, and in particular between Microsoft and SIE, is competition through the range of games that are on offer. After the withholding of CoD from PlayStation, gamers choosing between PlayStation and Xbox would have to take into account a reduction to PlayStation's range relative to pre-Merger—a reduction that would be significant when accounting for how gamers actually spend their time when given a free choice of games to buy and play.

7.368 The observation that other franchises and games exist does not contradict our provisional finding that partial or total foreclosure using CoD would be likely lead to substantial harm to SIE's competitiveness, and therefore to competition. More than one input can be important to the competitiveness of a rival. We consider that, even in the presence of other games (including a small number of other important franchises), a foreclosure strategy can result in consumer harm. We consider harm would manifest through, for example, consumers switching from CoD to a less-preferred alternative game, consumers reducing their total amount of game time on their chosen console, or even changing to a less-preferred console. Each of these outcomes would represent a worsening of consumer outcomes.

7.369 On this point, evidence from our survey suggests that consumers accounting for at least [X]% of game time on PlayStation would switch away as a result of withholding of CoD. This is evidence that the induced reduction in range is important enough for a substantial part of the PlayStation user base to suffer any switching costs and abandon their otherwise-preferred gaming console in favour of either another device or no gaming console at all. This level of switching—which does not account for a reduction in gaming time spent on PlayStation—is, in our view, not consistent with customers being able to avoid experiencing harm by simply playing different games.

Provisional conclusion

7.370 On the basis of this evidence, our provisional view is that, partial or total foreclosure of CoD from PlayStation would significantly weaken SIE as a

⁶⁰⁴ Parties, submission to the CMA.

competitive constraint to the Merged Entity, the effect would be to substantially lessen competition in the gaming consoles market in the UK.

7.371 In addition, we provisionally consider that this substantial lessening of competition would result in both direct and indirect effects on consumer outcomes:

(a) Gamers whose preferred console is PlayStation would be directly harmed as they experience a loss of range of games available on PlayStation. To avoid this loss of range, consumers would have to divert to the console of second choice.

(b) Moreover, this loss of range constitutes an overall weakening of competitiveness for SIE's PlayStation. As a consequence, Microsoft will face weaker incentives to provide a competitive offering post-Merger.

7.372 We assess in Chapter 9 the extent to which entry or expansion by SIE or other game publishers might offset this competitive and consumer harm.

Provisional conclusion on TOH1

7.373 We provisionally conclude that the Merger may be expected to result in a substantial lessening of competition in the market for the supply of console gaming services in the UK.

8. Theory of harm 2: Vertical effects in cloud gaming services

Framework for assessment

- 8.1 The concern under this input foreclosure theory of harm is that the Merger may lead to the Merged Entity using Activision's games to foreclose cloud gaming service rivals, harming their ability to compete.
- 8.2 In relation to Activision's content, we consider whether the Merged Entity could harm its rivals' competitiveness and thus lessen current and future competition in cloud gaming services through the following foreclosure strategies (which could be used in isolation or combination):
- (a) **total foreclosure**: making either current and/or future Activision content unavailable on rival cloud gaming services (ie exclusive to Game Pass);
 - (b) **partial foreclosure**, which could involve several possible strategies, the most likely of which would be making Activision content available for release on rival cloud gaming services at a later date compared to Xbox (ie timed exclusivity).⁶⁰⁵
- 8.3 In our assessment of whether the Merged Entity may harm rival cloud gaming services' ability to compete by denying or worsening its access to Activision's games, we follow the framework set out in the Merger Assessment Guidelines for assessing input foreclosure theories of harm.⁶⁰⁶ As we did in ToH1, we therefore consider whether three cumulative conditions are satisfied:⁶⁰⁷
- (a) Would the Merged Entity have the ability to use its control of content to harm the competitiveness of rival cloud gaming services?
 - (b) Would it have the incentive to actually do so, ie would it be profitable?
 - (c) Effects of foreclosure: would the foreclosure of rival cloud gaming services substantially lessen overall competition between cloud gaming services?

⁶⁰⁵ Partial foreclosure strategies may also include i) degrading the technical quality of Activision gaming content available to cloud gaming rivals (eg content having worse graphics, worse latency, lower frame per second, longer load times; ii) making features or upgrades of Activision games unavailable to other cloud gaming rivals (ie content exclusivity); and/or iii) raising the wholesale price of Activision content to cloud gaming rivals. In our view, these strategies are far less likely because they may be technically more difficult to achieve in a BYOG model.

⁶⁰⁶ CMA129, paragraphs 7.9-7.22.

⁶⁰⁷ CMA129, paragraph 7.9.

- 8.4 An important question in this context is the likely development of this market, and the Parties' likely position within it, absent the Merger. We have therefore assessed the long-term viability of cloud gaming services, [REDACTED].⁶⁰⁸
- 8.5 Microsoft has a wide range of products and services, some of which may be important assets or inputs into cloud gaming. These include the Windows and Xbox operating systems, its Azure cloud infrastructure, and its Xbox gaming library. Any ability on Microsoft's part to use these assets to foreclose rivals does not form part of this theory of harm, as Microsoft already benefits from these assets and inputs without the Merger. However, as detailed below, these assets and inputs may nonetheless affect Microsoft's incentive to engage in a foreclosure strategy using Activision's content, and they may also magnify the effect of any such foreclosure strategy in the market for cloud gaming services. We have therefore carried out an assessment of Microsoft's pre-existing strengths in cloud gaming services and assessed their impact on its incentives to foreclose rivals and the effects of any such foreclosure:
- (a) In relation to incentive, Microsoft will have a greater incentive to foreclose rivals the stronger it is downstream, as it will capture more of the sales from any foreclosed rival. As noted in the MAGs, incentives will be greater if the Merged Entity has a more successful downstream offering.⁶⁰⁹
 - (b) In relation to effect, as noted in the MAGs, competition concerns may be particularly likely to arise if a merger firm has a degree of pre-existing market power in the downstream market, and already faces limited competitive constraints pre-merger.⁶¹⁰
- 8.6 We are also mindful that Activision content has only been available on cloud gaming services to a limited extent thus far. We have therefore considered the extent to which Activision would have made its content available on cloud gaming services absent the Merger.
- 8.7 This chapter is structured as follows:
- (a) First, we assess the likely future development and long-term viability of cloud gaming services.
 - (b) Second, we assess the competitive landscape in cloud gaming services.

⁶⁰⁸ Microsoft, response to working papers.

⁶⁰⁹ CMA129, paragraph 7.19 (b).

⁶¹⁰ CMA129, paragraph 7.21.

- (c) Third, we assess Microsoft's pre-existing strengths in cloud gaming services, focusing on the Windows and Xbox OSs, Azure, and its Xbox gaming library.
- (d) Fourth, we assess Microsoft's overall strengths in cloud gaming services relative to rivals.
- (e) Fifth, we assess the extent to which Activision content would have been available on cloud gaming services absent the merger.
- (f) Sixth, we assess whether the Merged Entity would have the ability to foreclose rival cloud gaming services as a result of the Merger.
- (g) Seventh, we assess whether the Merged Entity would have the incentive to foreclose rival cloud gaming services.
- (h) Finally, we assess the effect that any foreclosure strategy would have on competition in the cloud gaming services industry.

8.8 As set out in the MAGs, in the context of sectors that are characterised by fast-moving technological and commercial developments or assessments of potential or dynamic effects that are particularly dependent on the evolution of competitive conditions, the types of evidence that are available to the CMA may be more restricted. In such cases, the CMA may place particular weight on evidence such as internal documents, the expected number of competitors after the merger, similarities between the characteristics of the products or services that are under development, and the views and expansion plans of market participants. As with uncertainty, the absence of certain specific types of evidence such as historical data will not in itself preclude the CMA from concluding that the SLC test is met on the basis of all the other available evidence assessed in the round.⁶¹¹

Future development of cloud gaming

8.9 This section considers evidence on how the market for cloud gaming services will develop in the future, and Microsoft's plans for its cloud gaming service.

8.10 As set out above, we consider that there is a single market for cloud gaming services. We recognise, however, that cloud gaming service providers are testing a range of different business models to monetise their service. They all currently offer a subscription-based model for access to their servers (and some offer a free tier with advertising for this purpose). Different services

⁶¹¹ [CMA129](#), paragraph 2.28.

monetise their gaming content in different ways, including (i) the traditional B2P model, whereby users must purchase a game in order to play it (eg, Google Stadia), (ii) the BYOG model, whereby users pay a regular subscription fee for access to cloud gaming servers and can play games bought in third-party storefronts (eg, NVIDIA GeForceNow), (iii) free-to-play offerings paid through advertising revenue and in-game purchases, and (iv) multi-game subscription services, whereby users pay a subscription fee for access to gaming servers and a catalogue of games (eg, Amazon Luna and Xbox Game Pass Ultimate). The evidence shows that these business models are not fixed, and that cloud gaming service providers are open to exploring different ways of monetising their services.

8.11 Under this theory of harm, we explore competition concerns in the market for cloud gaming services as a whole. Given our provisional findings set out below that Activision's content is especially likely to become available on cloud gaming services under a B2P or BYOG approach, we pay particular attention to the potential impact of the Merger on these services. We note, however, that industry participants in this growing industry are continuously experimenting with different payment models, and even a single participant may have more than one way of monetising content. For example, Amazon has implemented a BYOG option in Luna for Ubisoft games, and NVIDIA [REDACTED] on GFN.⁶¹²

8.12 As such, we believe that any competition concerns arising from the Merger would affect the market as a whole, rather than just existing participants following a B2P or BYOG approach.

Parties' views

8.13 Microsoft submitted the following on cloud gaming:

(a) It stated that cloud gaming is currently small. According to Microsoft, it accounted for a *de minimis* proportion of consumer spend on gaming in 2021 – just [REDACTED]%.⁶¹³

(b) It submitted that consumer adoption was uncertain and expected to be limited,⁶¹⁴ and that downloading games was likely to remain the most popular option for playing games on PC and console. Microsoft noted that

⁶¹² 'Amazon Luna Ubisoft Store', accessed by the CMA 17 January 2022; and [REDACTED] call note.

⁶¹³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.3.

⁶¹⁴ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.3.

this was in part because cloud gaming requires the user to be connected to the internet and gameplay can be affected by latency.⁶¹⁵

- (c) It submitted that cloud gaming on mobile devices had been unsuccessful, citing the performance of Fortnite on xCloud as an example of difficulty in attracting and retaining gamers.⁶¹⁶
- (d) It submitted that it did [REDACTED]. It submitted that this had been demonstrated by its experience with streaming Fortnite, and provided data purporting to show that [REDACTED].⁶¹⁷ Microsoft provided further data that suggested that [REDACTED].⁶¹⁸
- (e) It submitted that it considered using [REDACTED].⁶¹⁹
- (f) It explained that, as a result of these issues, it had [REDACTED].⁶²⁰ [REDACTED].⁶²¹

Our assessment

Internal document evidence

- 8.14 This section considers the evidence from Microsoft's internal documents that discuss its plans and expectations for cloud gaming. The evidence is presented in chronological order to track the development of Microsoft's view of cloud gaming services over time.
- 8.15 Internal documents from [REDACTED] suggest that Microsoft is optimistic about cloud gaming and committed to bolstering its already strong position in the market [REDACTED]. These documents, set out in more detail below, include views from senior Microsoft employees such as [REDACTED].⁶²²
- 8.16 A strategy document from October 2019, prepared by the Xbox gaming team for Microsoft's senior leadership team, states that 'cloud streaming' represents an [REDACTED]. The document also notes that the transition to a [REDACTED].⁶²³
- 8.17 In an email exchange from April 2020, [REDACTED] discuss the possibility of putting [REDACTED].⁶²⁴

⁶¹⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 5.4-5.6.

⁶¹⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 5.10-5.13.

⁶¹⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 5.14-5.15.

⁶¹⁸ Microsoft, site visit.

⁶¹⁹ Microsoft response to the CMA's s109 notice.

⁶²⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.16.

⁶²¹ Microsoft, response to working paper.

⁶²² Microsoft Internal Document; Microsoft internal document; Microsoft internal document.

⁶²³ Microsoft Internal Document.

⁶²⁴ Microsoft Internal Document.

- 8.18 A May 2020 presentation sets out a number of projects that would support a long-term strategy to support expansion in cloud streaming. In particular, the document defines [REDACTED]. The document describes [REDACTED].⁶²⁵
- 8.19 An email from [REDACTED] in December 2020 states that [REDACTED].⁶²⁶ In the same email chain [REDACTED] states [REDACTED].
- 8.20 A draft document from May 2021 discusses [REDACTED]. It describes [REDACTED]. It suggests [REDACTED].⁶²⁷
- 8.21 An email from [REDACTED] in December 2021 [REDACTED].⁶²⁸
- 8.22 In an email from February 2022, [REDACTED] argues that [REDACTED].⁶²⁹ [REDACTED]. In this email [REDACTED] also notes [REDACTED].
- 8.23 Another email from February 2022 provides an update on [REDACTED].⁶³⁰ Microsoft submitted that this project [REDACTED]. It has publicly stated that it still expects to produce a streaming device at some point, but that this could be ‘years away’.⁶³¹
- 8.24 An email from [REDACTED] in March 2022 notes [REDACTED].⁶³²
- 8.25 Emails from [REDACTED] in May 2022 discuss [REDACTED]. In the same email chain [REDACTED] describes [REDACTED].⁶³³
- 8.26 In relation to Microsoft’s argument that [REDACTED], emails from [REDACTED] to [REDACTED] in July 2022 discussing [REDACTED].⁶³⁴
- 8.27 In submissions to the CMA during these proceedings, Microsoft has submitted that this analysis had been prepared relatively early [REDACTED].⁶³⁵ The analysis [REDACTED]. Microsoft also described [REDACTED]. In this respect we make the following observations:
- (a) The Parties have not pointed to any internal documents generated in the ordinary course of business that update these analyses and show [REDACTED].

⁶²⁵ Microsoft Internal Document.

⁶²⁶ Microsoft Internal Document.

⁶²⁷ Microsoft Internal Document.

⁶²⁸ Microsoft Internal Document.

⁶²⁹ Microsoft Internal Document.

⁶³⁰ Microsoft Internal Document.

⁶³¹ Microsoft response to working papers.

⁶³² Microsoft internal document.

⁶³³ Microsoft internal document.

⁶³⁴ Microsoft Internal Document.

⁶³⁵ Microsoft response to working papers.

(b) Other games are likely to be [REDACTED].

(c) Whilst different assumptions would have an impact on [REDACTED], the analysis nevertheless broadly demonstrates that [REDACTED].

8.28 Microsoft also provided data showing that [REDACTED].⁶³⁶ As such, Microsoft considers that [REDACTED].⁶³⁷ However, we note that this data involves [REDACTED]. It was also based on [REDACTED]. In addition, Microsoft highlighted issues with discoverability on mobile due to app store restrictions which limited user uptake.⁶³⁸ This means that the experience [REDACTED] is likely to underestimate consumer uptake and the viability of cloud gaming services outside the mobile ecosystem.

8.29 Slides from May 2022 provide an update on xCloud quarterly results, showing MAUs of [REDACTED] in Q3, with year-on-year growth in MAUs of [REDACTED]%, [REDACTED]. [REDACTED]% of MAUs were NTX, which was [REDACTED]%. It is also noted in the slides that [REDACTED].⁶³⁹

8.30 Slides from August 2022 provide an update on [REDACTED].⁶⁴⁰

8.31 A July 2022 email exchange between [REDACTED] describes [REDACTED]. [REDACTED]. It also notes that [REDACTED].⁶⁴¹

8.32 An internal chat in July 2022 describes how [REDACTED].⁶⁴² This suggests that [REDACTED].

8.33 An email from 11 August 2022 to the Xbox Everywhere Team [REDACTED] further sets out [REDACTED]. [REDACTED]. For example, [REDACTED]. It describes [REDACTED]. It also describes that [REDACTED].⁶⁴³

8.34 Microsoft provided a chart showing that, [REDACTED]. In February 2022 it forecast approximately [REDACTED] xCloud MAUs by [REDACTED]. In September 2022, this forecast [REDACTED], which [REDACTED].⁶⁴⁴ We note, [REDACTED].

8.35 Microsoft highlighted further internal documents from April to July 2022, which [REDACTED].⁶⁴⁵

⁶³⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 5.14-5.15.

⁶³⁷ Microsoft, site visit.

⁶³⁸ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.13.

⁶³⁹ Microsoft Internal Document.

⁶⁴⁰ Microsoft Internal Document.

⁶⁴¹ Microsoft Internal Document.

⁶⁴² Microsoft Internal Document.

⁶⁴³ Microsoft Internal Document.

⁶⁴⁴ Microsoft response to the CMA's s109 notice.

⁶⁴⁵ Microsoft, response to working paper.

- (a) An email exchange from April 2022 between [REDACTED] and [REDACTED], both of whom work in Xbox marketing,⁶⁴⁶ [REDACTED]. It notes that the [REDACTED]. However, the same email also states that [REDACTED].⁶⁴⁷
- (b) An internal message from May 2022 from [REDACTED] highlights [REDACTED]. It notes that, [REDACTED]. It states that that [REDACTED].⁶⁴⁸
- (c) An internal chat from July 2022 between [REDACTED]⁶⁴⁹ suggests that [REDACTED]. In relation to the [REDACTED] discussed above, it [REDACTED].⁶⁵⁰
- (d) Another internal chat from July 2022 between the same people highlights [REDACTED]. It describes how [REDACTED]. It also states that [REDACTED].⁶⁵¹

8.36 Despite these views and [REDACTED], more recent internal documents continue to discuss [REDACTED]. For example:

- (a) Emails from September 2022 discuss [REDACTED].⁶⁵²
- (b) A document from September 2022 discusses in detail [REDACTED].⁶⁵³ Microsoft submitted that this document represents [REDACTED]. However, it discusses [REDACTED].
- (c) A memo from September 2022 describing priorities for Fiscal Year 2023 sets out how [REDACTED]. The new fiscal year is described [REDACTED]. It describes [REDACTED].⁶⁵⁴
- (d) Two documents dated September 2022 and November 2022 discussing plans for next generation consoles show that [REDACTED]. One slide describes [REDACTED]. Another slide discusses [REDACTED].⁶⁵⁵

8.37 In our view, the overarching impression from Microsoft's internal documents is that cloud gaming is expected to be a growing area in gaming [REDACTED]. Whilst these documents highlight that [REDACTED], we do not consider that they suggest that cloud gaming services will stop growing. At most, we consider that these documents show [REDACTED]. As described above, more recent documents continue to discuss [REDACTED].

⁶⁴⁶ Microsoft Internal Document.

⁶⁴⁷ Microsoft Internal Document.

⁶⁴⁸ Microsoft Internal Document.

⁶⁴⁹ Microsoft Internal Document.

⁶⁵⁰ Microsoft Internal Document.

⁶⁵¹ Microsoft Internal Document.

⁶⁵² Microsoft Internal Document.

⁶⁵³ Microsoft Internal Document.

⁶⁵⁴ Microsoft Internal Document.

⁶⁵⁵ Microsoft Internal Document; and Microsoft Internal Document.

Third party evidence

- 8.38 Evidence from rival cloud gaming providers, including from their internal documents, shows that they expect the market to grow and be profitable. Internal documents from one rival [REDACTED] from October 2021 [REDACTED]. The document suggests that this rival [REDACTED].⁶⁵⁶
- 8.39 Another rival [REDACTED] submitted that it expected that many users would switch to cloud gaming.⁶⁵⁷ It said that it expected cloud gaming could and would be delivered profitably, and that getting the right content to attract paid users was the main barrier to succeeding in this market, rather than any technical or economic aspects of cloud gaming.⁶⁵⁸ An internal document from this provider shows that [REDACTED].⁶⁵⁹
- 8.40 The same rival [REDACTED] submitted that technological barriers to streaming, including latency, were quickly dropping and were likely to continue to drop. It described how it had reduced latency on its service [REDACTED].⁶⁶⁰ On a call the same rival stated that it had solved the latency problem, and that its service now outperformed playing on a local console device including from a latency perspective, which it had achieved by using more powerful graphical processing units (**GPUs**).⁶⁶¹
- 8.41 Evidence from this rival [REDACTED] on play time for different games showed that multiplayer and ‘fast-twitch’ games⁶⁶² are amongst the most popular, indicating that latency does not present a problem for streaming these types of games. [REDACTED] the [REDACTED] most played games on the platform included [REDACTED], all of which include multi-player and can be considered fast-twitch.⁶⁶³
- 8.42 Another rival [REDACTED] expressed that it expected cloud gaming to increase substantially and ultimately replace consoles, stating that cost and technological issues such as latency could be overcome to provide an ‘amazing gaming experience’.⁶⁶⁴

⁶⁵⁶ [REDACTED] Internal Document.

⁶⁵⁷ [REDACTED] response to the CMA’s RFI.

⁶⁵⁸ [REDACTED] response to the CMA’s RFI.

⁶⁵⁹ [REDACTED] Internal Document.

⁶⁶⁰ [REDACTED] response to the CMA’s RFI.

⁶⁶¹ [REDACTED] call note.

⁶⁶² Games that require fast response times such as first-person shooters.

⁶⁶³ [REDACTED] Internal Document.

⁶⁶⁴ [REDACTED] call note.

- 8.43 A potential entrant [REDACTED] stated that there were challenges in cloud gaming, but that it was only a matter of time before they were solved, and cloud gaming really takes off.⁶⁶⁵
- 8.44 A third-party developer [REDACTED] indicated that it did not expect cloud gaming to replace console in the near future, but that it would become an alternative for some consumers.⁶⁶⁶
- 8.45 Several market analyst reports demonstrate an expectation that the cloud gaming services market will grow, with estimates ranging from \$6.1 to \$10.0 billion by 2025, but with differing views on the extent to which it will replace consoles.
- (a) One recent industry market report from [REDACTED] estimates that in 2021 there were 21.7 million paying users of cloud gaming services spending \$1.5 billion. It forecasts an increase of almost triple in terms of user base (to 58.6 million paying users) and more than quadruple in terms of spending (to \$6.3 billion) in 2024, according to the most-likely scenario.⁶⁶⁷
- (b) Another industry market report from [REDACTED] in 2021 indicates that cloud gaming's share of total consumer spend on games is expected to double, from 2.2% in 2021 to 5.3% in 2025, from \$3.7 to \$10.0 billion revenue.⁶⁶⁸
- (c) Another estimate from [REDACTED] from 2021 forecasts cloud gaming to reach 101 million revenue-driving users by 2025, with \$6.1 billion of revenue.⁶⁶⁹
- (d) A report from [REDACTED] in 2021 predicts that over the next five years cloud gaming revenue is expected to grow to \$13.5 billion and account for over 5% of revenue in gaming. It expects that cloud gaming will not necessarily grow the market for 'fast-twitch' action games, but instead grow based on new forms of high production content.⁶⁷⁰
- (e) A 2021 report from Oppenheimer describes how [REDACTED]. It also described [REDACTED].⁶⁷¹
- (f) A report from 2022 from Enders predicts that [REDACTED].⁶⁷²

⁶⁶⁵ [REDACTED] call note.

⁶⁶⁶ [REDACTED] response to the CMA's RFI.

⁶⁶⁷ [REDACTED] Internal Document.

⁶⁶⁸ [REDACTED] Internal Document.

⁶⁶⁹ [REDACTED] Internal Document.

⁶⁷⁰ [REDACTED] Internal Document.

⁶⁷¹ Microsoft Internal Document.

⁶⁷² Microsoft Internal Document.

Provisional conclusion on expectations for cloud gaming

- 8.46 Based on this evidence, we consider that cloud gaming will continue to grow and is likely to become profitable in the next five years. Although it is difficult to predict exactly how big cloud gaming will eventually become, the evidence suggests that it is a growing and promising market in which several market participants are investing considerable amounts.
- 8.47 We consider that [REDACTED]. Most of Microsoft's internal documents show that its [REDACTED], and there are indications in these documents that cloud gaming could be transformative for the gaming industry [REDACTED]. As such, we believe it is likely that [REDACTED].
- 8.48 There is also clear consensus from third party respondents that cloud gaming users and revenue will increase substantially in the next few years. Although current revenues compared to streaming costs present challenges for profitability, responses indicate that this will change as demand grows and costs are driven down. We also note that short-run loss-making is not uncommon in nascent technology markets, and that this does not preclude their viability as the technology and market develop.

Competitive Landscape in cloud gaming services

Features of the cloud gaming market

Network effects in cloud gaming

- 8.49 This section considers the extent of network effects in cloud gaming services. Significant network effects can be a barrier to entry or expansion in a market. In addition, the larger the network effects are in cloud gaming, the more likely it is that the market could 'tip', ie, reach a position where only one or a few providers are able to compete.⁶⁷³ In a market with significant network effects, the effect of any foreclosure strategy can therefore be increased. As part of our assessment of network effects we also look at evidence on multi-homing, as this may mitigate the strength of network effects to some extent.

Parties' views

- 8.50 Microsoft submitted that cloud gaming reduces network effects. It stated that, as cloud gaming is effectively device agnostic and does not require the consumer to invest in hardware, gamers can easily switch and multi-home

⁶⁷³ [CMA129](#), paragraph 4.25.

across services, reducing network effects. It cited Ofcom evidence that in the video streaming market many consumers multi-home, thereby reducing the importance of network effects (as smaller platforms can still attract content creators to distribute on their services) and decreasing barriers to entry.⁶⁷⁴ It also stated that direct network effects operate at the game level rather than the platform level.⁶⁷⁵

Our assessment

- *Evidence from ToH1*

- 8.51 As described above, there is evidence that direct network effects (ie the benefit to gamers of there being more other gamers on a platform) are prevalent in the gaming industry, at both a game-level and platform-level, and work similarly across different platforms. There is evidence that network effects are stronger for large multiplayer social franchises like CoD, with gamers wanting to play with their network of friends. This suggests that direct network effects are likely to be similarly prevalent in cloud gaming, though mitigated to some extent by multi-homing and switching being relatively easier than in console gaming (described below). As cross-play and cross-progression are implemented at the game level, they are available on cloud platforms at similar levels to console, reducing the strength of direct network effects at the platform level.
- 8.52 As described above, there is also evidence that indirect network effects (ie the benefit to publishers of there being more gamers on a platform, and vice-versa) exist in gaming. In principle, indirect network effects should be more limited in this market. Unlike gaming consoles, which operate with exclusive and proprietary console OSs, cloud gaming service providers predominantly use OSs designed for PCs. If they decide to use Windows, which already has a large catalogue of compatible games, they would be able technically to run all Windows games on their service. They would, however, have to pay Windows licensing fees, and they would still have to reach an agreement with the relevant game publishers for the right to run the relevant games on the cloud gaming service. If they decide to use Linux, the availability of games would be significantly more limited. Although the availability of Windows (albeit for a licensing fee) reduces the impact of indirect network effects to some extent, we have seen evidence (see below) that game publishers are also more likely to license their content to cloud gaming services with a

⁶⁷⁴ Microsoft [response to the phase 2 Issues Statement, 31 October 2022](#), paragraphs 5.51-5.52.

⁶⁷⁵ Microsoft response to working papers.

significant user base, meaning that indirect network effects are still relevant for individual cloud gaming platforms in this market.

- *Internal documents*

8.53 An internal email from [REDACTED] at Activision in February 2021, discussing its approach to [REDACTED], notes that there are currently few [REDACTED], noting that [REDACTED].⁶⁷⁶ We consider this email shows that the number of users on a platform is a factor in attracting content.

- *Third party evidence*

8.54 On direct network effects, one competitor [REDACTED] described their importance but pointed to ways of mitigating them. It described how consumers look at which platform other users choose as this is important to ensuring full enjoyment of multiplayer games. It noted that cross-play was a solution to this, and that cross-play was therefore extremely important for new cloud gaming platforms with small user bases, but that this option was not always available.⁶⁷⁷

8.55 Another competitor [REDACTED] also submitted that direct network effects are important. It described that games have become social media platforms and that gamers play games with their friends, creating game-specific social networks, and increasing the cost of switching to another game even within the same genre. On cross-play it noted that the ability to play across cloud gaming platforms was not universal and dependent on how each platform is structured.⁶⁷⁸

8.56 On indirect network effects, one competitor [REDACTED] also noted their existence and importance for developers. It described how a large user base is necessary to attract developers to release games on a platform, especially for games that primarily generate revenue from in-game transactions which it described as a model that is growing in popularity. It further stated that game developers want assurance that their games will reach a certain group of users, and that if a cloud gaming platform already has an established user base, it would therefore be easier to reach an agreement with a game developer to license their games. It also stated that having a large number of users could increase a cloud gaming provider's bargaining power with developers to put games on its service and negotiate exclusivity.⁶⁷⁹

⁶⁷⁶ Activision Internal Document.

⁶⁷⁷ [REDACTED] response to the CMA's RFI.

⁶⁷⁸ [REDACTED] response to the CMA's RFI.

⁶⁷⁹ [REDACTED] response to the CMA's RFI.

- 8.57 In discussing commercial negotiations between a competitor [REDACTED] and Activision, this competitor [REDACTED] noted that [REDACTED] given its [REDACTED] size.⁶⁸⁰ This competitor [REDACTED] noted that when thinking [REDACTED].⁶⁸¹
- 8.58 An internal document from the same competitor dated April 2021 further demonstrate the significance of indirect network effects, with a chart showing a cycle of getting more games, leading to having more engaged gamers, and therefore better relationships with publishers.⁶⁸²
- 8.59 Another competitor [REDACTED] also submitted that indirect network effects were important. It noted that to publishers, the number of users on a service is key, and that without sufficient users the cost of maintaining a game on a service may not be worthwhile, particularly if the service requires the publisher to port and update the game on a new OS. This competitor noted ‘without a sufficient number of users, the administrative burden of maintaining a game on a particular cloud gaming service may not be worth the publisher’s effort.’ It stated that [REDACTED].⁶⁸³ This competitor explained that it understood [REDACTED].⁶⁸⁴
- 8.60 An internal document from another competitor [REDACTED] dated August 2020 [REDACTED].⁶⁸⁵ [REDACTED].
- 8.61 Responses from several publishers indicated that they aimed to make games available on as many platforms as possible subject to considerations such as user experience and cost:
- (a) One publisher [REDACTED] described how it generally tries to make its games available to users on as many platforms as practicable, and that it evaluates a cloud gaming service provider’s technical capacity to provide an optimal user experience and ‘various business considerations’ before deciding to publish a game on the cloud gaming service.⁶⁸⁶
 - (b) Another publisher [REDACTED] stated that its strategy is to ‘reach players wherever they are’, and that in reaching that goal, it would consider developing/publishing its games on cloud gaming services. When deciding on which cloud gaming service to develop/publish a game, financial considerations are taken into account by weighing the opportunity cost with the added production costs.⁶⁸⁷

⁶⁸⁰ [REDACTED] call note.

⁶⁸¹ [REDACTED] call note.

⁶⁸² [REDACTED] Internal Document.

⁶⁸³ [REDACTED] response to the CMA’s RFI.

⁶⁸⁴ [REDACTED] response to the CMA’s RFI.

⁶⁸⁵ [REDACTED] Internal Document.

⁶⁸⁶ [REDACTED] response to the CMA’s RFI.

⁶⁸⁷ [REDACTED] response to the CMA’s RFI.

- (c) Another publisher [REDACTED] submitted that in deciding whether to make its games available on a cloud gaming service it will consider the player experience, development costs, and the expected financial return.⁶⁸⁸
- (d) Another publisher [REDACTED] stated that it will take into account commercial and technological factors such as the additional costs incurred and potential consumer base.⁶⁸⁹
- (e) A further publisher [REDACTED] stated that it would look at the potential audience, financial incentives and sales forecasts, also noting that each platform would require some engineering work to publish on it.⁶⁹⁰

8.62 The evidence on multi-homing specific to cloud gaming was mixed and generally third parties seemed to lack detailed analysis or thorough views on the topic, mainly because the market is still developing:

- (a) One competitor [REDACTED] submitted that as cloud gaming services have untethered gamers from consoles, it is eliminating obstacles that prevent consumers from choosing the devices and platforms for gaming.⁶⁹¹ It noted that cloud gaming eliminates an important barrier to multi-homing in the purchase of expensive hardware. However, it suggested that multi-homing in cloud multi-game subscription services is less likely than in video streaming due to the high cost of subscribing. It also explained that gamers may not multi-home between cloud gaming services due to the loyalty they gain from both investing time and progress in games, and any investment in platform specific hardware such as controllers.⁶⁹²
- (b) In a call, a competitor [REDACTED] suggested that the existence of established players with their own content makes new entry in cloud difficult but not impossible. It further suggested that, for example, Nintendo, SIE and Microsoft's content ecosystems are deep, meaning that other entrants may struggle to obtain the necessary compelling content to attract users to multi-home away from incumbent services.⁶⁹³
- (c) Another competitor [REDACTED] commented that some degree of multi-homing does and will exist, but [REDACTED].⁶⁹⁴

⁶⁸⁸ [REDACTED] response to the CMA's s109 notice.

⁶⁸⁹ [REDACTED] response to the CMA's RFI.

⁶⁹⁰ [REDACTED] response to the CMA's RFI.

⁶⁹¹ [REDACTED] response to the CMA's RFI.

⁶⁹² [REDACTED] response to the CMA's RFI.

⁶⁹³ [REDACTED] call note.

⁶⁹⁴ [REDACTED] call note.

(d) A further competitor [X] suggested that multi-homing may reduce indirect network effects but that the monthly subscription plan of cloud gaming is not low cost, so multi-homing can be expected to be less prevalent.⁶⁹⁵

- *Provisional conclusion on network effects and multi-homing in cloud gaming*

8.63 We consider the evidence shows that cloud gaming is currently characterised by both direct and indirect network effects.

8.64 Direct network effects exist because the multiplayer and social aspect of gaming means that gamers prefer to play on platforms with a large user base, where they can play with their friends and benefit from better multiplayer matchmaking. They are also more likely to stick to a platform in which their gaming progress has been saved (although the BYOG model allows for cross-progression which may mitigate this). As cross-play between a cloud gaming platform and other platforms exists at similar levels to console platforms, direct network effects are mitigated to a similar extent.⁶⁹⁶ The strength of direct network effects seems to be mitigated further by multi-homing when compared to console gaming, as the financial cost of switching to a new cloud gaming service is lower than in the market for gaming consoles. However, since the non-financial costs remain relatively high (ie, moving away from friends and losing game progress), we consider that direct network effects are also likely to be prevalent in this market.

8.65 Indirect network effects also seem to be strong. The number of users of a cloud gaming service is an important consideration for publishers when deciding whether to make their games available to that service. Whilst developers generally aim to make games available on as many platforms as possible, there seem to be cost considerations when deciding whether to make a game available on a cloud gaming platform. These costs are especially high if the cloud gaming service provider does not use Windows as its OS, as most games are optimised for Windows. However, the fact that cloud gaming service providers are able to use Windows as their OS (albeit for a licensing fee) means that indirect network effects are likely to be weaker in cloud gaming services than in gaming consoles.

⁶⁹⁵ [X] call note.

⁶⁹⁶ In principle players could cross play amongst PC based cloud gaming providers (such as GFN and Luna), PCs and consoles (if available and PC-console cross play is supported), but this will depend on each specific game.

Overview of competitors

8.66 As explained in our section on market definition, we consider that there is a UK market for cloud gaming services, primarily because not every provider is present in the UK and there are price differences between different countries. From a supply-side perspective, however, cloud gaming service providers are global players, and they have been expanding their presence to different regions in recent years. Since this is a rapidly changing market in which the competitive landscape will likely continue to develop over the next few years, we consider that an assessment of the major global cloud gaming providers is relevant to understanding competition in this market today and in the near future.

8.67 There are four main global competitors in the market for cloud gaming services today. They are:

- (a) **NVIDIA GFN.** NVIDIA's GeForce NOW provides streaming services for PC games using high-end GPUs on its servers, building on its strengths as a GPU supplier. Its service offers one free and two premium tiers, with premium tiers providing improved performance, priority servers access, and longer session lengths. It uses a BYOG model where consumers use the service to access games already owned on PC storefronts such as Steam, Epic Games Stores, EA Origin, and Ubisoft Connect.⁶⁹⁷ It is available across several devices including PCs, mobiles and smart TVs.⁶⁹⁸
- (b) **Amazon Luna.** Amazon is a leading provider of cloud computing services and has invested in improving its virtualisation technology to provide a better streaming performance to gamers. Luna streams PC games and has primarily an MGS model with different channels that users can subscribe to.⁶⁹⁹ It has recently also incorporated BYOG for Ubisoft.⁷⁰⁰ [redacted].⁷⁰¹ It is available across several devices including PCs, mobiles, and smart TVs.⁷⁰²
- (c) **Microsoft xCloud.** Microsoft offers cloud gaming as part of the Game Pass Ultimate MGS. The service uses current generation console hardware to stream console games from the Game Pass Ultimate game

⁶⁹⁷ [redacted] response to the CMA questionnaire.

⁶⁹⁸ 'GFN system requirements', accessed by the CMA 23 January 2023.

⁶⁹⁹ Parties, FMN.

⁷⁰⁰ 'Amazon Luna Ubisoft Store', accessed by the CMA 17 January 2023.

⁷⁰¹ [redacted] response to the CMA's s109 notice.

⁷⁰² 'Luna – getting started', accessed by the CMA 23 January 2023.

library. It is available across several devices including Xbox consoles, PCs, mobiles, and smart TVs.⁷⁰³

- (d) **SIE PlayStation Plus.** SIE offers cloud gaming as part of the Premium tier of its PlayStation Plus MGS. PlayStation Plus provides access to a large catalogue of games. Its cloud gaming offering, however, is currently limited to older titles, as the cloud infrastructure uses older console hardware.⁷⁰⁴ It is only available on PlayStation consoles and Windows PCs.⁷⁰⁵

8.68 Google Stadia was a cloud gaming service that offered streaming of PC games using a Linux OS. It included a free and premium tier, and both B2P and MGS features. The service closed down in January 2023. Whilst it is no longer a competitor in the market, we consider it in the evidence below as its exit from the market provides insights into the importance of certain assets and inputs.

8.69 There are several other providers that are potential entrants or are already active in cloud gaming to some extent. We do not consider their strengths or position in the market in detail here for the reasons given below. However, we would still be concerned if the Merger increased barriers to entry or expansion, thereby constraining their ability to enter and compete effectively:

- (a) **Tencent.** Tencent does not currently have a consumer facing cloud gaming service.⁷⁰⁶ One competitor [REDACTED] told us that, although Tencent has been exploring avenues for using cloud gaming, these initiatives have been small and focused on the PRC.⁷⁰⁷
- (b) **Shadow.** Shadow is a cloud computing service—a service where the user can access a powerful Windows PC remotely for uses including but not limited to gaming—rather than a specific cloud gaming service.⁷⁰⁸ We understand it to be a very small competitor and has not featured in any of the shares of supply submitted to us, see Appendix C: Shares of supply.
- (c) **Meta.** Meta has a small presence in gaming of which cloud gaming [REDACTED]. [REDACTED], and in our view is therefore materially different to cloud gaming services offering the latest high-performance games.⁷⁰⁹

⁷⁰³ 'xCloud – ways to play', accessed by the CMA 23 January 2023.

⁷⁰⁴ [REDACTED] response to the CMA's RFI.

⁷⁰⁵ 'PS Plus – what you need', accessed by the CMA 23 January 2023.

⁷⁰⁶ Parties, FMN.

⁷⁰⁷ [REDACTED] response to the CMA questionnaire.

⁷⁰⁸ 'Shadow Cloud Computing', accessed by the CMA on 17 January 2023.

⁷⁰⁹ [REDACTED] response to the CMA's RFI.

- (d) **Nintendo.** Nintendo also offers a very limited cloud gaming service that is only available on the Nintendo Switch device. Nintendo explained that [REDACTED].⁷¹⁰
- (e) **Antstream Arcade.** Antstream Arcade is a cloud gaming service that offers access to a library of retro games, such as Pac-Man.⁷¹¹ Given it focuses on much older, niche content, we do not consider it as a competitor in the market for cloud gaming services offering the latest high-performance games. Antstream Arcade is [REDACTED], supporting this interpretation.
- (f) **Others.** There are also some lesser-known providers such as Boosteroid, Utomik, Blacknut, Gamestream, and Wiztivi. These providers are likely to be much smaller and are therefore not considered in detail.⁷¹²

Shares of supply

- 8.70 We have looked at market shares as an indicator of the relative strength of currently available cloud gaming services. Our assessment is based on data and forecasts from several sources, including the Parties' submissions and third-party evidence.
- 8.71 We recognise that market share data may not be particularly informative to assess relative strength in this market. Cloud gaming services remain in their infancy and, as such, static measures of market share are unlikely to accurately reflect the relative strengths of different cloud gaming services providers. We also note that cloud gaming service providers may face some degree of competition from out-of-market constraints, such as from PCs and consoles. These constraints are not captured within our market share data, meaning that market shares may understate the constraints on cloud gaming providers. We therefore treat our market share estimates for cloud gaming services as indicative only and interpret them alongside qualitative evidence on the competitive landscape.
- 8.72 Microsoft submitted global market shares for cloud gaming services in 2021. Microsoft estimates that xCloud had a [0-10%] share,⁷¹³ NVIDIA GFN had a [50-60%] share, and Facebook Gaming a [10-20%] share.

⁷¹⁰ [REDACTED] response to the CMA's RFI [REDACTED] call note., questions 14 and 15.

⁷¹¹ 'PC Mag—Antstream Arcade review' accessed by the CMA on 17 January 2023.

⁷¹² [REDACTED] response to the CMA's RFI.

⁷¹³ Microsoft, response to the CMA's s109 notice; Given the limited available information on competing providers' cloud streaming offerings, these shares were produced by Microsoft on best-efforts basis.

8.73 Using the Parties' data and third-party evidence, we estimated global shares of supply for cloud gaming for both 2021 and 2022 (set out at Table 8.1 and Table 8.2, respectively). Our estimates include broadly like-for-like services that provide a means to play high-performance games via cloud gaming and, therefore, exclude Facebook Gaming, Nintendo Switch Online, and Antstream Arcade.⁷¹⁴ Although these shares of supply are global (whereas we have provisionally found a UK market for cloud gaming), we think they are informative of the relative size and recent growth of cloud gaming service providers generally. We recognise that Amazon Luna is not currently active in the UK [REDACTED].

Table 8.1: Shares of cloud gaming services in terms of average MAUs, 2021, worldwide.

Service	Average MAUs	%
xCloud	[REDACTED]	[20-30]
PlayStation Cloud Gaming	[REDACTED]	[30-40]
NVIDIA GFN	[REDACTED]	[20-30]
Google Stadia*	[REDACTED]	[5-10]
Total	[REDACTED]	100

Source: CMA's calculations on the Parties' and Third Parties' data.

Note: Due to rounding, figures may sum to more than 100%

*Figure for March to December 2021

Table 8.2: Shares of cloud gaming services in terms of average MAUs, 2022, worldwide.

Service	Average MAUs	%
xCloud*	[REDACTED]	[60-70]
NVIDIA GFN†	[REDACTED]	[10-20]
PlayStation Cloud Gaming	[REDACTED]	[10-20]
Google Stadia‡	[REDACTED]	[0-5]
Amazon Luna§	[REDACTED]	[0-5]
Total	[REDACTED]	100

Source: CMA's calculations on the Parties' and Third Parties' data.

Note: Due to rounding, figures may sum to more than 100%

*Figure for January to September 2022.

†Figure for January 2022 only

‡ Figure for January to July 2022

§ Figure for March (launch date) to September 2022.

8.74 These estimates show that Microsoft's share increased from [20-30]% in 2021 to [60-70]% in 2022, and that, in 2022, it had [REDACTED] as many average MAUs as the next biggest service, NVIDIA GFN.

8.75 One third party [REDACTED]'s internal document contained a third party analyst report from March 2022 which showed 2021 shares of supply for cloud gaming services in terms of revenue.⁷¹⁵ It showed that PS Now had a share of more than [REDACTED]% in 2021, with xCloud, NVIDIA GFN and Luna significantly smaller.

⁷¹⁴ A more detailed explanation of our methodology and the caveats surrounding the shares is contained in Appendix C: Shares of supply.

⁷¹⁵ [REDACTED] Internal Document.

- 8.76 The same report contains estimates for the future of the cloud gaming market as a whole. It estimated that revenue would increase by almost 300% from 2021 to 2026, increasing from less than c.0.4 billion to c.1.05 billion USD. Within this, xCloud's revenue was expected to increase from under 50 million to c.450 million USD in the same period, estimating it to be the largest cloud gaming service by revenue in 2026.
- 8.77 Whilst we place less weight on independent reports than on the data that we gathered from third parties, we note that the report does corroborate our own findings regarding the growth of xCloud.
- 8.78 Our shares of supply may not be a good proxy for the future state of the cloud gaming market, given the caveats in the methodology and the nascent nature of cloud gaming. However, we consider that these shares provide a useful indication of the current strength of different cloud gaming providers.

Microsoft's potential strengths in cloud gaming

- 8.79 This section considers whether Microsoft holds pre-Merger advantages over current and potential cloud gaming rivals as a result of its wider multi-product ecosystem. The section is structured as follows:
- (a) First, we consider the extent to which individual assets could give Microsoft an advantage in cloud gaming services. We focus our assessment on the following products and services:
 - (i) Microsoft's Windows and Xbox OSs;
 - (ii) Microsoft's Azure cloud infrastructure;
 - (iii) Microsoft's first- and third-party content;
 - (b) Second, we consider the assets held by rivals, and whether these are likely to offset any advantage Microsoft may have.
 - (c) Third, we consider the overall view of the respective strengths of different cloud gaming competitors.

Operating systems

- 8.80 In this section, we consider evidence on the extent to which Microsoft may have a strong position in OSs that can be used for cloud gaming, in particular through its ownership of Windows and the Xbox OSs. We also consider whether any such strong position would be likely to confer on Microsoft a competitive advantage in cloud gaming services.

Importance of operating systems

- 8.81 OSs are system software products that control the basic functions of computing devices, such as servers, PCs, tablets, and smartphones, and enable the user to use the device and run application software on it, including games.⁷¹⁶ A cloud gaming service requires an OS to run on the cloud infrastructure it uses to be able to provide its service.
- 8.82 The OS also has an important impact on the availability of gaming content. Games are developed to be compatible with specific OSs. Cloud gaming services can offer more content if they run on an OS for which many games have been developed.
- 8.83 In the following section, we consider Microsoft's pre-existing strength in cloud gaming services as a result of owning Windows OS and Xbox OS. We also consider evidence on the ability of rivals to access Windows OS for their own cloud gaming service (including the cost) and any alternatives available to them, such as porting games to rival OSs (eg, Linux) and the use of compatibility layers (eg, Proton).⁷¹⁷

Parties' views

- 8.84 The Parties submitted shares of supply indicating that the Windows PC OS is the predominant OS for PCs. Windows' share of PC OSs is [redacted]% worldwide and [redacted]% in the UK (January to June 2021).⁷¹⁸
- 8.85 We note that Windows' market share for PC OSs used for gaming is even higher, upwards of 95%, based on a Steam survey.⁷¹⁹
- 8.86 The Parties submitted that because xCloud runs on Xbox console hardware (running the Xbox OS), Microsoft does not benefit from any Windows-related advantages when competing in the supply of cloud gaming services.⁷²⁰
- 8.87 The Parties submitted that [redacted].⁷²¹
- 8.88 Regarding alternatives to Windows, Microsoft submitted that [redacted]. [redacted]. [redacted].⁷²²

⁷¹⁶ Microsoft, response to the CMA's s109 notice [redacted].

⁷¹⁷ Porting requires the game developer to create a version of the game that is compatible with a different OS. Once developed the game can then run natively on that OS. With a compatibility layer, the Windows version of the game is still used, meaning the developer does not need to create a new version of the game, but an additional layer of software is used to translate the game allowing it to run on a different OS.

⁷¹⁸ Microsoft response to the CMA's RFI [redacted].

⁷¹⁹ 'Steam Hardware & Software Survey: December 2022', dated December 2022, accessed 23 January 2023.

⁷²⁰ Microsoft response to the phase 2 Issues Statement, 31 October 2022, paragraph 5.21.

⁷²¹ Microsoft response to the phase 2 Issues Statement, 31 October 2022, paragraph 5.24.

⁷²² Microsoft response to the CMA's s109 notice

- 8.89 Activision submitted that, based on the experience of porting [X] to [X], porting typically takes a team [X], with (taking the specific example of [X]) roughly [X] USD upfront cost and [X] USD annual ongoing cost. It also noted the [X] cost of [X].⁷²³
- 8.90 Microsoft submitted that it expects [X]. It submitted that Valve had successfully used Proton on its Steam Deck handheld gaming device and [X]. It also submitted that there are already game streaming providers (eg Maximum Settings) which use Proton.⁷²⁴ Microsoft stated that the large majority of the best-selling Windows PC games can be run on Proton and that it is highly rated by gamers.⁷²⁵
- 8.91 With regard to Google's recent decision to shut down Stadia, Microsoft submitted that this was not linked to the use of a non-Windows OS. Microsoft submitted instead that the failure was linked to it having [X].⁷²⁶
- 8.92 Microsoft also submitted that it had [X], referencing a statement from CodeWeavers, the developers of Wine—the compatibility layer for running Windows applications which Proton is based on.⁷²⁷ The quote stated that a certain application programming interface⁷²⁸ (**API**) could not be used to make it difficult for Wine to keep up, as changing the API would break Microsoft's existing codebase as well as those of many other software developers.
- 8.93 It also submitted that using Linux has certain advantages for cloud gaming services, notably its wide use in cloud computing which means there are greater opportunities for re-use of Linux servers for non-gaming uses, allowing for recouping of costs.⁷²⁹

Our assessment

- *Internal document evidence*

- 8.94 An internal document from Microsoft recognises the [X].⁷³⁰
- 8.95 Internal documents from Microsoft also describe the [X]:

⁷²³ Activision response to the CMA's s109 notice.

⁷²⁴ Microsoft response to the CMA's s109 notice; and Microsoft, response to working paper.

⁷²⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.46.

⁷²⁶ Microsoft response to the CMA's s109 notice.

⁷²⁷ Microsoft response to working paper.

⁷²⁸ An API is a way for two or more computer programs to communicate with each other.

⁷²⁹ Microsoft, response to the working papers.

⁷³⁰ Microsoft Internal Document.

- (a) One email chain from [REDACTED]. The same email says that [REDACTED] and that [REDACTED]. While noting that [REDACTED].⁷³¹
- (b) Another email from [REDACTED]. [REDACTED]. [REDACTED].⁷³²
- (c) An email from [REDACTED] recognises [REDACTED]. The email says that [REDACTED]. [REDACTED].⁷³³
- (d) An email from [REDACTED].⁷³⁴
- (e) An Activision internal document also describes that a key barrier to putting content on [REDACTED] is that [REDACTED].⁷³⁵

8.96 Several internal documents discuss Proton and show that [REDACTED]:

- (a) In an email chain [REDACTED]. [REDACTED]. [REDACTED].⁷³⁶
- (b) Another email from [REDACTED]. [REDACTED]. [REDACTED].⁷³⁷ In our view the statement that [REDACTED], suggests [REDACTED].
- (c) An email from [REDACTED]. [REDACTED]. [REDACTED].⁷³⁸
- (d) Some internal discussions suggest that [REDACTED]. [REDACTED]. [REDACTED].⁷³⁹

8.97 The Xbox OS also has a large library of compatible games and, in particular, the full range of games that Microsoft already uses to support the Xbox console business. As Xbox OS runs on Xbox consoles, it has allowed Microsoft to set up cloud infrastructure in a quick and low-cost way, whilst maintaining access to a large library of games. This is discussed in more detail in the next section.

- *Third party evidence*

8.98 The strong position of Windows in OSs, especially among PCs used for gaming, is reflected in a similarly large proportion of PC games that are developed for Windows. Of the games available on Steam, 99.97% are compatible with Windows, compared to 21% for MacOS, and 14% for Linux.⁷⁴⁰ This means that a cloud service provider that uses Windows will

⁷³¹ Microsoft Internal Document.

⁷³² Microsoft Internal Document.

⁷³³ Microsoft Internal Document.

⁷³⁴ Microsoft Internal Document.

⁷³⁵ Activision Internal Document.

⁷³⁶ Microsoft Internal Document.

⁷³⁷ Microsoft Internal Document.

⁷³⁸ Microsoft Internal Document.

⁷³⁹ Microsoft Internal Document.

⁷⁴⁰ Analysis of '[Steam store page](#)', accessed by the CMA on 24 October 2022.

benefit from access to a significantly wider range of games that work on its system without any porting or emulation than will a cloud service provider that chooses other non-console OSs such as Linux or MacOS. Several third parties submitted that Windows is very important for cloud gaming:

- (a) One competitor [redacted] stated that Windows was an essential input for cloud gaming because, as a result of its large installed user base, publishers tended to write games for Windows/DirectX.⁷⁴¹
- (b) One potential entrant [redacted] described Windows as crucial for gaming and noted that rivals that had attempted to use alternative OSs had failed.⁷⁴² It also described its reliance on Microsoft's agreement to use Windows for a specific element of its service, not covered by the standard licensing agreement.⁷⁴³
- (c) A third-party publisher [redacted] stated that it mainly developed PC games for Windows as it was the most commonly used OS amongst gamers.⁷⁴⁴ Activision also stated that all its available PC games run on Windows.⁷⁴⁵

8.99 The OS can have a significant impact on a cloud gaming service provider's costs. Whilst some OSs are free to use, others—including Windows—have licensing fees which can be substantial and represent a significant proportion of a cloud gaming services overall costs. Evidence, including from internal documents, provided by several rival services demonstrated that the cost of licensing Windows is substantial:

- (a) One competitor [redacted] said that Microsoft could charge high fees for Windows and that this provided Microsoft with a competitive advantage. It stated that the Windows licence fee it paid [redacted].⁷⁴⁶ Internal documents from this competitor show that Windows fees represent [redacted]% of its streaming cost per hour.⁷⁴⁷
- (b) Another competitor [redacted] used Windows for early prototypes of its service but indicated that use of Windows would have almost doubled its streaming cost per hour, and that it would therefore be difficult for anyone other than Microsoft to provide a financially sustainable cloud gaming

⁷⁴¹ [redacted], response to the CMA's RFI [redacted].

⁷⁴² [redacted] call note.

⁷⁴³ [redacted] call note.

⁷⁴⁴ [redacted] response to the CMA's RFI.

⁷⁴⁵ Activision response to the CMA's s109 notice.

⁷⁴⁶ [redacted] response to the CMA's RFI.

⁷⁴⁷ [redacted] Internal Document.

service using Windows that could be profitable in view of Windows licensing costs.⁷⁴⁸

(c) Internal documents from another competitor [REDACTED] showed that [REDACTED].⁷⁴⁹

8.100 One option for competitors using an OS other than Windows is to have developers port games and make them compatible with other OSs, such as Linux.

8.101 Responses from various third parties highlight the difficulties and cost associated with this approach. For example, one competitor [REDACTED], submitted that the cost of porting games to Linux is a significant barrier to making content available on a cloud gaming platform and, therefore, is a key challenge in attracting users to a Linux-based platform.⁷⁵⁰ It said that there was a substantial cost involved in porting a game built on the Windows/DirectX platform to the Linux/Vulkan platform.⁷⁵¹ [REDACTED], the competitor described the development of a cloud gaming service on a non-Windows OS as time and resource intensive, dependent on acquiring a significant customer base to recoup the initial investment, and not viable without sufficient breadth and depth of content.⁷⁵² [REDACTED].

8.102 A publisher [REDACTED] described the OS as decisive in its decision to make a game available on a cloud gaming service, with a service using Windows requiring minimal effort.⁷⁵³ In comparison it noted the difficulty of creating a port for cloud gaming services requiring publishers to use their own software development kits (**SDKs**), describing it as taking some time, effort and investment.⁷⁵⁴ It described the cost of porting as dependent on several factors, but generally ranging between [REDACTED], also suggesting that porting costs could decrease over time if a developer has a library including games or game engines that have previously been ported to the same OS.⁷⁵⁵

8.103 We have considered the experience of Google's Stadia, which was a Linux-based cloud gaming platform that relied on porting games from Windows to Linux. Stadia announced its closure in September 2022 and ceased operating as a cloud gaming service provider to customers in January 2023. [REDACTED] noted that its failure was linked to [REDACTED] to attract sufficient users and that the choice

⁷⁴⁸ [REDACTED] response to the CMA's RFI.

⁷⁴⁹ [REDACTED] Internal Document.

⁷⁵⁰ [REDACTED] response to the CMA's RFI.

⁷⁵¹ [REDACTED] response to the CMA's RFI.

⁷⁵² [REDACTED] response to the CMA's RFI.

⁷⁵³ [REDACTED] response to the CMA's RFI.

⁷⁵⁴ [REDACTED] response to the CMA's RFI.

⁷⁵⁵ [REDACTED] response to the CMA's RFI.

of a [redacted] was a factor in this as it ‘increased friction’ for development studios.⁷⁵⁶

- 8.104 Another option for providers using a non-Windows OS is to use a compatibility layer which effectively translates a Windows game, allowing it to be played on a non-Windows OS. Proton is a notable example of a compatibility layer for Linux, which was introduced by Valve in 2018.⁷⁵⁷ It is already in use by some cloud gaming providers and is under consideration by others.
- 8.105 Some third parties were confident in the effectiveness of Proton as an alternative to Windows. One competitor [redacted] is already partially using Proton (alongside Windows) for game streaming [redacted].⁷⁵⁸ Internal documents from this competitor [redacted].⁷⁵⁹ It submitted that it was too early to be sure of its effectiveness in practice but that the relevant individual was not aware of any major issues so far.⁷⁶⁰
- 8.106 Others noted it as an option but expressed certain reservations about its effectiveness. One competitor [redacted] described that [redacted].⁷⁶¹ It described the disadvantages as [redacted], the reduced performance associated with using a compatibility layer, and the potential for unexpected issues and bugs, eg, due to anti-cheat software.⁷⁶² It also noted that [redacted].⁷⁶³
- 8.107 Another competitor [redacted] stated that Proton was less effective for games built on the latest version of DirectX.⁷⁶⁴ It also stated that Proton would perform less well for new games and therefore would not be suitable for offering games on release date.⁷⁶⁵
- 8.108 One potential entrant [redacted] similarly noted disadvantages relating to performance, additional work required to resolve issues and bugs, and the difficulty of using Proton to provide games on release date.⁷⁶⁶
- 8.109 One publisher [redacted] noted that compatibility layers could reduce performance and the key consideration for [redacted] in deciding whether to put its games on a PC OS by way of a compatibility layer is whether its games performed well on

⁷⁵⁶ [redacted] call note.

⁷⁵⁷ Microsoft response to the CMA’s s109 notice.

⁷⁵⁸ [redacted] response to the CMA’s s109 notice.

⁷⁵⁹ [redacted] Internal Document.

⁷⁶⁰ [redacted] call note.

⁷⁶¹ [redacted] call note.

⁷⁶² [redacted] response to the CMA’s RFI; Publishers use anti-cheat software to try to identify and prevent efforts to obtain unfair advantages during gaming. As an unexpected intervention in the gaming software, compatibility layers can become a target for anti-cheat software.

⁷⁶³ [redacted] call note.

⁷⁶⁴ [redacted] response to the CMA’s RFI.

⁷⁶⁵ [redacted] call note.

⁷⁶⁶ [redacted] call note.

the PC OS and hardware, notwithstanding the presence of a compatibility layer.⁷⁶⁷

8.110 One publisher [redacted] stated that Proton enables Windows games to run on Linux with an almost seamless experience and that it could envision offering its games on a platform using it.⁷⁶⁸

- *Data on Game Performance*

8.111 Data on game performance using Proton suggests that it is an imperfect substitute for gaming on Windows, and a significant proportion of games cannot be played without issues. Valve categorises games based on how well they run using Proton on Valve's Steam Deck handheld gaming device.⁷⁶⁹ Data on the proportion of Steam's top 100 games in each category showed that 16% were playable with no issues, with a further 33% playable with some tweaking required. 31% were unplayable and 20% had not been tested.⁷⁷⁰

8.112 A separate community-based categorisation is also available, and this also suggested that Proton was still subject to material performance issues.⁷⁷¹ Data for Steam's top 100 games using this categorisation suggested that 19% ran perfectly, 53% ran perfectly after some tweaking, 14% ran with minor issues, 2% ran but with more substantial issues, and 12% were unplayable. Whilst Microsoft submitted that this data demonstrates the effectiveness of Proton,⁷⁷² in our view it is consistent with the interpretation that it is an imperfect substitute to using the Windows OS.

- *Provisional conclusion on Microsoft's position in operating systems*

8.113 OSs affect both the range of content available and cost to cloud gaming service providers. We believe that Windows OS and Xbox OS both give Microsoft a wide range of games that readily work without any need for porting or use of a compatibility layer. Further, as both OSs are owned by Microsoft, they can be self-supplied at little or no incremental cost.

⁷⁶⁷ [redacted] response to the CMA's RFI.

⁷⁶⁸ [redacted] response to the CMA's RFI.

⁷⁶⁹ steamdeck.com | 'Deck Verified', accessed by the CMA on 9 December 2022.

⁷⁷⁰ Analysis of data from 'ProtonDB dashboard', accessed by the CMA on 19 October 2022. Proportions will be subject to change as the top 100 games changes. Some performance issues will relate to Steam Deck as a handheld device rather than Proton.

⁷⁷¹ 'ProtonDB', accessed by the CMA on 9 December 2022.

⁷⁷² Microsoft response to working papers.

8.114 With respect to Microsoft's submission that it does not benefit from Windows-related advantages on the basis that xCloud currently does not use Windows, we make the following observations:

(a) First, Microsoft has two strong OSs to choose from, and each has a significant library of compatible games that can run without the need to port them or emulate another OS.

(b) Second, Microsoft [REDACTED]. We assess the importance of Azure below, [REDACTED].

8.115 We consider the evidence above to be consistent in showing that Microsoft's ability to self-supply Windows represents a significant cost saving relative to rivals (as Microsoft does not have to pay an expensive license fee for Windows OS).

8.116 Use of a console OS provides similar content advantages, but this option is limited to a small number of competitors. A proprietary console OS is only available to providers who can use an existing console hardware OS for game streaming, which is limited to Microsoft, SIE, and Nintendo, the latter of which does not currently use its own cloud infrastructure to provide its cloud gaming service.⁷⁷³

8.117 For providers other than Microsoft, there is a significant cost to using Windows as licensing fees must be paid to Microsoft. This is demonstrated by several third party responses and recognised by Microsoft.

8.118 Evidence suggests that porting a game to a different OS is expensive, and developers are generally unwilling to develop games for OSs without a large installed user base. Google Stadia, for example, attempted to run its cloud gaming service on Linux and its business failed. Many see the lack of content on Stadia's Linux-based platform as a major contributor to its failure. We believe that this shows that porting games to an alternative OS (ie requiring developers to create a new version of the game compatible with that OS) is not a viable alternative to Windows currently and is unlikely to be in the near future.

8.119 Using a Proton compatibility layer on a Linux-based cloud gaming service may be a better alternative to porting, and it is already in use by some gaming platforms. [REDACTED] and [REDACTED]. [REDACTED].

8.120 There are, however, limitations to Proton. The majority of games require additional work to run well on Proton, and it needs to be maintained to keep

⁷⁷³ [REDACTED] response to the CMA's RFI.

up with updates to Windows or DirectX. Releasing games D&D using Proton is also difficult given the additional work required. It is possible that further investment and increased use of Proton in gaming could reduce these limitations but that remains uncertain.

- 8.121 We provisionally consider that Microsoft's rivals in cloud gaming services, therefore, face the choice between high costs associated with using Windows or using an alternative OS (such as Linux) with limited native content. The ability to use its Windows and Xbox OS without a licencing fee, therefore, provides Microsoft with a significant advantage in cloud gaming services.

Cloud infrastructure

- 8.122 This section considers whether Microsoft has a strong position on cloud infrastructure given its ownership of the Azure cloud infrastructure network, and its option of using console-based infrastructure. First it will describe Microsoft's current use of cloud infrastructure and the possibility of using Azure in the future. It will then consider the strength of Microsoft's position by comparing its cloud infrastructure options to the alternative available to rivals.

- 8.123 Cloud infrastructure is an essential input for cloud gaming service providers. Cloud gaming platforms operate by storing and executing games remotely on hardware in a data centre and streaming the game to a gamer's device. Within the data centre, games which are being streamed are stored and run on hardware. The type of hardware depends on the provider and can range from bespoke gaming hardware to servers which can be used for multiple workloads.⁷⁷⁴

Using Azure for cloud gaming

- 8.124 This section considers Microsoft's current use of cloud infrastructure for its cloud gaming service, and its plans for the future. It will consider Microsoft's submissions as well as internal document evidence on the evolution of its plans over time.

Parties' views

- 8.125 Microsoft submitted that it currently does not use Azure for its cloud gaming service, which instead is provided on dedicated Xbox consoles located in Microsoft data centres, streaming console games running on the Xbox OS. It submitted that it cannot derive any advantage from an asset that it does not

⁷⁷⁴ Microsoft response to the CMA's s109 notice.

use.⁷⁷⁵ It noted that this [REDACTED]. It also only allows for streaming of console games, not PC games.⁷⁷⁶

8.126 Microsoft submitted that there are expected benefits to using Azure PC infrastructure for cloud gaming, [REDACTED]. It also noted the advantages of scale to cloud infrastructure providers such as Azure.⁷⁷⁷

8.127 Microsoft submitted that it [REDACTED].⁷⁷⁸ It stated the reasons for this were [REDACTED].⁷⁷⁹ As described previously, Microsoft submitted that it [REDACTED].⁷⁸⁰ It also submitted that [REDACTED].⁷⁸¹

Our assessment

- *Internal document evidence*

8.128 Microsoft's internal documents show that, [REDACTED]:

8.129 Slides from May 2020 [REDACTED]. [REDACTED]. [REDACTED]. [REDACTED].⁷⁸² Microsoft has submitted that [REDACTED].⁷⁸³ Microsoft submitted that [REDACTED].⁷⁸⁴

(a) Emails from [REDACTED] in [REDACTED]. [REDACTED].⁷⁸⁵

(b) An internal evaluation of rival cloud gaming services [REDACTED] describes benefits from using PC hardware [REDACTED].⁷⁸⁶

(c) Discussion between [REDACTED].⁷⁸⁷

(d) An email discussion [REDACTED]. [REDACTED].⁷⁸⁸

(e) An internal chat [REDACTED].⁷⁸⁹

(f) A [REDACTED] cloud gaming performance evaluation report [REDACTED].⁷⁹⁰

⁷⁷⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 5.21-5.22.

⁷⁷⁶ Microsoft response to the CMA's s109 notice.

⁷⁷⁷ Microsoft response to the CMA's s109 notice.

⁷⁷⁸ Microsoft response to the CMA's s109 notice.

⁷⁷⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.24.

⁷⁸⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 5.25-5.26.

⁷⁸¹ Microsoft, response to the working papers.

⁷⁸² Microsoft Internal Document.

⁷⁸³ Microsoft, response to working papers.

⁷⁸⁴ Microsoft, response to working papers.

⁷⁸⁵ Microsoft Internal Document.

⁷⁸⁶ Microsoft Internal Document.

⁷⁸⁷ Microsoft Internal Document.

⁷⁸⁸ Microsoft Internal Document.

⁷⁸⁹ Microsoft Internal Document.

⁷⁹⁰ Microsoft Internal Document.

(g) Emails from [REDACTED].⁷⁹¹

(h) Similarly, [REDACTED]. [REDACTED]. [REDACTED]. [REDACTED]. [REDACTED].⁷⁹²

(i) Emails from [REDACTED].⁷⁹³

(j) Another email [REDACTED]. [REDACTED] investment are also highlighted however.⁷⁹⁴

(k) Slides [REDACTED]. [REDACTED].⁷⁹⁵

- *Provisional conclusion on using Azure for cloud gaming*

8.130 With respect to Microsoft's cloud infrastructure plans, internal documents [REDACTED]. Some internal documents note [REDACTED]. [REDACTED]. [REDACTED].

8.131 We [REDACTED]. [REDACTED], we believe that Microsoft's use of Xbox consoles provides it with an advantage over most rivals already as described in the following section.

Microsoft's position in cloud infrastructure

8.132 The previous section considered whether Microsoft is likely to use Azure for cloud gaming services. In this section, we consider Microsoft's position in the upstream market for cloud infrastructure, including the availability of alternatives.

Parties' views

8.133 Microsoft submitted that there are plenty of cloud infrastructure alternatives. According to Microsoft, cloud infrastructure is standardised, commoditised, and competitive. It stated that there are many providers, all of which source GPUs from the same suppliers and have comparable offers that can, and in some instances already are, being used for cloud gaming.⁷⁹⁶ It submitted that Amazon and Google had [REDACTED], and that NVIDIA had [REDACTED].⁷⁹⁷

⁷⁹¹ Microsoft Internal Document.

⁷⁹² Microsoft Internal Document.

⁷⁹³ Microsoft Internal Document.

⁷⁹⁴ Microsoft Internal Document.

⁷⁹⁵ Microsoft Internal Document.

⁷⁹⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.45.

⁷⁹⁷ Microsoft, response to working papers.

Our assessment

- *Internal document evidence*

- 8.134 One Microsoft internal document describes various advantages Microsoft has from Azure. [REDACTED].⁷⁹⁸ In submissions to the CMA, Microsoft submitted that [REDACTED].⁷⁹⁹
- 8.135 Other internal documents indicate that Azure [REDACTED]. A document [REDACTED] discussing infrastructure services opportunities in cloud gaming notes that [REDACTED].⁸⁰⁰ A note of discussions with a customer from [REDACTED] describes again that Azure [REDACTED]. The same note describes [REDACTED].⁸⁰¹
- 8.136 An internal document from Activision also states that, despite [REDACTED] in [REDACTED] cycles, [REDACTED] is well positioned for [REDACTED] with its ability to leverage [REDACTED].⁸⁰²
- 8.137 Microsoft internal documents also provide some comparison of expected cost differences between major providers, [REDACTED]. One document discussing infrastructure services opportunities in cloud gaming notes [REDACTED], but states that [REDACTED]⁸⁰³ [REDACTED].⁸⁰⁴ An email [REDACTED], but notes that [REDACTED].⁸⁰⁵

- *Third party evidence*

- 8.138 The cost of cloud infrastructure is a substantial component of a cloud gaming service's overall costs. One independent report submitted by Microsoft notes that compute cost per hour (ie the cost per hour of cloud usage) is [REDACTED], [REDACTED].⁸⁰⁶ Responses from third party cloud gaming service providers estimated that cloud infrastructure represents from [REDACTED]% to [REDACTED]% of overall costs.⁸⁰⁷
- 8.139 The technical capability of cloud infrastructure is also important in determining the performance of games on a cloud gaming service, and therefore the customer experience. One third party described several key requirements for cloud gaming infrastructure: low latency, high bandwidth, and reliability.⁸⁰⁸

⁷⁹⁸ Microsoft Internal Document.

⁷⁹⁹ Microsoft, response to working papers.

⁸⁰⁰ Microsoft Internal Document.

⁸⁰¹ Microsoft Internal Document.

⁸⁰² Activision Internal Document.

⁸⁰³ Cloud-based game streaming services are computationally intensive and also require significant network bandwidth (ie network egress) on account of being video-heavy. All providers of streaming and other online services need to pay egress charges, which is the cost to send information over the internet from a data centre to an end user. The greater the volume of data transported over the internet, the lower the per unit charge. As such, providers can benefit from economies of scale by providing a range of streaming and other online services.

⁸⁰⁴ Microsoft Internal Document.

⁸⁰⁵ Microsoft Internal Document.

⁸⁰⁶ Microsoft Internal Document.

⁸⁰⁷ Third party responses to the CMA questionnaire: [REDACTED]; [REDACTED]; and [REDACTED].

⁸⁰⁸ [REDACTED] response to the CMA questionnaire.

Another third party described how cloud infrastructure used for gaming requires GPUs to provide the smooth graphics and dynamic experience that customers expect.⁸⁰⁹

8.140 Cloud gaming services can self-supply cloud infrastructure, either utilising an existing cloud network or building one, or use a third-party cloud infrastructure provider. The decision will depend on the firm's available assets and as such, any advantage Microsoft has will vary according to the rival we compare Microsoft to.

8.141 Third party responses indicate that most current competitors, with the exception of Nintendo, self-supply cloud infrastructure. For example:

(a) Amazon [redacted],⁸¹⁰ which has the [redacted].⁸¹¹

(b) SIE generally [redacted] to provide cloud gaming services.⁸¹²

(c) NVIDIA developed its own custom cloud gaming servers utilising its GPU assets [redacted].⁸¹³

(d) Google hosted Google Stadia [redacted].⁸¹⁴ Its GCP cloud infrastructure network has [redacted].⁸¹⁵

(e) Nintendo uses a third-party cloud infrastructure provider [redacted] to run its limited cloud gaming service.⁸¹⁶ The Parties submitted that this provider [redacted] uses cloud infrastructure from multiple cloud infrastructure providers [redacted].⁸¹⁷

8.142 Third party responses noted the cost advantages of having a large cloud infrastructure network.

8.143 One rival [redacted] noted that, by being a leading provider of cloud infrastructure services, Microsoft can leverage a much lower cost structure for its cloud gaming service.⁸¹⁸ This rival described that large cloud providers enjoy a significant cost advantage in cloud gaming services because they contract at

⁸⁰⁹ [redacted] response to the CMA questionnaire.

⁸¹⁰ [redacted] call note.

⁸¹¹ Parties, FMN.

⁸¹² [redacted] response to the CMA's RFI.

⁸¹³ [redacted] response to the CMA's RFI.

⁸¹⁴ [redacted] response to the CMA's RFI.

⁸¹⁵ Parties, FMN.

⁸¹⁶ [redacted] response to the CMA's RFI.

⁸¹⁷ [redacted], response to the CMA's s109 notice.

⁸¹⁸ [redacted] response to the CMA's RFI.

much higher volumes than others including itself, and have cloud infrastructure located throughout the world.⁸¹⁹ It described that [REDACTED].⁸²⁰

- 8.144 Another rival [REDACTED] described how, as it is unable to replicate Microsoft's cloud infrastructure network, it would never be able to run its cloud gaming service as efficiently.⁸²¹ It also provided internal document evidence demonstrating that it considers Microsoft to have unique advantages in cloud gaming services, of which Azure is one.⁸²²
- 8.145 A market report from January 2021 described [REDACTED].⁸²³
- 8.146 Third party responses indicated that several cloud infrastructure providers offered servers suitable for cloud gaming. One cloud infrastructure provider [REDACTED] said that its platform offered the required capabilities for cloud gaming, [REDACTED].⁸²⁴ Another potential provider stated that several cloud infrastructure providers have similar capabilities.⁸²⁵ As it uses older console hardware, [REDACTED] cloud gaming service is currently behind rivals and can only offer older games.⁸²⁶
- 8.147 Some third parties stated that providing a cloud gaming service using third party cloud infrastructure, ie procured from a public cloud infrastructure provider such as Azure, AWS or GCP, was not viable.
- 8.148 One cloud gaming service rival [REDACTED] described how it had built its own [REDACTED] for its service [REDACTED]. It further stated that it [REDACTED].⁸²⁷ [REDACTED] notably is a [REDACTED], a key input for cloud infrastructure, which will provide [REDACTED]. [REDACTED].
- 8.149 Similar comments were made by another provider [REDACTED] in a market report. It noted that it would not be possible to provide a cloud gaming service using a public cloud infrastructure offering as servers are not optimised for gaming, hardware is often outdated, and coverage is limited.⁸²⁸ Although this provider does use an external infrastructure provider, this utilises a custom GPU server designed and configured by the cloud gaming provider, using hardware and data centres from the cloud infrastructure provider.⁸²⁹

⁸¹⁹ [REDACTED] response to the CMA's RFI.

⁸²⁰ [REDACTED] call note.

⁸²¹ [REDACTED] response to the CMA's RFI.

⁸²² [REDACTED] Internal Document.

⁸²³ Microsoft Internal Document.

⁸²⁴ [REDACTED] call note.

⁸²⁵ [REDACTED] call note.

⁸²⁶ [REDACTED] response to the CMA's RFI.

⁸²⁷ [REDACTED] response to the CMA's RFI.

⁸²⁸ [REDACTED] response to the CMA's RFI.

⁸²⁹ 'Pushing cloud gaming to the next level' accessed by the CMA on 14 December 2022.

8.150 A market report [redacted] stated that [redacted]. [redacted].⁸³⁰

8.151 However, other third party responses stated that, whilst high costs may make use of third party infrastructure difficult currently, it is likely to become feasible as streaming costs decrease and providers develop cloud gaming optimised servers in the longer run. One provider [redacted] described it as expensive today but as being feasible in the ‘not-too-distant future’.⁸³¹

8.152 As described above, cloud infrastructure represents a substantial proportion of a cloud gaming service’s costs, therefore streaming cost is likely to be a key determinant of a cloud gaming service’s competitiveness.

8.153 It is difficult to make an exact comparison across providers as methods for calculating cost per streaming hour may differ, the cost is heavily influenced by the usage which can vary substantially, and costs are developing over time as most providers aim to reduce them through various means. Despite these caveats, comparison of the evidence submitted by providers shows:

(a) Microsoft submitted that current cost per streaming hour is [redacted] using console-based servers.⁸³² Internal documents note that [redacted].⁸³³ A further document describes that [redacted].⁸³⁴ Another document on [redacted] outlines targets [redacted].⁸³⁵

(b) One competitor’s [redacted] internal documents show [redacted]. [redacted].⁸³⁶ [redacted].⁸³⁷ [redacted].⁸³⁸

(c) Another competitor’s [redacted] internal document from January 2021 indicates a cost per streaming hour of [redacted].⁸³⁹ It is important to note that [redacted] uses [redacted] hardware for its streaming service. [redacted].⁸⁴⁰ It is therefore not directly comparable to other cloud gaming services currently. This will explain at least some of the large cost difference compared to others [redacted]. According to internal documents [redacted] intends to move to [redacted].⁸⁴¹

⁸³⁰ Microsoft Internal Document.

⁸³¹ [redacted] call note.

⁸³² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, table 10.

⁸³³ Microsoft Internal Document.

⁸³⁴ Microsoft Internal Document.

⁸³⁵ Microsoft Internal Document.

⁸³⁶ [redacted] response to the CMA’s section 109 notice.

⁸³⁷ [redacted] response to the CMA’s section 109 notice.

⁸³⁸ [redacted] response to the CMA’s section 109 notice.

⁸³⁹ [redacted] Internal Document.

⁸⁴⁰ ‘PlayStation Plus’, accessed by the CMA on 15 December 2022.

⁸⁴¹ [redacted] Internal Document.

(d) Another competitor's [REDACTED] internal document from January 2021 shows [REDACTED].⁸⁴² A more recent August 2022 internal document indicates [REDACTED].⁸⁴³

(e) Finally, one competitor [REDACTED] submitted that its cost per streaming hour was [REDACTED].⁸⁴⁴

8.154 Based on the available evidence, and noting the difficulties of making direct comparisons, [REDACTED] has the lowest current streaming cost, but this is due to [REDACTED]. Its costs can be expected to [REDACTED]. At that point, it is likely to have higher costs than [REDACTED]. [REDACTED], [REDACTED], and [REDACTED] have relatively similar costs currently. [REDACTED] current costs are considerably higher, but it has [REDACTED]. Both [REDACTED] and [REDACTED] have similar long-term targets for cost per streaming hour.

8.155 It is clear from Microsoft's internal documents that it [REDACTED]. It is worth noting that Microsoft's predicted costs for [REDACTED] are also below [REDACTED], meaning that the combination of [REDACTED] significantly increases Microsoft's advantage in cloud gaming.

- *Provisional conclusion on Microsoft's position in cloud infrastructure*

8.156 Cloud infrastructure is an essential long-term input for cloud gaming services and has an important impact on costs and performance.

8.157 Microsoft currently has the option of using Xbox consoles, [REDACTED], and which enables it to offer cloud services at a competitive cost. However, evidence suggests [REDACTED], given advantages such as [REDACTED]. Whilst the current [REDACTED].

8.158 Some rivals have their own cloud infrastructure solution. [REDACTED]. [REDACTED].

8.159 Alternatively, cloud gaming service providers can also access third-party cloud infrastructure. Evidence suggests that this may not be a financially viable option at present but may become viable in future.

8.160 In any event, we provisionally consider that Microsoft has a strong position in cloud gaming as a result of its ownership of Azure, one of the biggest cloud infrastructure providers globally. This will likely give Microsoft a significant cost advantage over rivals without an in-house cloud infrastructure (although not over rivals with their own cloud infrastructure, [REDACTED]). When this cost advantage is combined with Microsoft's advantage from owning Windows OS, a license for which is a significant proportion of rivals' costs, it becomes difficult to see how any cloud gaming service provider—whether or not it has

⁸⁴² [REDACTED] Internal Document.

⁸⁴³ [REDACTED] Internal Document.

⁸⁴⁴ [REDACTED] response to the CMA's RFI.

its own cloud infrastructure—can match Microsoft’s cost advantages. We therefore provisionally believe that Azure will likely help to compound Microsoft’s advantages over rival cloud gaming service providers.

First and third-party content

8.161 Microsoft is a game publisher and currently owns 24 game development studios, several of which it acquired in recent years. These studios make games such as Minecraft, Forza, Elder Scrolls, and Halo for Xbox and other consoles, PC, and mobile devices. Some of this content is available exclusively on Xbox and some is licensed to rival console providers.⁸⁴⁵

8.162 Microsoft also has established relationships with third party developers and publishers, including a large existing library of third party content available on Game Pass.

8.163 This section will consider Microsoft’s pre-existing position in first- and third-party content.

Microsoft’s position on first- and third-party content

Parties’ views

8.164 Microsoft submitted that its first- and third-party content does not give it an advantage over Sony and Nintendo, given these players’ strong content portfolios. It also submitted that its cloud gaming competitors, including NVIDIA, Amazon, and Netflix, will have access to a large, diverse, and high-quality pool of content for their cloud streaming services.⁸⁴⁶ Microsoft also stated that it agrees that content is an important factor driving the value of game streaming services, although Microsoft clarified that it is not the only factor.⁸⁴⁷

Our assessment

- *Internal document evidence*

8.165 Microsoft’s internal documents suggest that rival cloud gaming service providers without an existing gaming console may lack the games and

⁸⁴⁵ CMA, [Phase 1 Decision](#), 12 October 2022, paragraph 12.

⁸⁴⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.10 and 3.67.

⁸⁴⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.48(b).

relationships with third-party game publishers to compete effectively in cloud gaming:

- (a) One Microsoft internal document from October 2019 shows that [REDACTED]. The document explains that [REDACTED]. We note that this document pre-dates the agreement of the Merger.⁸⁴⁸
- (b) An email to the [REDACTED] in March 2020 explains that rivals like [REDACTED]. According to the email, these rivals are [REDACTED]. The email explains that this is [REDACTED].⁸⁴⁹
- (c) Another document from April 2020 describes gaming content as [REDACTED].⁸⁵⁰

- *Third party evidence*

8.166 Several rivals highlighted Microsoft's content library as a significant strength.⁸⁵¹ One described how Microsoft had a large catalogue of existing titles, with access to its own game development studio to increase this offering.⁸⁵² Another noted Microsoft's significant content advantages, including a leading first-party exclusive content library.⁸⁵³ Another stated that Microsoft owns a significant library of must-have content.⁸⁵⁴ And another described that XGP offered a robust game library, including games from companies Microsoft has already purchased.⁸⁵⁵

8.167 One rival [REDACTED] described how Microsoft has access to exclusive gaming content, through its pre-merger ownership of 23 first party game studios.⁸⁵⁶

8.168 An internal document from one competitor [REDACTED] in October 2021 describes how Microsoft has leveraged the Game Pass game catalogue for xCloud, and has secured D&D releases from AAAs like Square-Enix in addition to putting all 1P content into Game Pass on day one.⁸⁵⁷

8.169 A third party report described Microsoft as best positioned for subscription services generally, and for cloud gaming specifically as a large first-party content library will help the platform scale up faster and with better marginal economic benefits. The document explains that the cost of technology (ie processing and bandwidth costs) increases broadly with user growth, whilst

⁸⁴⁸ Microsoft Internal Document.

⁸⁴⁹ Microsoft Internal Document.

⁸⁵⁰ Microsoft Internal Document.

⁸⁵¹ Third party responses to the CMA questionnaire: [REDACTED]; [REDACTED]; [REDACTED]; and [REDACTED].

⁸⁵² [REDACTED] response to the CMA questionnaire.

⁸⁵³ [REDACTED] response to the CMA questionnaire.

⁸⁵⁴ [REDACTED] response to the CMA questionnaire.

⁸⁵⁵ [REDACTED] response to the CMA questionnaire.

⁸⁵⁶ [REDACTED] response to the CMA's RFI.

⁸⁵⁷ [REDACTED] Internal Document.

the marginal cost of content can drop significantly if more subscribers join the platform.⁸⁵⁸

- *Provisional conclusion on Microsoft's position on first- and third-party content*

8.170 Based on the evidence, we provisionally believe that the existing content portfolio and developer/publisher relationships that Microsoft has built over time may give Microsoft a significant advantage over cloud gaming services rivals without similar assets. Of current rivals, only SIE and Nintendo have comparable strength in this area.

Microsoft's overall strengths in cloud gaming services relative to rivals

8.171 We believe that Microsoft's strengths in cloud gaming services should not be assessed in isolation. The evidence suggests that the combination of Microsoft's multi-product ecosystem gives it a stronger position in cloud gaming than would be suggested by assessing each of its products and services individually. As described above, this may affect Microsoft's incentive to engage in a foreclosure strategy using Activision's content, and may also magnify the effect of any such foreclosure strategy in the market for cloud gaming services.

8.172 Microsoft is not, however, the only industry participant with a combination of assets that could be leveraged for cloud gaming. There are rivals with their own multi-product ecosystem, several of which have entered, are present, or intend to enter the market for cloud gaming services. These include Amazon, SIE, NVIDIA, Nintendo, Google, [X].

8.173 In this section, we first consider the potential strengths that each of these rivals has. We then consider how these compare to Microsoft's advantages when assessed in the round.

Advantages of Microsoft's rivals

Amazon Luna

8.174 Amazon's key assets for cloud gaming services include:

⁸⁵⁸ Microsoft Internal Document.

- (a) **AWS cloud infrastructure.** As described above, [X]. Similar to Microsoft with Azure, this can be leveraged to provide cloud gaming services at a low cost.
- (b) **Twitch.** Twitch is an interactive livestreaming service for content, primarily used for gaming ie watching streams of others playing games.⁸⁵⁹ As described above this gives Amazon access to a large community of consumers interested in gaming.
- (c) **Promotional channels.** As well as Twitch, Prime Video and Amazon's retail site offer useful channels for promoting its cloud gaming service.
- (d) **First- and third-party content.** Amazon has a game development studio and has published the games Lost Ark and New World (although neither is currently available on Luna).⁸⁶⁰ This game development studio is not comparable to rivals such as Microsoft, SIE, and Nintendo in the volume and range of first party content. On third-party content, Amazon has been successful in placing some third-party content on Luna (eg, from Ubisoft).⁸⁶¹

SIE PlayStation Plus

8.175 SIE's key assets for cloud gaming services include:

- (a) **PlayStation hardware and OS.** Similar to Microsoft, SIE has the option to use console hardware and the associated OS to stream games, providing a lower cost solution with a large library of compatible games. As discussed above, however, there are cost advantages in using PC servers in the long term, so any advantage that SIE may have by using its console hardware for cloud gaming services is not likely to extend into the future.
- (b) **First- and third-party content.** SIE publishes several high profile and popular game franchises such as God of War, The Last of Us and Uncharted, and owns several studios capable of developing high quality games.⁸⁶² Like Microsoft and Nintendo, it also has strong relationships with third party developers and publishers, including exclusive titles.

⁸⁵⁹ 'Twitch', accessed by the CMA on 15 December 2022.

⁸⁶⁰ 'Amazon Games', accessed by the CMA on 7 December 2022.

⁸⁶¹ 'Amazon Luna – Ubisoft', accessed by the CMA on 24 January 2023.

⁸⁶² 'TechRaptor article', accessed by the CMA on 15 December 2022.

NVIDIA GFN

8.176 NVIDIA's key assets for cloud gaming services include:

- (a) **GPUs.** NVIDIA is one of two leading manufacturers of GPUs, which are an essential input into the cloud infrastructure required for cloud gaming. Access to these at lower cost than rivals provide NVIDIA with an advantage in developing its cloud infrastructure and this has helped it develop its own infrastructure without having an existing cloud network.⁸⁶³
- (b) **Third-party content.** GFN as a large library of third-party content available on its service with over 1,400 games available.⁸⁶⁴ However we note that these games are not part of NVIDIA's service and must be purchased by the consumer separately, and that it does not have any exclusive titles.

Nintendo

8.177 Nintendo's key assets for cloud gaming services include:

- (a) **First- and third-party content.** Nintendo publishes several high profile and popular game franchises such as Mario and Zelda.⁸⁶⁵ Like Microsoft and SIE it also has strong relationships with third party developers and publishers, including exclusive titles.

8.178 Whilst Nintendo has its own console hardware that could be used as cloud infrastructure, given its lower grade specification, it would not be suitable for streaming higher performance games, and has not been used by Nintendo for its cloud gaming offer.

Google Stadia

8.179 Although Google shut down its cloud gaming service, Stadia, it is worth considering Google's pre-existing strengths, given that these were insufficient for it to succeed in cloud gaming. Google's key assets for cloud gaming services include:

- (a) **GCP.** As described above, Google is the [redacted] provider of cloud infrastructure services [redacted]. Similar to Microsoft with Azure, this can be leveraged to provide cloud gaming services at a low cost.

⁸⁶³ 'NVIDIA website', accessed by the CMA on 15 December 2022.

⁸⁶⁴ 'Games available on NVIDIA GeForce NOW', accessed by the CMA on 7 December 2022.

⁸⁶⁵ 'PlayDiaries article', accessed by the CMA on 15 December 2022.

(b) **Promotional channels.** As the owner of YouTube and the Google Play Store, Google has useful channels for promoting Stadia to consumers.

[REDACTED]

8.180 [REDACTED] is a potential entrant to cloud gaming. [REDACTED] key assets for cloud gaming services include:

(a) [REDACTED].⁸⁶⁶

Microsoft's overall strengths relative to rivals

Parties' views

8.181 Microsoft submitted that it does not have any pre-existing advantage or strength in cloud gaming due to its ecosystem, and that whilst it has several assets or products, these products are not integrated or linked and cannot be used to cause the market for cloud gaming services to tip.⁸⁶⁷

8.182 Microsoft also submitted that it does not hold a uniquely strong position in cloud gaming services. It submitted that NVIDIA has become the leading cloud gaming provider without having any first party content. It stated that both Sony and Amazon have first party content similar to Microsoft.⁸⁶⁸ It has also suggested that Microsoft is behind both Amazon and Google on cloud infrastructure.⁸⁶⁹

Our assessment

- *Internal document evidence*

8.183 Internal documents from Microsoft since 2019 describe the key inputs and assets required for cloud gaming service providers and indicate that Microsoft has a strong position in the market due to its strength across the full set. For example, one Microsoft internal document displays a chart showing that [REDACTED].⁸⁷⁰

⁸⁶⁶ [REDACTED] call note.

⁸⁶⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.17.

⁸⁶⁸ Microsoft, response to working papers.

⁸⁶⁹ Microsoft, response to working papers.

⁸⁷⁰ Microsoft Internal Document.

Figure 8.1 Microsoft internal cloud gaming competitive assessment

[REDACTED]

Source: Microsoft internal document.

8.184 We consider that developments since the document was produced have not significantly altered the situation. Notable developments include:

- (a) Microsoft has strengthened its position on first party content with the acquisition of Zenimax Media;
- (b) Amazon has increased third party content available on Luna with, for example, Ubisoft games now available.⁸⁷¹ Amazon has also published first party games Lost Ark and New World, although neither is currently available on Luna;⁸⁷²
- (c) Electronic Arts has not launched a cloud gaming service;
- (d) Google announced the winding down of Google Stadia in September 2022, with the service closing in January 2023;⁸⁷³
- (e) NVIDIA has increased third party content accessible on GFN (over 1,400 games available),⁸⁷⁴ and has developed cloud infrastructure utilising NVIDIA's GPUs,⁸⁷⁵ and
- (f) SIE has [REDACTED].⁸⁷⁶

8.185 Another Microsoft draft internal document [REDACTED], finding that [REDACTED]. [REDACTED]. [REDACTED]. [REDACTED].⁸⁷⁷ Our view is that both of these disadvantages are being addressed through [REDACTED]. Microsoft submitted that this document had not been finalised and was not used as the basis for any decisions by Microsoft's Gaming Leadership Team.

8.186 An internal document from early 2021 notes that Microsoft is [REDACTED].⁸⁷⁸ [REDACTED]. [REDACTED]. [REDACTED]. [REDACTED]. As noted above, however, Microsoft's [REDACTED].

8.187 In another document from 2020 comparing [REDACTED].⁸⁷⁹

⁸⁷¹ 'Ubisoft+ Now Available on Amazon Luna', accessed by the CMA on 7 December 2022.

⁸⁷² 'Amazon Games', accessed by the CMA on 7 December 2022.

⁸⁷³ 'A message about Stadia and our long term streaming strategy', accessed by the CMA on 7 December 2022.

⁸⁷⁴ 'Games available on NVIDIA GeForce NOW', accessed by the CMA on 7 December 2022.

⁸⁷⁵ [REDACTED] response to the CMA's RFI.

⁸⁷⁶ [REDACTED] response to the CMA's RFI.

⁸⁷⁷ Microsoft Internal Document.

⁸⁷⁸ Microsoft's Internal Document.

⁸⁷⁹ Microsoft Internal Document.

8.188 Another internal document from early 2021 focusing on game development in the Xbox ecosystem highlights [REDACTED]. [REDACTED].⁸⁸⁰

- *Third party evidence*

8.189 Internal documents from one competitor [REDACTED]. A document from August 2020 describes [REDACTED]. [REDACTED]. The same document notes that [REDACTED].⁸⁸¹ Another document from the same competitor describes Microsoft as [REDACTED] of the group of listed competitors [REDACTED].⁸⁸²

8.190 Another competitor [REDACTED] described Microsoft as having a unique advantage in the expected transition to cloud gaming due to its capabilities across a range of products and services needed for gaming but noted the advantages of others. Microsoft's advantages included the Windows OS, its leadership in consoles, the game developers and publishers it has acquired, and its cloud infrastructure business.⁸⁸³ In comparison it described Sony as having strength only in content. Amazon was described as having a huge advantage through its cloud infrastructure network but lacking in content. NVIDIA was noted to compete by making rapid technological innovations, and constantly adding cutting-edge technology to its world-class GPU hardware and software but relies on others for access to content.

8.191 Industry market reports also described Microsoft's strong position. One report stated that Microsoft's strengths across most of cloud gaming's value chain mean it is much better positioned to succeed than other game companies.⁸⁸⁴ Another third-party report described Microsoft as best positioned for subscription services generally, and for cloud gaming specifically as in-house cloud infrastructure is expected to provide a critical advantage, and a large first-party content library will help the platform scale up faster and with better marginal economic benefits.⁸⁸⁵

Provisional conclusion on Microsoft's potential strengths in cloud gaming

8.192 The evidence suggests that Microsoft has a multi-product ecosystem that places it in a very strong position relative to most or all rivals in the growing market for cloud gaming services.

⁸⁸⁰ Microsoft Internal Document.

⁸⁸¹ [REDACTED] Internal Document.

⁸⁸² [REDACTED] Internal Document.

⁸⁸³ [REDACTED] response to the CMA's RFI.

⁸⁸⁴ [REDACTED] Internal Document.

⁸⁸⁵ Microsoft Internal Document.

- 8.193 We provisionally believe that Windows alone is one of Microsoft's strongest advantages in this market. Most PC games are developed for Windows and not for other OSs, meaning that a cloud gaming service running on Windows can potentially access a vast library of content. Since Microsoft owns Windows, it has a significant cost advantage over rival cloud gaming providers, who face substantial licensing fees reported to be around [X] % of hourly streaming costs by some providers, and even up to [X] % by others.
- 8.194 Alternative OSs are available but have significant disadvantages. There is a high cost of porting and maintaining games from Windows to Linux. And the Proton compatibility layer that allows Windows games to be played on servers running Linux is not seen as sufficiently reliable to guarantee gameplay parity with cloud gaming services running Windows.
- 8.195 On cloud infrastructure, Microsoft's xCloud infrastructure is a cost-effective short-term solution that gives it some advantage over most competitors, with the possible exception of SIE [X]. In the longer term, [X], we believe Microsoft will be able to leverage the full extent of its Azure infrastructure for its cloud gaming service, providing it with a significant cost advantage over most rivals. Only Amazon and Google (the latter having shut down its cloud gaming service) have similar internal cloud infrastructure capabilities. Neither of them, however, have the combined cost advantage of Azure plus Windows, (or the content advantages of Microsoft) which places Microsoft in a uniquely advantageous position. The failure of Stadia demonstrates that even a strong cloud infrastructure network cannot necessarily compensate for the difficulties associated with using an alternative OS.
- 8.196 Finally, we consider Microsoft already has a strong position on first-party content compared to most competitors, except for SIE and Nintendo. We provisionally believe that content is particularly important to the success of a cloud gaming service, particularly considering Google's failure with Stadia, which our evidence suggests was caused at least in part by a lack of gaming content, which was connected to its use of a Linux OS.
- 8.197 We recognise that a few rival cloud gaming service providers also have multi-product ecosystems that could offer an advantage in cloud gaming services. Some have an in-house cloud gaming infrastructure (eg, Amazon and Google), others have access to first- and third-party content (eg, Sony), and others have different cost advantages, such as GPUs (eg, NVIDIA). Consistent with Microsoft's own internal documents, however, we believe that none of these rivals can match Microsoft's cost advantage arising from its ownership of Windows, Azure, and the Xbox gaming catalogue combined. As such, we provisionally believe that Microsoft is already in a uniquely strong position in the market for cloud gaming services.

8.198 In the next sections, we first consider the evidence on the extent to which Activision would have made its content available on cloud gaming platforms absent the Merger, then assess whether the Merger would give Microsoft the ability and incentive to use Activision's content to foreclose rivals, and consider what effect, if any, this would have on competition.

Availability of Activision's content on cloud gaming services

8.199 As of February 2023, Activision content has only been available to cloud gaming platforms to a limited extent, in particular during the beta testing phase of NVIDIA GFN and has since been removed.

8.200 In this section we consider evidence on the extent to which Activision would have made its content available on cloud gaming platforms absent the Merger. In particular, we consider:

- (a) The likely growth of cloud gaming services. The greater the growth, the greater we would expect Activision's incentive to be to make its content available on these services.
- (b) Whether latency is a challenge likely to be overcome in cloud gaming services within the next five years.
- (c) Additional evidence on Activision's incentives to make its content available on cloud gaming services, including from the Parties' internal documents and third party evidence.

Parties' views

8.201 Microsoft submitted that Activision content would not be available via cloud-based game streaming absent the Merger. It submitted that the evidence shows that Activision does not consider that cloud-based game streaming constitutes a good value proposition as it has major reservations about [REDACTED].⁸⁸⁶

8.202 Microsoft submitted that [REDACTED] due to [REDACTED], making it an unattractive title for cloud gaming. It further submitted that, for example, [REDACTED].⁸⁸⁷

⁸⁸⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.29.

⁸⁸⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 5.42-5.44.

Our assessment

Future growth of cloud gaming

8.203 In the previous sections, we provisionally found that cloud gaming will continue to grow and is likely to become profitable in the next five years.

8.204 Therefore, we consider that Activision's incentives to add its content to cloud gaming services are likely to increase. This will be the result of an increase in Activision's expected profits from cloud gaming—in turn resulting from increased overall audience—as the market grows.

8.205 We also received evidence that MGS-based cloud gaming platforms are [REDACTED]:

(a) One Microsoft internal document dated April 2022 shows that [REDACTED].⁸⁸⁸

(b) An internal document provided by a competitor [REDACTED] shows that [REDACTED].⁸⁸⁹
[REDACTED].⁸⁹⁰

8.206 We consider that this would further increase Activision's incentives to add content to those platforms, as [REDACTED] would not lead to any cannibalisation.

8.207 With respect to latency and technical quality of the games played on cloud gaming platforms, third party evidence suggests that these are not an issue or that any outstanding issues will be solved soon. In particular:

(a) A competitor [REDACTED] submitted that cloud gaming outperforms most PCs and consoles and is technologically viable for all game genres.⁸⁹¹

(b) Another competitor [REDACTED] submitted that most players on most internet connections can now have a great quality gaming experience via cloud gaming. It further submitted that there are many viable ways to make cloud gaming economically and technically viable in the current state.⁸⁹²

(c) Another competitor [REDACTED] submitted that there are challenges to be solved in cloud gaming with respect to latency. However, this competitor submitted that it is a matter of time before these challenges get solved. According to this competitor, [REDACTED] would solve the latency issue.⁸⁹³

⁸⁸⁸ Microsoft Internal Document.

⁸⁸⁹ [REDACTED], response to the CMA's s109 notice; [REDACTED].

⁸⁹⁰ [REDACTED].

⁸⁹¹ [REDACTED], submission to the CMA.

⁸⁹² [REDACTED] call note.

⁸⁹³ [REDACTED] call note.

8.208 Activision's incentives are also likely to be impacted by what other publishers do, any additional costs in porting games to cloud gaming platforms, how many incremental customers Activision could reach, and the extent of any financial incentives offered by cloud gaming providers.

Publishers' behaviour on adding content to cloud gaming

8.209 We first consider the approach that rival publishers have taken to placing games on cloud gaming services, especially those who offer games that could be similarly affected by latency issues. We consider that this is relevant evidence when assessing Activision's likely incentive to place games on cloud gaming services.

8.210 Rival publishers such as Ubisoft, Electronic Arts, and Epic Games already offer a range of games, including AAA titles and new releases, on cloud gaming services. They offer these games either on a standalone basis or through their own MGS bundles. In particular:

- (a) Electronic Arts currently offers EA Play as part of Game Pass Ultimate, which allows subscribers to stream several games via xCloud. It also offered a selection of games, such as the latest FIFA day and date, on Google Stadia (before it was shut down), and offers several games, including the latest Battlefield release (Battlefield 2042, an AAA fast-twitch game) on NVIDIA GFN.⁸⁹⁴
- (b) Ubisoft offers several games, including latest releases and day-and-date AAA titles on Amazon Luna through its Ubisoft+ subscription and through a BYOG feature.⁸⁹⁵ Ubisoft also has several games available on NVIDIA GFN – these include latest releases of AAA games such as Assassin's Creed Valhalla, Tom Clancy's Rainbow Six Extraction, and Far Cry 6.⁸⁹⁶
- (c) Epic Games offers several games, including Fortnite, on NVIDIA GFN.

8.211 Activision has also offered games – including CoD – on cloud gaming services in the past. It offered games on NVIDIA GFN when this was in the beta phase, before they were removed from the service.⁸⁹⁷ These were both

⁸⁹⁴ [Launch & Play EA SPORTS™ FIFA 23 in Seconds - Stadia \(google.com\)](#), accessed by the CMA on 17 January 2023; we note that Google announced it is closing down Google Stadia in January 2023, even though these games were still available to play in the meantime: [A message about Stadia and our long term streaming strategy \(blog.google\)](#); [Play Your Games Anywhere | GeForce NOW | NVIDIA](#), accessed by the CMA on 17 January 2023.

⁸⁹⁵ [Play Ubisoft Games You Own on Amazon Luna](#), accessed by the CMA on 17 January 2023.

⁸⁹⁶ [Play Your Games Anywhere | GeForce NOW | NVIDIA](#), accessed by the CMA on 17 January 2023.

⁸⁹⁷ [Activision Blizzard pulls all games from GeForce Now a week after launch | GamesIndustry.biz](#), accessed by the CMA on 2 February 2023, and [Nvidia says a 'misunderstanding' led to Activision's departure from GeForce Now | PC Gamer](#), accessed by the CMA on 2 February 2023.

back catalogue titles, and latest and day and date releases, including various CoD games.

8.212 This evidence shows that some rival publishers have been willing to make their latest AAA games available on third-party cloud gaming services both on a subscription (Amazon Luna) and BYOG (Amazon Luna and NVIDIA GFN) basis, and in some cases even on a day and date basis (on Google Stadia).

Activision's internal documents

Activision's general stance on cloud gaming

8.213 Although some Activision internal documents show that it has [REDACTED]. In particular:

- (a) One internal document dated May 2020 notes that [REDACTED].⁸⁹⁸
- (b) A document dated October 2020 provides an overview of cloud gaming in general and [REDACTED]. The document states that [REDACTED].⁸⁹⁹
- (c) The same document also explores different ways for Activision to [REDACTED]. The document explains that [REDACTED]. The document also notes that [REDACTED].⁹⁰⁰
- (d) The same document also sets out [REDACTED]. It explains that [REDACTED]. It adds that [REDACTED]. However, it notes that, in the long term, Activision should [REDACTED].⁹⁰¹
- (e) A document dated August 2021 notes that cloud gaming is emerging and will [REDACTED]. It adds that Activision should [REDACTED]. The same document expresses [REDACTED]. [REDACTED].⁹⁰²
- (f) In an email dated January 2022, [REDACTED]. The document considers [REDACTED].⁹⁰³

8.214 Activision submitted that these documents show that [REDACTED].⁹⁰⁴

8.215 However, we consider that Activision's stance on cloud gaming as emerging from these documents is positive overall, and that Activision has been proactive in exploring cloud gaming opportunities. We also note that none of the documents above raise any significant concerns about [REDACTED]. In fact, one Activision internal email by [REDACTED] from February 2021 states that [REDACTED]. The

⁸⁹⁸ Activision Internal Document.

⁸⁹⁹ Activision Internal Document.

⁹⁰⁰ Activision Internal Document.

⁹⁰¹ Activision Internal Document.

⁹⁰² Activision Internal Document.

⁹⁰³ Activision Internal Document.

⁹⁰⁴ Activision response to working paper.

document recognises that [REDACTED]. However, in the same document [REDACTED] states that [REDACTED].⁹⁰⁵

8.216 We now turn to internal documents relating to interactions with specific cloud gaming providers, including [REDACTED].

[REDACTED]

8.217 Activision's internal documents show that [REDACTED]. The documents show senior Activision employees were involved in these discussions. In particular:

- (a) One email from Activision to [REDACTED] dated December 2022 [REDACTED].⁹⁰⁶
- (b) A subsequent internal Activision email exchange from January 2022 shows that [REDACTED]. The document shows that he planned [REDACTED].⁹⁰⁷
- (c) Another internal Activision email exchange dated December 2022 discusses [REDACTED]. The document shows that Activision was considering [REDACTED].⁹⁰⁸
- (d) Another internal Activision email exchange shows that Activision was considering [REDACTED].⁹⁰⁹
- (e) Another internal Activision email exchange discusses the [REDACTED].⁹¹⁰

8.218 Activision internal documents also suggest that Activision senior management, including [REDACTED]. This was a follow-up to [REDACTED]. These documents show that Activision was [REDACTED].⁹¹¹ [REDACTED].

8.219 Activision submitted that it has had the opportunity to consider [REDACTED]. [REDACTED].⁹¹² However, Activision did not provide any evidence in support of these claims.

8.220 We consider that these documents show that Activision was [REDACTED] until shortly before the Merger was agreed. We consider that these documents are consistent with latency and other potential obstacles to streaming Activision content as being surmountable.

⁹⁰⁵ Activision Internal Document.

⁹⁰⁶ Activision Internal Document.

⁹⁰⁷ Activision Internal Document.

⁹⁰⁸ Activision Internal Document.

⁹⁰⁹ Activision Internal Document.

⁹¹⁰ Activision Internal Document.

⁹¹¹ Activision Internal Document, and Activision Internal Document.

⁹¹² Activision response to working paper.

[REDACTED]

- 8.221 The [REDACTED] between [REDACTED] presented in the MGS section above included [REDACTED] around [REDACTED].
- 8.222 The documents relating to these [REDACTED] appear to show that Activision [REDACTED]. From these documents, it appears that the main reasons for Activision's [REDACTED].
- 8.223 For example, one Activision document dated February 2021 [REDACTED].⁹¹³
- 8.224 In this respect, a Microsoft document dated May 2022 shows that [REDACTED]. The document notes that [REDACTED]. [REDACTED].⁹¹⁴
- 8.225 We consider that these documents show that Activision was [REDACTED]. They also show that even if Activision [REDACTED], Microsoft was [REDACTED].

Other providers

- 8.226 Activision's internal documents show [REDACTED].
- 8.227 One document dated April 2020 discusses a possible [REDACTED] with [REDACTED]. [REDACTED].⁹¹⁵ However, the document notes that Activision remained available for discussions, noting that it would hold a follow-up conversation with [REDACTED] to hear updates.⁹¹⁶
- 8.228 Another of Activision's internal documents dated March 2021 discusses a possible [REDACTED]. The document shows that Activision was cautious about a [REDACTED].⁹¹⁷
- 8.229 This evidence suggests that Activision was open to discussing and [REDACTED], subject to [REDACTED], even though the [REDACTED].

Third party evidence

- 8.230 We received evidence from several cloud gaming service providers on their discussions with Activision to bring Activision's content onto their platforms over the years up to 2022 before the Merger was announced.
- 8.231 [REDACTED] submitted that it had held discussions with Activision to [REDACTED]. It submitted that, from a technical perspective, it would be possible to do so.⁹¹⁸

⁹¹³ Activision Internal Document.

⁹¹⁴ Microsoft Internal Document.

⁹¹⁵ [REDACTED].

⁹¹⁶ Activision Internal Document.

⁹¹⁷ Activision Internal Document.

⁹¹⁸ [REDACTED] call note.

[REDACTED] engaged in discussions with Activision several times over the last few years, including after 2019, [REDACTED].⁹¹⁹ [REDACTED] impression was that Activision saw itself as a leading content provider that would ‘wait and see’ (ie, assess the success of [REDACTED] over time) before placing any content on [REDACTED].⁹²⁰

8.232 [REDACTED]. [REDACTED]. [REDACTED]. [REDACTED].⁹²¹

8.233 One Activision internal document dated February 2021 suggests that the reason why Activision was not interested in [REDACTED]. This document notes that [REDACTED]. The same document also states that the key barrier to [REDACTED].⁹²²

8.234 [REDACTED] submitted that it [REDACTED]. [REDACTED].⁹²³

Provisional view

8.235 On the basis of the evidence above, we consider that Activision would likely have made its games – including day and date releases – available on cloud gaming services in the next five years. We consider that this is more likely for cloud gaming services which do not have an MGS-based model, ie those with a B2P or BYOG model. However, we note that [REDACTED]. We consider that this will make it more attractive for Activision to add its games to those services.

8.236 The evidence suggests that technical obstacles such as latency have either been overcome already, or they would be overcome in the near future. Cloud gaming service providers explained that their respective platforms already offer gameplay on a par to consoles. We consider the fact that Activision allowed NVIDIA GFN to offer games – including CoD – on its streaming service during its beta testing phase also suggests that it’s technically possible to play these games on cloud gaming services.

8.237 We consider Activision’s interactions with cloud gaming service providers showed [REDACTED]. [REDACTED] rather than to any concerns with cloud gaming itself. Indeed, several of Activision’s internal documents suggested [REDACTED] in identifying a commercially viable way to distribute its games in this way. We consider it likely, in particular, that Activision would have [REDACTED] in the near future absent the Merger.

⁹¹⁹ [REDACTED] call note.

⁹²⁰ [REDACTED] call note.

⁹²¹ [REDACTED] call note.

⁹²² Activision Internal Document.

⁹²³ [REDACTED] response to the CMA’s RFI.

Ability to foreclose

- 8.238 In the TOH 1 chapter, we assessed whether the Merged Entity would have the ability to foreclose rivals in downstream console hardware and distribution. In doing that, we assessed both the upstream market power of Activision's content, and in particular CoD, to the console gaming market and its importance to PlayStation in particular.
- 8.239 We follow a similar framework here, by assessing whether the Merged Entity would have the ability to foreclose rivals in cloud gaming services. We do so by looking at Activision's market power upstream in game publishing and the importance of Activision's gaming content to the downstream cloud gaming services market.
- 8.240 In doing so, we focus on the whole of Activision catalogue across console and PC. That is because, while Microsoft's and SIE's cloud gaming platforms run on console-based OS (ie, Xbox OS and Orbis OS, respectively), all the other cloud gaming platforms run on a PC OS (predominantly Windows or Linux). We therefore consider the relevance of both console and PC games for cloud gaming platforms.⁹²⁴
- 8.241 As noted in the section above, Activision content is not available on cloud gaming services at the moment, but we consider it would be available within the next five years absent the Merger (and that this would include day and date releases). We also noted that this would be more likely the case for cloud gaming rivals which have or will have in the future a BYOG or B2P business model (either standalone or in combination with an MGS model) rather than just an MGS-based model. While we noted that older games may be added to MGS services, we consider that removing older games would not give the Merged Entity the ability to foreclose rivals, given that it is mostly new releases that drive downstream competition.
- 8.242 Moreover, in the market definition section we noted that we do not think that firms that are solely focused on bringing mobile-quality games to cloud are a meaningful constraint on cloud gaming services that provide console-quality and/or gaming PC-quality games (high-performance games). In the following sections, we focus on the latter, that is games that would not typically run natively on mobile. As it is evident from the sections below, high-performance

⁹²⁴ We do not focus on mobile content as no cloud gaming platform currently runs on a mobile OS. This means that the content offered on cloud gaming services (almost all of which is games designed for console and PC) is generally very different from mobile content (games designed specifically for mobile).

games are the focus of competition within cloud gaming services and therefore the focus of our competitive assessment.

8.243 In this section, we assess whether, absent the Merger, Activision's content would become an important input for cloud gaming as the market develops and this content becomes available. In doing so, we focus primarily on the importance of this content for rivals who have, or are likely to have, a BYOG or B2P business model. Given that the importance of Activision's content must be considered relative to the full range of available games (ie, any 'alternatives'), we consider in the same section the importance of Activision's content and alternative games.

Importance of Activision content

8.244 The Parties offer a range of games available on console and PC:

- (a) We have discussed the Parties' console games in the framework section of the previous theory of harm. They include CoD, Overwatch (another FPS game), and Diablo (an Action RPG / MMORPG). These games/franchises are all available on PC.
- (b) In addition, Activision publishes PC-only AAA game franchises including World of Warcraft (**WoW**) and Hearthstone (an online card game within the Warcraft franchise).

Parties' views

8.245 Microsoft submitted that Activision's content would not give it a material advantage in cloud gaming services or deter entry. According to Microsoft:

- (a) Activision's reluctance to make its content available through cloud gaming services has not deterred several companies from launching cloud gaming services (such as PS+, Amazon Luna and NVIDIA GFN) in recent years.⁹²⁵
- (b) Activision's share in console game publishing in 2021 was very low, at [0-10]% worldwide ([10-20]% in the UK).⁹²⁶ The Merged Entity's share of PC game publishing in 2021 was only [0-10]% worldwide ([10-20]% in the UK), meaning that a vast range of other content (accounting for over [80-90]% of PC game publishing revenue) would remain potentially available

⁹²⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.40 and Microsoft response to working papers.

⁹²⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.5; Parties, FMN.

for rival cloud gaming services to use.⁹²⁷ The Parties also noted that Steam is the market leader in PC distribution without having CoD.⁹²⁸

- (c) There are challenges to making CoD available for streaming. [REDACTED].⁹²⁹
- (d) Microsoft's experience with offering Fortnite on xCloud [REDACTED].⁹³⁰
- (e) Rival cloud gaming providers were also successfully developing their own first-party content, and that there was no suggestion that CoD was seen as "unique" or "special" amongst Windows PC games.⁹³¹
- (f) The primary use case for cloud gaming today relates to 'try before you buy' functionality, and there is no sense in which the addition of Activision content could offer any advantages in this regard compared to rivals.⁹³²

Our assessment

8.246 In relation to the Parties' submissions, we note the following:

- (a) The competitiveness of rivals can be harmed even without deterring them from entering the market altogether. This is particularly relevant for a growing market like cloud gaming, where foreclosure may have an adverse impact on the growth of rival cloud gaming services compared to the Merged Entity's.
- (b) Even if Activision's share were relatively small, it could still be significant in a market where a range of inputs (rather than a single input) is an important driver of competition. In markets where downstream customers buy only one product, a relatively small share of supply upstream suggests that there are likely to be several alternatives to the necessary input. Where downstream customers want to access a range of products, reducing the range (or quality of that range) that rivals are able to offer may have a significant impact on downstream competition. The impact is particularly severe where the content making up that relatively small share of supply is particularly important to that range/quality. This is the case for console, PC, or cloud gaming services, in which the range and quality of gaming content available is an important parameter of competition as discussed in Chapter 7. As the MAGs explain, when assessing the importance of an input, the CMA may have regard to the role an input

⁹²⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.41 and Parties, FMN.

⁹²⁸ Microsoft response to working papers.

⁹²⁹ Microsoft response to working papers.

⁹³⁰ Microsoft response to working papers.

⁹³¹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.41.

⁹³² Microsoft response to working papers.

plays as a determinant of product quality.⁹³³ In any event, a narrow focus on shares of supply in differentiated markets, such as game publishing fails to recognise that games with an apparently modest share may have a more significant role in shaping downstream competition.

- (c) We consider the evidence on Microsoft's experience with Fortnite on xCloud mobile is only relevant to running a cloud gaming service on mobile. We consider the main challenges in that case to be mobile specific driven by Microsoft not being able to use the app store to distribute its cloud gaming content, rather than in-game play quality aspects such as latency which would affect cloud gaming on all device types. Evidence from a competitor [REDACTED] suggests that [REDACTED].⁹³⁴ [REDACTED].⁹³⁵ This suggests that Microsoft's experience with Fortnite on xCloud mobile may not apply to other cloud gaming services.
- (d) As discussed in the market definition section, evidence from Microsoft suggests that consumers [REDACTED]. This suggests that the use-case for cloud gaming is not limited to the 'try before you buy' functionality, and that most customers choose cloud gaming for these other reasons.

8.247 We address the rest of the Parties' submissions by reference to the evidence below.

Microsoft internal documents

8.248 Evidence contained in the Parties' internal documents suggest that AAA content in general, and Activision's content more specifically, would be an important input to cloud gaming services in the counterfactual.

8.249 In relation to popular AAA content:

- (a) One email from [REDACTED] suggests that [REDACTED].⁹³⁶
- (b) One email from [REDACTED] discusses [REDACTED].⁹³⁷
- (c) One email from an external analyst to Microsoft dated [REDACTED].⁹³⁸ A third-party report also notes that [REDACTED]. [REDACTED].⁹³⁹

⁹³³ CMA129, paragraph 7.14(b).

⁹³⁴ [REDACTED] Internal Document.

⁹³⁵ [REDACTED] Internal Document.

⁹³⁶ Microsoft Internal Document.

⁹³⁷ Microsoft Internal Document, [REDACTED].

⁹³⁸ Microsoft Internal Document.

⁹³⁹ [REDACTED]

- (d) One Microsoft internal document dated [REDACTED]. The document also shows that [REDACTED].⁹⁴⁰

8.250 In relation to Activision content:

- (a) One report by an investment advisor from January 2021 received by Microsoft assesses investment opportunities in Activision, Electronic Arts, and Take-Two. The document states that ‘Activision Blizzard is the best-positioned company in our coverage space with regard to broader gaming industry trends. The company’s broad and diverse portfolio of fully-owned intellectual property across multiple platforms allows Activision Blizzard to capitalize on industry trends’. The document also states that Activision’s IP is a ‘must-have for any broad gaming library service, allowing them to command advantageous terms’.⁹⁴¹
- (b) One internal Microsoft document dated [REDACTED]. The document suggests that [REDACTED].⁹⁴²
- (c) An Activision internal document dated December 2021 also reports that NVIDIA claimed it was expecting around [REDACTED] NVIDIA GFN MAUs to play [REDACTED].⁹⁴³ This would have been equivalent to around [REDACTED]% to [REDACTED]% of NVIDIA GFN MAUs at the time.⁹⁴⁴

Third party evidence

8.251 Cloud gaming service competitors also highlighted the critical importance of content, particularly AAA titles, to cloud gaming services. In particular:

- (a) A competitor [REDACTED] submitted that [REDACTED] Google decided to close Stadia down.⁹⁴⁵ This competitor [REDACTED] also submitted that for it content represents around [REDACTED] % of the total cost of its cloud gaming service. It also submitted that a cloud gaming platform needs a sufficient number of top-tier AAA titles from leading game developers and publishers to attract and maintain a bigger user base.⁹⁴⁶

⁹⁴⁰ Microsoft Internal Document.

⁹⁴¹ Microsoft Internal Document.

⁹⁴² Microsoft Internal Document.

⁹⁴³ Activision Internal Document.

⁹⁴⁴ [REDACTED]

⁹⁴⁵ [REDACTED] call note.

⁹⁴⁶ [REDACTED] response to the CMA’s RFI.

- (b) Another competitor [REDACTED] submitted that Google Stadia was not successful because they did not have enough content, which was a result of running their cloud gaming service on Linux, rather than Windows OS.⁹⁴⁷
- (c) Another competitor [REDACTED] submitted that the success of gaming services (including cloud gaming) is critically driven by the quality of content.⁹⁴⁸

8.252 These views are supported by competitors' internal documents:

- (a) An internal document from a competitor [REDACTED].⁹⁴⁹
- (b) Another document from that competitor [REDACTED].⁹⁵⁰
- (c) Another document from that competitor [REDACTED].⁹⁵¹
- (d) An internal document from another competitor [REDACTED] dated October 2021 attributes [REDACTED].⁹⁵²
- (e) Another document from that competitor [REDACTED] dated April 2021 states that having enough content is critical to 'land the content flywheel'.⁹⁵³

8.253 Competitors highlighted the importance of Activision's content, in particular, for cloud gaming services:

- (a) One competitor [REDACTED] described Activision games as 'must-have' for its cloud gaming service with 'no meaningful substitute'.⁹⁵⁴ The same competitor stated that some gamers will not switch from CoD to anything else because of their investment of 'time, money, and friends into the franchise'.⁹⁵⁵
- (b) Another competitor [REDACTED] submitted that *CoD: Modern Warfare's* presence on its cloud gaming platform would 'have a material effect' on the players that its platform could acquire.⁹⁵⁶
- (c) Another competitor [REDACTED] submitted that the failure of Google Stadia shows the importance of CoD compared to other gaming franchises, and that CoD's role in attracting consumers to platforms is not directly proportionate to engagement alone. This competitor submitted that

⁹⁴⁷ [REDACTED] call note.

⁹⁴⁸ [REDACTED] response to the CMA's RFI.

⁹⁴⁹ [REDACTED] response to the CMA's section 109 notice.

⁹⁵⁰ [REDACTED] response to the CMA's section 109 notice.

⁹⁵¹ [REDACTED] response to the CMA's section 109 notice.

⁹⁵² [REDACTED] response to the CMA's RFI.

⁹⁵³ [REDACTED] response to the CMA's RFI.

⁹⁵⁴ [REDACTED] response to the CMA's RFI.

⁹⁵⁵ [REDACTED] response to the CMA's RFI.

⁹⁵⁶ [REDACTED] call note.

Google Stadia did in fact have a reasonable catalogue of games, including successful franchises such as FIFA, Assassin’s Creed and NBA 2K, which accounted for at least [REDACTED]% of PlayStation engagement in 2021. It further submitted that, despite having these games, Google Stadia did not have CoD, and that this prevented Google Stadia from reaching a meaningful number of MAUs.⁹⁵⁷

8.254 These views are supported by competitors’ internal documents, which shows that Activision content is expected to be particularly important relative to the alternatives in the counterfactual:

(a) One internal document from a competitor [REDACTED] dated October 2019 shows that this competitor has targeted deals with publishers/franchises such as: EA, Activision, Roblox and Fortnite. The same document described Activision as having a ‘critical IP portfolio’.⁹⁵⁸ Another document from this competitor dated December 2019 described Activision as a leading game publisher and this competitor’s number one target for content acquisition at that time.⁹⁵⁹

(b) Internal documents from another competitor [REDACTED]. [REDACTED].⁹⁶⁰

(c) Two other documents from this competitor [REDACTED]. [REDACTED]. [REDACTED]. [REDACTED].⁹⁶¹

(d) Internal documents from a competitor [REDACTED]. [REDACTED]. [REDACTED].⁹⁶²

8.255 We also received data from a competitor [REDACTED] on what it described as the ‘great success’ of Activision games on this competitor’s cloud gaming service during the time in which the service was in a testing phase.⁹⁶³ Activision complemented this evidence by submitting documents on how many unique users of this competitor’s [REDACTED] service were playing Activision’s games during the testing phase.⁹⁶⁴ This evidence suggests that:

(a) On the one hand, [REDACTED].

(b) On the other hand, [REDACTED].

⁹⁵⁷ [REDACTED] submission to the CMA.

⁹⁵⁸ [REDACTED] response to the CMA’s RFI.

⁹⁵⁹ [REDACTED] response to the CMA’s RFI.

⁹⁶⁰ [REDACTED] response to the CMA’s section 109 notice.

⁹⁶¹ [REDACTED] response to the CMA’s section 109 notice [REDACTED].

⁹⁶² [REDACTED] response to CMA’s RFI dated [REDACTED] and CMA analysis.

⁹⁶³ [REDACTED] response to CMA’s RFI dated [REDACTED] and CMA analysis.

⁹⁶⁴ Activision Internal Document, and Activision Internal Document.

8.256 We note that there are several limitations with the data and analysis above, including that:

- (a) Users from the testing phase may not be representative of current [REDACTED] users. For example, access during the testing phase was free and so it may overstate F2P games.⁹⁶⁵ It's unclear whether this would over- or underestimate the importance of Activision content.
- (b) Similarly, gamers might have decided not to invest in an expensive game like CoD in order to use it on [REDACTED], given there was no certainty the service would have continued after the testing phase. This is consistent with the data, which shows that [REDACTED].⁹⁶⁶ This would likely underestimate the importance of Activision content.
- (c) [REDACTED]. [REDACTED].⁹⁶⁷ However, [REDACTED]. This would likely underestimate the importance of Activision content.
- (d) The testing phase of the service likely contained fewer games than the full offering [REDACTED] in the counterfactual. This would likely overestimate the importance of Activision content.

8.257 As such, we consider we should place only limited weight on this data and analysis as it is only relevant for the testing phase usage [REDACTED]. As the caveat above shows, it is also not clear whether this data would overestimate or underestimate the actual importance of Activision content to [REDACTED].

8.258 We consider that the data presented above on the most requested games on [REDACTED], as well as estimates on the MAUs that *CoD: Warzone* would have on the service are more reliable estimates as they are not subject to the caveats above.

Evidence from console and PC gaming

8.259 In theory, the preferences of cloud gaming customers may be different from console or PC gaming customers. The reason is these are different services which may cater to different types of customers or customer needs.

8.260 In practice, we consider customers' preferences across console and PC gaming to be a good starting point to understand customers' preferences in the developing cloud gaming services market. This is because the main purpose of cloud gaming services is to achieve parity in terms of gameplay

⁹⁶⁵ [REDACTED] response to the CMA's RFI.

⁹⁶⁶ [REDACTED] response to the CMA's RFI and CMA analysis, [REDACTED].

⁹⁶⁷ [REDACTED] response to the CMA's RFI and CMA analysis, [REDACTED].

with consoles as well as gaming PCs, without being tied to a specific piece of hardware. Therefore, we consider that evidence from console and PC gaming is relevant to assess whether Activision content would be an important input to cloud gaming services in the counterfactual.

- 8.261 With respect to console, we noted in the previous theory of harm that a significant proportion of console gamers have a strong preference for CoD. We also consider Activision's console games, and in particular CoD, to be important to shape competition between console gaming services. We have provisionally found that CoD, in particular, is important to PlayStation, Xbox's closest rival in console gaming, in terms of technical specifications, target audience, and gaming catalogue.
- 8.262 With respect to PC, we note that the number of games available is much larger than on consoles. Whilst the Parties' internal documents suggest that CoD and WoW (which is PC-only) are among the most played games on PC, CoD is less prominent on PC than it is on console. These documents also suggest that there is a higher number of games which reach a similar or greater level of engagement to CoD on PC relative to console. They also suggest that shooters and Multiplayer Online Battle Arena (**MOBA**) games are particularly popular genres on PC. In particular:
- (a) A Microsoft internal document from 2021 looks at the top PC games played by various categories of PC gamers, [REDACTED]. The document shows that [REDACTED]. The document also shows that [REDACTED]. [REDACTED].
 - (b) This document also shows that [REDACTED].⁹⁶⁸
 - (c) The same document also shows that [REDACTED].⁹⁶⁹
 - (d) One Activision internal document dated February 2022 shows that both CoD titles and WoW [REDACTED]. In particular, [REDACTED], respectively whilst [REDACTED] in 2021. WoW [REDACTED] in 2020 and [REDACTED] in 2021. The other games which featured in the [REDACTED] list in 2020 were (in ranking order): [REDACTED]. In the 2021 list, the other games were (in ranking order): [REDACTED].⁹⁷⁰
 - (e) One Microsoft document from 2020 shows that *CoD: Modern Warfare* was [REDACTED] by PC gaming-hours in 2020 worldwide, preceded by [REDACTED]. When looking at the [REDACTED], *CoD: Modern Warfare* ranked [REDACTED] by PC gaming-hours in 2020 worldwide with a [REDACTED]% share of gaming-hours, whilst WoW ranked [REDACTED] with a [REDACTED]% share. Other Activision games in the list were

⁹⁶⁸ Microsoft Internal Document; [REDACTED].

⁹⁶⁹ Microsoft Internal Document. [REDACTED].

⁹⁷⁰ Activision Internal Document.

Overwatch ([redacted] position, [redacted]% share), and WoW Classic ([redacted] position, [redacted]% share). The remaining games in the list were (in ranking order): [redacted].⁹⁷¹ The document also shows that there are [redacted] in the composition of the top PC games list. For example, [redacted].⁹⁷²

(f) One Activision document shows that on PC, Activision Blizzard games achieved a total of [redacted] average MAUs in 2020, corresponding to [redacted] of the total MAUs on Steam in the same year.⁹⁷³

8.263 In relation to the document discussed in (a)-(c) above, Microsoft submitted that this document provides many examples of popular titles across multiple genres, and it shows the broad range of content which is of interest to PC gamers, which is much broader than the shooter genre.⁹⁷⁴

8.264 We also reviewed evidence from the latest Newzoo report (Newzoo is a third party provider of video games and gamer data) published on 21 December 2022. The report shows that CoD had a strong performance in 2022 across PC and console (Xbox and PlayStation). In particular, the report shows that two CoD games (*Modern Warfare 2/ Warzone 2* and *Modern Warfare/ Warzone*) were the fourth and fifth largest in terms of MAUs across PC and console (Xbox and PlayStation) in 2022, as based on Newzoo estimates.⁹⁷⁵

8.265 These documents points to significant regional variations across games on PC – the composition and rankings of the top PC games/genres vary significantly by geography, indicating that there are likely regional variations in consumer demand, especially between Western countries and the rest of the world. As noted in the market definition section, we take account of any regional or UK-specific differences where relevant. In this respect, these documents suggest that Activision content, in particular CoD and WoW, are substantially more important in the Western countries (including the UK) than in the rest of the world when it comes to PC games.

Provisional view

8.266 Based on the Parties' internal documents and third party evidence specific to cloud gaming, we provisionally consider that Activision content, in particular CoD, would be an important input to cloud gaming services in the

⁹⁷¹ Microsoft Internal Document.

⁹⁷² Microsoft Internal Document.

⁹⁷³ Activision Internal Document; in 2020, Activision games were only available on PC through Activision's own PC storefront Battle.Net.

⁹⁷⁴ Microsoft response to working papers.

⁹⁷⁵ [The Games Market in 2022: The Year in Numbers | Newzoo](#), accessed by the CMA on 16 January 2023; China and India are excluded from these estimates.

counterfactual. Based on the same evidence, we also consider that any alternatives of the same scale and to CoD would be limited.

- 8.267 We consider that this is supported by evidence from console and to some extent PC gaming, which we assessed given their close links with cloud gaming. On console, we provisionally found in TOH 1 that CoD would be an important input and any alternatives of the same scale and engagement to CoD are limited. On PC, the evidence indicates that CoD and WoW are among the most played games on PC particularly in Western countries (including the UK), although it also suggests that CoD is less prominent on PC than it is on console – as suggested by the higher number of games which reach a similar or greater level of engagement to CoD on PC relative to console.
- 8.268 Overall, we provisionally consider that Activision content, in particular CoD and WoW, would be an important input to cloud gaming services in the counterfactual. It also indicates that any alternatives would not be a sufficiently good replacement for Activision content, especially CoD and WoW. In particular, we consider that any alternatives would not be enough to offset any loss of Activision content by cloud gaming rivals, nor to compensate for the reduction in range and choice for customers of those rivals.
- 8.269 This is particularly relevant in a nascent market like cloud gaming, wherein economies of scale and network effects may play a significant role in determining the success of a service, as discussed above. In turn, any harm to cloud gaming rivals' competitive strength is likely to be self-reinforcing and may hinder these rivals from scaling quickly enough, which is especially important to compete successfully when network effects play a role.
- 8.270 In the previous sections we also considered that multi-homing might be stronger in cloud gaming than in console in the counterfactual, given the lower switching costs. Multi-homing might in principle reduce the ability to foreclose in cloud gaming if customers already use multiple platforms, eg to access exclusive content. However, the evidence on multi-homing specific to cloud gaming was mixed, mainly because the market is still developing. Furthermore, any foreclosure might prevent the emergence of multi-homing in the counterfactual, especially if such foreclosure prevented rival cloud gaming services from reaching sufficient critical mass that would allow them to succeed.
- 8.271 Therefore, as cloud gaming rivals are still negotiating to attract the larger publishers to their platforms in order to be successful, we consider that this is likely to be a crucial time. In such a moment for the cloud gaming market, we provisionally consider that not having access to Activision, and particularly

CoD titles as a result of foreclosure would have even more potential to significantly reduce the chance of these cloud gaming services to succeed.

Provisional view on Ability

8.272 We provisionally consider that, in the counterfactual:

- (a) Activision content, in particular CoD and WoW would be a particularly important input to cloud gaming services;
- (b) Any alternatives are likely not to be sufficient to offset the loss incurred to cloud gaming rivals by foreclosure of Activision content, nor to compensate for the reduction in range and choice for customers of those rivals;
- (c) Multi-homing is unlikely to limit ability to foreclose in cloud gaming. In fact foreclosure could negatively impact the emergence of multi-homing itself in the future.

8.273 Therefore, we provisionally conclude that the Merged Entity has the ability to foreclose rivals in the cloud gaming market using Activision content, particularly CoD and WoW.

Incentive to foreclose

8.274 In this section, we assess whether the Merged Entity would have the incentive to use Activision's content to foreclose downstream cloud gaming competitors. These rivals will include NVIDIA, Amazon Luna, and potential new entrants [✂].

8.275 The Merged Entity would have the incentive to engage in foreclosure strategies if the benefits of doing so exceed the costs.⁹⁷⁶ In assessing what constitutes a benefit or a cost, we consider not only the immediate financial implications of a foreclosure strategy, but also the longer-term consequences (the latter reflecting possible strategic costs and benefits that manifest over a longer time horizon or affect different parts of the business).

8.276 In this case, given that cloud gaming is a developing market, we would expect to place more weight on the long-run strategic objectives of the Merged Entity. As set out in the MAGs, 'in complex and dynamic markets, firms may not focus on short term margins but may pursue other objectives to maximise their long-run profitability, such as 'eliminating a possible long-term threat,

⁹⁷⁶ CMA129, paragraph 7.16

increasing the stickiness of existing customers, positioning themselves strongly in high-growth markets, gaining customers to obtain direct or indirect network effects, obtaining access to customer data or enabling cross-selling within a broader ecosystem'.⁹⁷⁷

8.277 The evidence that we use to assess these strategic objectives is primarily qualitative. As set out in the MAGs, 'the CMA may undertake more extensive quantitative analysis in simple markets with high quality data but focus on a qualitative assessment in complex and dynamic markets, where firms' current positions and margins may not be a good guide to the future, and strategic considerations may play a greater role.'⁹⁷⁸ Given that cloud gaming is still in its infancy, we do not believe that a quantitative analysis of short-run gains and losses from foreclosure would be informative.

8.278 As such, we have focused our analysis on two types of evidence: (i) Microsoft's past behaviour regarding first-party content on rival cloud gaming platforms, and (ii) Microsoft's business strategy as set out in its internal documents. As noted in the MAGs, the purpose of the incentives analysis is to predict the merged entity's behaviour, and it may be possible to understand this directly from its past conduct and business strategy.⁹⁷⁹

8.279 We consider the evidence on Microsoft's current and potential strengths in cloud gaming to be relevant for the assessment of the incentives to foreclose. As per the MAGs, the 'gain in downstream sales' resulting from foreclosure 'will be greater if the merged entity has a more successful downstream offering'.⁹⁸⁰ Therefore, other things equal, the more successful Microsoft is in cloud gaming (now and in the future), the greater the incentives to foreclose cloud gaming rivals.

Parties' views

8.280 Microsoft submitted that it does [REDACTED]. It expects downloads to continue to dominate the market, and it does not expect cloud gaming to replace native mobile games purchased through mobile app stores.⁹⁸¹

8.281 Microsoft submitted that the [REDACTED].⁹⁸² In particular, Microsoft submitted that it has [REDACTED].⁹⁸³

⁹⁷⁷ CMA129, paragraph 7.19(e).

⁹⁷⁸ CMA129, paragraph 7.18.

⁹⁷⁹ CMA129, paragraph 7.19(a).

⁹⁸⁰ CMA129, paragraph 7.19(b).

⁹⁸¹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.49.

⁹⁸² Microsoft response to working papers.

⁹⁸³ Microsoft response to working papers.

8.282 Microsoft also submitted that the possibility that cloud gaming might become profitable in the long term is insufficient to find, on a balance of probability standard, that it could have an incentive to foreclose in the next five years. It also submitted that the CMA must first be confident that any such foreclosure strategy would be profitable.⁹⁸⁴

8.283 Further Microsoft submitted that demand for cloud gaming has [redacted], and that it's not in Microsoft's interest to harm the consumer experience of a rival cloud gaming provider.⁹⁸⁵

Our assessment

8.284 As discussed above, we provisionally believe that no cloud gaming rival can match Microsoft's cost advantage arising from its ownership of Windows, Azure, and the Xbox gaming catalogue combined. As such, we provisionally believe that Microsoft is already in a uniquely strong position in the market for cloud gaming services.

8.285 Our global market shares estimates presented above support that Microsoft already holds a strong position in cloud gaming. These estimates show that Microsoft's share increased from [20-30]% in 2021 to [60-70]% in 2022, and that, in 2022, it had [redacted] as many average MAUs as the next biggest service, NVIDIA GFN.

8.286 In the remainder of this section, we consider Microsoft's past behaviour in making games available to rival cloud gaming platforms, ie whether it has (i) placed recent first-party games on rival cloud platforms and (ii) taken games off rival cloud platforms when it has acquired a publisher (in particular, Zenimax). We also consider Microsoft's internal documents setting out its business strategy in cloud gaming.

Past behaviour

8.287 Microsoft submitted that it has no policy against including first-party games in rival multi-game subscription or cloud gaming services.⁹⁸⁶ It submitted that its titles were available on PS+ and Stadia.⁹⁸⁷ In particular, it submitted that Rage 2, Wolfenstein: Youngblood, Doom 64, Doom and Doom Eternal were

⁹⁸⁴ Microsoft response to working papers.

⁹⁸⁵ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 5.49.

⁹⁸⁶ Microsoft response to the CMA's RFI.

⁹⁸⁷ Microsoft response to working papers.

available on Google Stadia, and that Elder Scrolls V: Skyrim Special Edition is available on PlayStation Plus Extra and Premium.⁹⁸⁸

8.288 Microsoft also submitted a list of a further 23 games that it stated were available on PS+.⁹⁸⁹ We understand, however, that the only games on this list available on Sony's cloud gaming service are published by Bethesda.⁹⁹⁰

8.289 To assess the extent to which Microsoft makes its AAA games (ie those more comparable to CoD) available on rival cloud gaming platforms, we have looked at a list of Microsoft's biggest games and franchises,⁹⁹¹ excluding Bethesda games (which we discuss further below).⁹⁹² Of seven games and franchises on this list, six were available on xCloud through Game Pass Ultimate (only [X] was not available on xCloud).⁹⁹³ When looking at rival cloud gaming platforms, however, we have found that none of these games were available.

8.290 We have also looked at Microsoft's past behaviour in relation to Bethesda's games. We identified five major Bethesda game franchises (Doom, Elder Scrolls, Fallout, Rage and Wolfenstein). The latest titles in all franchises are or were available on a rival cloud gaming platform (PS+ or Stadia). All except two of these titles were released and available on the cloud platform prior to Microsoft's acquisition of Bethesda.⁹⁹⁴ The titles released after the acquisition (notably Deathloop and Ghostwire) are not available on PS+ cloud as SIE's cloud offerings run on PS4 servers and these new titles were released on PS5 and do not offer backwards compatibility.

⁹⁸⁸ Microsoft response to working papers. Elder Scrolls V: Skyrim Special Edition is available on PlayStation cloud through PlayStation Plus Premium membership.

⁹⁸⁹ The games listed were: Brink, Deathloop, Dishonoured, Doom (2016), Fallout 3, Fallout 4, Fallout 76, Fallout New Vegas, Hunted, Hunted The Demons Forge, Prey, Rage, Rage 2, Rogue Warrior, The Elder Scrolls IV Oblivion, The Elder Scrolls Online, The Elder Scrolls V Skyrim, The Evil Within, The Evil Within 2, Wet, Wolfenstein II: The New Colossus, Wolfenstein: The New Order, and Wolfenstein: The Old Blood. See Microsoft response to the CMA's RFI.

⁹⁹⁰ In addition, some of these Bethesda games were available on SIE's cloud gaming service in the past, but no longer are (such as Dishonoured, Rage 2, the Evil Within, The Evil Within 2, Wet, Wolfenstein II: The New Colossus, and Wolfenstein: The Old Blood).

⁹⁹¹ We combined a list of games from the [Xbox Game Studios website](#), accessed by the CMA on 17 January 2023, (which are highlighted as 'some of the biggest franchises in history') and Microsoft's top games and franchises by revenue in 2021. Parties Internal Document. Excluding the Bethesda games, these were: [X].

⁹⁹² We look at Bethesda games separately because Microsoft has only taken ownership of Bethesda since March 2021 and so there may have been contractual obligations in place between Bethesda and other cloud gaming platforms prior to the acquisition ([Officially Welcoming Bethesda to Team Xbox - Xbox Wire](#), accessed by the CMA on 31 January 2023).

⁹⁹³ [Age of Empires 2 and 4 will be released on xCloud](#), accessed by the CMA on 31/01/2023.

⁹⁹⁴ Fallout 76 was added to PlayStation cloud in October 2021 (following its release in October 2018) and Elder Scrolls V: Skyrim Special Edition was added to PlayStation cloud in November 2022 (following its release in October 2016).

8.291 The evidence shows, therefore, that Microsoft has made very few of its first-party games available on rival cloud gaming platforms but has not removed some older Bethesda titles from Google Stadia and PS+.

Internal documents discussing Bethesda games on GFN

8.292 We have also considered internal documentary evidence in relation to the previous acquisition of Zenimax (which includes the publisher Bethesda). Bethesda had two games (Wolfenstein: Young Blood and Quake 2 RTX) on NVIDIA GFN at the time of Microsoft's acquisition of Zenimax. Following the acquisition, a Microsoft internal document shows [REDACTED]:

- (a) In an internal email in March 2021 to [REDACTED] notes that [REDACTED].⁹⁹⁵
- (b) In the same email chain, [REDACTED] replies to [REDACTED] suggesting they [REDACTED]. [REDACTED].⁹⁹⁶
- (c) Ultimately Microsoft decides to remove these games from GFN. In another email, [REDACTED] confirms that he has the 'OK' from [REDACTED] to give [REDACTED]. In this email thread, when discussing whether Microsoft should [REDACTED].⁹⁹⁷

8.293 Microsoft submitted that it had a consistent policy not to allow a provider to stream its games without a license.⁹⁹⁸ Microsoft also submitted that while the Xbox Cloud Gaming team did not object to continuing to support these games on NVIDIA GFN, Microsoft ultimately removed the titles in 2021 because no valid licensing agreement was in place.⁹⁹⁹ Microsoft submitted that [REDACTED].¹⁰⁰⁰

8.294 Microsoft also submitted that one of these two titles, Wolfenstein: Young Blood, continued to remain on Google Stadia, which is also a competitor to Xbox Cloud Gaming, as a valid licence agreement was in place.¹⁰⁰¹

8.295 We consider that Microsoft did not provide convincing evidence to show the full motives behind Microsoft's decision to remove Wolfenstein: Young Blood and Quake 2 RTX from NVIDIA GFN.

8.296 Most importantly, Microsoft's submissions do not address the fact that a Microsoft senior employee [REDACTED]. In any case, we consider that these motives ([REDACTED] licensing) are not mutually exclusive and [REDACTED] are likely to have contributed to Microsoft's decision to remove the two Bethesda games.

⁹⁹⁵ [REDACTED] See Microsoft Internal Document.

⁹⁹⁶ [REDACTED] See Microsoft Internal Document.

⁹⁹⁷ Microsoft Internal Document.

⁹⁹⁸ Microsoft response to the CMA's RFI.

⁹⁹⁹ Microsoft response to the CMA's RFI.

¹⁰⁰⁰ [REDACTED] Microsoft response to the CMA's RFI.

¹⁰⁰¹ Microsoft response to the CMA's RFI.

Provisional conclusion on the incentive to foreclose cloud gaming rivals

- 8.297 As set out above, we provisionally believe that cloud gaming will continue to grow and be profitable in the next five years. In a nascent market, particularly those characterised by some element of direct and/or indirect network effects, success is highly uncertain for new entrants, and there is a greater opportunity (and stronger incentive) for incumbents to engage in foreclosure strategies in a bid to acquire market power.
- 8.298 In this case, we provisionally believe Microsoft is already one of the strongest incumbents in cloud gaming services as evidenced by current market shares, and its multi-product ecosystem means that it is well positioned to compete in this market as it continues to grow and develop. As set out above in our TOH 2 framework, Microsoft will have a stronger incentive to foreclose given its uniquely strong position in cloud gaming.
- 8.299 Microsoft's internal documents reveal a strategy of not making its first-party titles available on rival cloud gaming platforms. [REDACTED].
- 8.300 With few exceptions (ie some Bethesda titles on some platforms), Microsoft's past behaviour shows that it has not made current AAA first-party content available on any cloud gaming service other than Game Pass Ultimate.
- 8.301 As such, we provisionally find that Microsoft has the incentive to foreclose cloud gaming rivals, including NVIDIA GFN, Amazon Luna, and potential new entrants [REDACTED].

Effect of foreclosure

Introduction

- 8.302 This section considers the effect on competition in the market for cloud gaming services of a foreclosure strategy by the Merged Entity using Activision content. It considers whether any such strategy would result in substantial harm to overall competition in the downstream market.¹⁰⁰² To assess this, we have considered the strength of Microsoft's cloud gaming service (including as a result of Microsoft's broader ecosystem set out above) and the strength of other cloud gaming service providers.
- 8.303 We have also considered barriers to entry and expansion. This includes the possibility of new providers entering the market, and the impact that a foreclosure strategy may have on their incentive to enter in the first place. Any

¹⁰⁰² [CMA129](#), paragraph 7.20.

negative effect on competition is likely to be larger if there are barriers to entry and expansion or if network effects are strong, as these may reinforce the Merged Entity's strength following a foreclosure strategy.¹⁰⁰³ Competition concerns may be particularly likely to arise if one of the merger firms has a degree of pre-existing market power in the downstream market, and already faced limited competitive constraints pre-merger.¹⁰⁰⁴

Strength of different cloud gaming services

8.304 Understanding the strength of Microsoft and rival cloud gaming providers is important for two related reasons. First, it shows how concentrated the market is and how much competition Microsoft faces in cloud gaming. Second, it shows the likely impact that a foreclosure strategy could have in the competitive strength of rivals.

Parties' views

8.305 Microsoft submitted that it does not hold a uniquely strong position in cloud gaming services and noted that rivals have their own strengths and assets. As described above, Microsoft submitted that it does not use Azure or the Windows OS in its cloud gaming services today. It submitted that while Microsoft and other providers such as Sony and Amazon have first-party content, NVIDIA has become the leading cloud gaming provider without having any first-party content. It also submitted that Microsoft is behind both Amazon and Google on cloud infrastructure.¹⁰⁰⁵

8.306 Microsoft submitted that its [redacted] is evident from the fact that it has a [redacted].¹⁰⁰⁶

8.307 As discussed in detail above, Microsoft also submitted that cloud gaming reduces network effects as the cost of switching or multi-homing is less than for console gaming.

Our assessment

Internal documents

8.308 Internal documents describing Microsoft's competitors in cloud gaming and their respective strengths are discussed above in the section on Microsoft's potential strengths in cloud gaming. They show that Microsoft monitors and

¹⁰⁰³ CMA129, paragraph 7.20.

¹⁰⁰⁴ CMA129, paragraph 7.21.

¹⁰⁰⁵ Microsoft, response to working papers; and Microsoft, response to working papers.

¹⁰⁰⁶ Microsoft, response to working papers.

benchmarks itself primarily against [REDACTED], although it also considers the potential competition from a wider group including [REDACTED].

Shares of supply

8.309 As described above, the market for cloud gaming services is currently concentrated with the top three competitors having over 90% share of supply. It is, however, a developing market, and there has been recent entry and expansion by rivals. For example, Amazon Luna is currently only available in the US [REDACTED].

Evidence considered in Microsoft's potential strengths in cloud gaming section

8.310 As set out in the MAGs, 'Competition concerns may be particularly likely to arise if one of the merger firms has a degree of pre-existing market power in the downstream market, and already faced limited competitive constraints pre-merger.'¹⁰⁰⁷

8.311 As described in detail above, we provisionally believe that Microsoft already has a strong position in cloud gaming services as a result of its multi-product ecosystem. This includes its strengths across PC Oses (Windows), cloud infrastructure (Azure), and first-party content (Xbox). Whilst rivals have their own strengths, for example Amazon on cloud infrastructure, NVIDIA on GPU technology, and SIE on first-party content, Microsoft appears to be in the strongest position as a result of its combined strength in these three key inputs for cloud gaming services.

8.312 Before considering the effect of a potential foreclosure strategy by the Merged Entity on the market for cloud gaming services, we consider the evidence we have seen on entry and expansion in the market.

Entry and expansion plans

8.313 The evolution of the cloud gaming services market is relevant to our assessment. Given our assessment is forward looking, entry and expansion plans absent the merger are helpful in assessing the extent to which competitive constraints are changing in this market, and also whether any foreclosure strategy is likely to have an effect on the market. We have set out the evidence we gathered on third parties' entry and expansion plans below.

¹⁰⁰⁷ CMA129, paragraph 7.21

- *Amazon Luna*

8.314 [REDACTED].¹⁰⁰⁸

8.315 Internal documents indicate that [REDACTED].¹⁰⁰⁹ [REDACTED].¹⁰¹⁰

8.316 [REDACTED].¹⁰¹¹

- *NVIDIA*

8.317 NVIDIA submitted that it continues to invest in technological innovations and adding the latest technology to its cloud gaming hardware and software to improve its service.¹⁰¹² An internal document from NVIDIA shows [REDACTED].¹⁰¹³

- *SIE*

8.318 An internal document from January 2021 describes [REDACTED]. It shows that [REDACTED]. It also shows [REDACTED]. It shows [REDACTED].¹⁰¹⁴

- *Nintendo*

8.319 Nintendo currently has a limited cloud gaming offer but in our view its history in gaming and strong first party content suggests it could expand. It noted that its [REDACTED].¹⁰¹⁵

- [REDACTED]

8.320 [REDACTED].¹⁰¹⁶ [REDACTED].¹⁰¹⁷

- *Others*

8.321 Other possible new entrants to cloud gaming services include Valve, Tencent, [REDACTED]. Valve and [REDACTED] have not indicated current plans to enter or expand in cloud gaming.¹⁰¹⁸ Tencent also stated that it does not have any specific expansion plans in cloud gaming.¹⁰¹⁹ However, an internal document from

¹⁰⁰⁸ [REDACTED], response to the CMA's s109 notice.

¹⁰⁰⁹ [REDACTED] Internal Document.

¹⁰¹⁰ [REDACTED] Internal Document; [REDACTED].

¹⁰¹¹ [REDACTED] Internal Document.

¹⁰¹² [REDACTED] response to the CMA's RFI.

¹⁰¹³ [REDACTED] Internal Document.

¹⁰¹⁴ [REDACTED] Internal Document.

¹⁰¹⁵ [REDACTED] response to the CMA's RFI.

¹⁰¹⁶ [REDACTED] call note.

¹⁰¹⁷ [REDACTED] call note.

¹⁰¹⁸ Valve call note; [REDACTED] response to the CMA's RFI.

¹⁰¹⁹ Tencent, response to the CMA's RFI.

one potential competitor highlights the potential of these firms and how they might enter into cloud gaming.¹⁰²⁰

Provisional conclusion on strength of different cloud gaming services

- 8.322 We provisionally believe that Microsoft already has a strong position in cloud gaming services. This can be seen from its current share of the market, and its short- and long-term advantages derived from its multi-product ecosystem. We consider we have seen ample evidence of Microsoft's strengths in its own documents, and in the assessment of third parties.
- 8.323 The other key competitors appear to be Amazon, SIE and NVIDIA, [REDACTED]. Whilst these competitors have their own respective strengths, none appears to have the full breadth of capabilities important to cloud gaming.
- 8.324 Amazon is yet to launch in the UK, and all other countries except the US. It currently has a very low market share worldwide [REDACTED]. It is one of the few players with a strong existing cloud infrastructure. It lacks, however, first-party content or access to Windows on equal terms as Microsoft.
- 8.325 NVIDIA has a relatively high current market share and has a reasonably strong position in cloud infrastructure as a leading GPU manufacturer. Although it does not have any first party content, it has been able to make a large library of third party content available.
- 8.326 SIE currently only offers cloud gaming as a way to play older games from its catalogue. It therefore does not currently offer a strong constraint, although this may change in the future if it expands its cloud gaming offer. It is likely to be weaker than other competitors such as Microsoft, Amazon, and NVIDIA on cloud infrastructure, as it does not have a large cloud infrastructure network or advantages in building one.
- 8.327 [REDACTED] may also become a significant constraint [REDACTED].
- 8.328 We provisionally consider that cloud gaming therefore appears likely to be a relatively concentrated market in the UK, with Microsoft enjoying a leading position and several advantages over its rivals. In a concentrated market, harm to rivals is likely to constitute harm to competition, unless there is some way to avoid that harm.¹⁰²¹

¹⁰²⁰ [REDACTED] Internal Document.

¹⁰²¹ CMA129, paragraph 7.21.

8.329 In the section below, we assess barriers to entry and expansion in the market for cloud gaming.

Barriers to entry and expansion

8.330 This section considers the evidence on barriers to entry and expansion in cloud gaming. To the extent that barriers to entry and expansion increase the likelihood of a concentrated market for cloud gaming services, this increases the effect on competition of the foreclosure of any one individual potential competitor or group of potential competitors.

Parties' views

8.331 Microsoft submitted that cloud gaming reduces barriers to entry into gaming. It stated that, as cloud gaming is device agnostic and does not require the consumer to invest in hardware, gamers can easily switch and multi-home across services, reducing network effects. It submitted that evidence on the video streaming market suggests that many consumers multi-home thereby reducing barriers to entry as users are not 'captive' and are willing to try new services.¹⁰²²

Our assessment

Third party views

8.332 One competitor [REDACTED] stated that barriers to entry in cloud gaming were high, with the two most significant barriers being sourcing cloud infrastructure and acquiring content. It stated that for its service cloud infrastructure represents around [REDACTED]% of the total cost of providing a cloud gaming service. It stated that content represents around [REDACTED]% of the total cost, with the average price for licensing a AAA game being 10 million USD, often structured as minimum guarantees. It added that delivering high-quality content requires building a relationship of trust with game developers so that a platform can provide a comprehensive library to consumers. It also noted that as consolidation increases within the gaming sector, it will be difficult for any new or nascent cross cloud gaming service to establish a compelling library of content.¹⁰²³

8.333 Another competitor [REDACTED] submitted that new entrants face several challenges in providing a cloud gaming service, highlighting cloud infrastructure, OS licence costs, and acquiring content as the most significant. First, it stated that

¹⁰²² Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraphs 5.51-5.52.

¹⁰²³ [REDACTED] response to the CMA's RFI.

Microsoft and Amazon can leverage their large cloud infrastructure networks to gain a cost advantage over any other competitor. It added that a competitor using public cloud infrastructure eg Azure, AWS, or GCP, would face challenges with high costs, and not having control over maintaining and updating the infrastructure. Second, it stated that the requirement to pay a licence fee for Windows, or use a less suitable alternative OS, was another barrier. Third, it stated that cloud gaming services faced a challenge in obtaining 'top games' for their service. Whilst it noted that technical barriers to adding content to a service could be low, there were barriers on the business side in the form of exclusivity arrangements and requests for large upfront payments.¹⁰²⁴

8.334 Internal documents from another competitor [REDACTED]. They describe [REDACTED]. It also describes [REDACTED]. It further describes the [REDACTED].¹⁰²⁵

8.335 Another competitor [REDACTED] submitted that barriers to entry in the wider gaming market (not restricted to cloud gaming) are generally low. It stated that the emergence of different business models in gaming had given developers more options to monetise and bring content to market in a way that makes sense to them and consumers. It submitted that this was reflected by the recent entry of competitors such as Amazon Luna, Netflix Games, Apple Arcade, and Epic Game Store. However, we note that of these, only Amazon has launched a cloud gaming service. This competitor also stated that restrictions that Apple imposes on gaming (including cloud gaming services) on its mobile OS have hindered the growth of cloud gaming.¹⁰²⁶

Provisional conclusion on barriers to entry and expansion

8.336 We provisionally believe that the evidence shows that there are significant barriers to entry and expansion in cloud gaming, including the cost of cloud infrastructure, the cost of acquiring content, and the need for economies of scale in order to drive down costs. This increases the potential effect on competition of the foreclosure by an individual competitor. If entry and expansion barriers are already high, then any significant entry is harder. In these circumstances foreclosing any likely entrant will have a greater effect on competition.

8.337 The possibility of entry or expansion from game publishers to offset the possible loss of Activision content is considered in Chapter 9.

¹⁰²⁴ [REDACTED] response to the CMA's RFI.

¹⁰²⁵ [REDACTED] Internal Document.

¹⁰²⁶ [REDACTED] response to the CMA's RFI.

Provisional conclusion on effect

- 8.338 The evidence assessed on the effect of input foreclosure using Activision content on competition in cloud gaming services suggests that Microsoft has significant strengths in the provision of cloud gaming services through its ownership of Windows and Xbox Oss, its cloud infrastructure capabilities, and its existing first party content. Whilst a few providers also have some capabilities relevant to cloud gaming, none is as strong across all important areas for cloud gaming as Microsoft.
- 8.339 Cloud gaming services are in their infancy, so current market shares do not provide the most accurate indication of the relevant strengths of different competitors. Nonetheless, current shares of supply also point in the direction of Microsoft being in a leading position in the market.
- 8.340 As for possible entry and expansion, we note that several providers are attempting or planning to enter or expand in cloud gaming. In particular [REDACTED], while new entrants [REDACTED] are still at early stages and it is not clear what impact their entry may have. This suggests that, absent the Merger, the market may be poised to benefit from more competition.
- 8.341 There appear to be significant barriers to entry in the market, particularly the cost of cloud infrastructure, the cost of acquiring content, and the need to grow sufficiently to benefit from economies of scale. There are also material direct and indirect network effects, although these may be mitigated to some extent by the possibility of multi-homing.
- 8.342 The evidence therefore suggests that the market is relatively concentrated at present. The biggest constraints to Microsoft come from NVIDIA, and Amazon [REDACTED] (we consider that SIE's disadvantages on cloud infrastructure mean that it is unlikely to present an adequate constraint in the longer term), both of which are significantly weaker than Microsoft.
- 8.343 Given the small number of existing competitors and Microsoft's strength, loss of competition from any of these competitors would be concerning. Having provisionally concluded that, absent the Merger, Activision's content is likely to become available on cloud gaming services using a B2P or BYOG model, we believe that the immediate effects would be felt most strongly by players such as NVIDIA, Amazon [REDACTED]. We have also provisionally concluded in the section on ability to foreclose, that in the counterfactual, Activision content would be a particularly important input to cloud gaming services, and that any alternatives are likely not to be sufficient to offset the loss incurred to cloud gaming rivals by foreclosure of Activision content. We therefore provisionally believe that Microsoft using Activision's content to foreclose rivals in cloud

gaming services would result in substantial harm to overall competition in this market.

Provisional conclusion on TOH2

8.344 We therefore provisionally conclude that the Merger may be expected to result in a substantial lessening of competition in the market for the supply of cloud gaming services in the UK.

9. Countervailing factors

- 9.1 The CMA's MAGs indicate that, in some instances, there may be countervailing factors that prevent or mitigate any SLC arising from a merger.¹⁰²⁷
- 9.2 There are two main countervailing factors:
- (a) the entry and/or expansion of third parties in reaction to the effects of a merger; or
 - (b) merger efficiencies.¹⁰²⁸

Entry and expansion in game publishing

- 9.3 Entry, or expansion of existing firms, in response to a merger can mitigate the initial effect of an acquisition on competition, and in some cases may mean that there is no SLC. In assessing whether entry or expansion might prevent a substantial lessening of competition, the CMA considers whether such entry or expansion would be timely, likely and sufficient to prevent an SLC.¹⁰²⁹
- 9.4 In terms of timeliness, the CMA's guidelines indicate that the CMA will look for entry to occur within two years; the CMA has discretion however to consider a longer timeframe, and typically will do so where the theories of harm under consideration are 'dynamic'.¹⁰³⁰ In assessing likelihood, we consider whether there are barriers to entry or expansion in game publishing services on console and/or cloud gaming services.
- 9.5 In chapters 7 and 8, we provisionally found that the Merger would lead to an SLC in the downstream markets for gaming consoles and cloud gaming. For entry or expansion to be sufficient, it would need to prevent the adverse effects we have provisionally identified in the supply of gaming consoles and in cloud gaming services.
- 9.6 Therefore, we assess in this chapter whether any entry into the upstream publishing market would enable SIE or rival cloud gaming platforms to appropriately mitigate the impact of the Merger. The significance of assessing entry into the upstream game publishing is in terms of the impact it would have on the downstream markets—particularly in filling a unique gap considering CoD's distinct role in the portfolio of games offered by the Merged

¹⁰²⁷ CMA129, March 2021, paragraph 8.1.

¹⁰²⁸ CMA129, March 2021, paragraph 8.1.

¹⁰²⁹ CMA129, March 2021, paragraph 8.31.

¹⁰³⁰ CMA129, March 2021, paragraph 8.33.

Entity's downstream rivals (assessed by size and scale of game, level of differentiation etc).

- 9.7 We have focused our assessment on barriers to entry and expansion, as this will impact the timeliness, likelihood and sufficiency of entry or expansion, as well as any evidence of possible entry or expansion.

Introduction

- 9.8 We set out two points of principle below before we assess the evidence on entry and expansion in game publishing.
- 9.9 First, we discuss what the availability of alternative games for gamers to switch to, both on console and on cloud gaming platforms, would mean in the event of any foreclosure strategy.
- 9.10 As set out in Chapter 7, Activision's games are already available on Xbox and PlayStation, and removing them from one console, or not making them available on equal terms, would reduce that console's competitive offering. Consumers who stay on that console and are no longer able to play Activision's games could nonetheless be harmed by the reduction in game range. As we provisionally concluded in Chapter 7, that reduction would likely be significant from the point of view of consumers, particularly given the importance of Activision content (especially CoD). In that context, consumers that respond to foreclosure by remaining on the same platform and switching to other less preferable games may still have been harmed, and the platform itself may still be expected to exert a weaker competitive constraint.¹⁰³¹
- 9.11 This discussion is also relevant in the assessment of the likelihood of countervailing entry and expansion: in a foreclosure scenario, at least some customers would be expected to remain on the foreclosed rival platform but switch to playing alternative, less preferable, games. While this might cause rivals to 'expand' in the sense that those rivals' games would start to account for a larger share of gameplay time than they did pre-Merger, it does not necessarily follow that such expansion would have prevented a deterioration in the competitive offering of the host platform. For expansion by rivals to prevent an SLC, it would be necessary for those games to improve in quality, such that the reduction in the overall range of the foreclosed rivals' platforms would be sufficiently restored such that their competitive constraint would not be substantially reduced relative to the situation absent the Merger.

¹⁰³¹ In other words, consumers would no longer have access to their first-choice of game, and therefore would move to a game/games that they would have preferred less in the presence of CoD.

- 9.12 We note that the ‘expansion’ of a game could sometimes lead to an improvement in its quality, for example through increased scale and direct network effects (ie more players and therefore a better multiplayer experience). We consider this further below.
- 9.13 In the above context, we focus on evidence on the likelihood of entry and expansion that involves rival studios (including the platforms themselves) investing in introducing new games or improving existing games such that the reduction in range imposed on rival platforms would be likely to be reduced.
- 9.14 Second, we note that in our assessment of entry and expansion, the relevant question is not what rivals ‘could’ do. In some cases, a response to foreclosure may be theoretically possible, but would result in losses that may make that competitive response prohibitive. For example, if developing a rival game is sufficiently costly, it may be that it would be more profitable (or less loss-making) for a platform to accept that its competitive offering has been weakened than to attempt to develop a new franchise. This is particularly likely to be the case where the success of a new franchise would be highly uncertain – this leads the ‘expected’ or ‘probability-weighted’ returns to be lower. While some third party publishers could hypothetically see the absence of CoD from rival platforms as an opportunity, they may also see the absence of CoD as an opportunity to enjoy greater sales without incurring any of the additional costs necessary to improve their product, particularly to the extent an important competitor (like CoD) has been eliminated or degraded from the foreclosed platforms. Our focus in this assessment is on the scope for entry and expansion that is likely to happen, and we attach particular weight to evidence on plans and discussions following the announcement of the Merger.

Barriers to entry and expansion

Parties’ views

- 9.15 The Parties submitted that barriers to entry in the supply of console games in digital form are low, reflecting the availability of mature software development tools, such as game engines and audio and video middleware which make the game development process less burdensome. The Parties also submitted that it is increasingly easy to port games developed for PCs to consoles. These efficiencies allow for PC games to be adapted for consoles without the need to re-write the game from scratch.¹⁰³²

¹⁰³² Parties, FMN.

- 9.16 The Parties submitted that the cost of developing and publishing console games varies, depending on the type of game(s) being developed. They stated that the development and publishing of console games may involve material investments in terms of costs, resources and marketing, as they are normally content heavy and offer an advanced gaming experience in terms of graphics, music, available options, gameplay mechanics, scope and depth of the storyline.¹⁰³³ The Parties also noted that some games that were developed as low-budget and low-resource games have also proven to be strong competitors (such as Minecraft and PUBG).¹⁰³⁴
- 9.17 We note that the Parties' submissions mainly relate to game publishing on consoles, but we consider these arguments also in the assessment of publishing on cloud-gaming services where relevant.

Our assessment

Third party views

- 9.18 Third parties stated that it is difficult to develop an alternative to CoD because the costs and time taken to develop a game like CoD are significant. For example, one third party [redacted] submitted that AAA titles take a long time to develop and involve significant production costs.¹⁰³⁵ This third party submitted that other publishers were unlikely to match CoD's annual release schedule and Activision's expertise and stated that other companies developing a CoD rival would have higher costs because they cannot build upon existing CoD game frameworks and experience.¹⁰³⁶ The third-party also stated that other experienced game developers like EA, who already have an incentive to improve their offering to match CoD, have failed in rivalling CoD's level of success.¹⁰³⁷
- 9.19 Multiple third-party industry websites list CoD: Modern Warfare 2 as the second most expensive game ever made (\$250 million), outranked only by GTA (\$265 million).¹⁰³⁸ Other games on the list of most expensive games include Star Wars: The Old Republic, Final Fantasy VII, Destiny, etc. Other shooter games are ranked lower down on the list. For example, one website

¹⁰³³ Parties, FMN.

¹⁰³⁴ Parties, FMN.

¹⁰³⁵ [redacted] response to the CMA's RFI.

¹⁰³⁶ [redacted] submission to the CMA.

¹⁰³⁷ [redacted] submission to the CMA.

¹⁰³⁸ See, for example, ['The 15 Most Expensive Games Ever Made, Ranked'](#), accessed by the CMA on 23 January 2023; ['What Are Most Expensive Video Games'](#), accessed by the CMA on 23 January 2023; and ['What The Most Expensive Video Games Ever Made Are'](#), accessed by the CMA on 23 January 2023.

ranks Destiny 5th (\$140 million) and Halo 7th (\$120 million).¹⁰³⁹ Another website notes EA's Battlefield 4 cost \$100 million.¹⁰⁴⁰

Internal documents

9.20 The Parties' internal documents discuss the difficulty in replicating a franchise like CoD, around which demand coalesces due to network effects:

- (a) One Activision document noted that demand continues to coalesce around major franchises, with each of the top-10 grossing games worldwide in the previous year being an established franchise that had been active for a decade (out of which ATVE owns [REDACTED] franchises). The document also added that there are [REDACTED] in gaming, and highlights Activision's [REDACTED] and the '[REDACTED]'.¹⁰⁴¹ Whilst we note that two of Activision's franchises are mobile or PC games (ie Candy Crush and World of Warcraft), we consider the evidence still substantiates the difficulty in developing/publishing a large franchise.
- (b) One Microsoft internal document explains that [REDACTED], and that [REDACTED]. However, the document goes on to note that [REDACTED].¹⁰⁴²
- (c) An Activision presentation noted that 'while the concept of [REDACTED] franchises has long been seen across media and entertainment, gaming franchises enjoy attributes that are unique to the sector, including [REDACTED]'.¹⁰⁴³

9.21 Along with strong network effects, the Parties' internal documents analyse various other barriers to entry and expansion. One Activision document lists a range of factors that limit the threat from new entrants that attempt to build and sustain gaming franchises. It discusses the broad and deep capabilities required, especially as [REDACTED] becomes more critical to [REDACTED]; the fact that '[REDACTED]' given [REDACTED]; the [REDACTED] of game platforms requiring [REDACTED]; and challenges around [REDACTED].¹⁰⁴⁴ The document states that the durability of game franchises is driven by factors such as [REDACTED].¹⁰⁴⁵

9.22 Third party reports submitted by the Parties note that strong intellectual property make franchises successful and durable, with very few big successes being from new intellectual property:

¹⁰³⁹ 'The 15 Most Expensive Games Ever Made, Ranked', accessed by the CMA on 23 January 2023.

¹⁰⁴⁰ 'The 12 Most Expensive Games Ever Made & How Much It Cost To Make Them', accessed by the CMA on 23 January 2023.

¹⁰⁴¹ Activision Internal Document.

¹⁰⁴² Microsoft Internal Document.

¹⁰⁴³ Activision Internal Document.

¹⁰⁴⁴ Activision Internal Document.

¹⁰⁴⁵ Activision Internal Document.

(a) An analyst report prepared by a third party media and telecommunication research company noted that ‘franchises are everything’; with the biggest franchises in video games dominating the industry and with ‘longevity and relative strength that eclipse even the Hollywood analogue’. The report noted that these franchises can be built on owned and internally developed intellectual property, as is the case with most of Activision’s IP, or leverage others’ intellectual property, like Electronic Arts does with its respective sports franchises. The report stated that as the industry has evolved, the importance of franchises has steadily increased, as the biggest games year-to-year tend to come from established franchises. For example, of the top 20 best-selling games in the U.S. for 2020, only two could be labelled as new IP or unrelated to an existing franchise.¹⁰⁴⁶

9.23 We have also seen evidence to suggest that the current state of the gaming industry is driven by established franchises and their enduring brand loyalty:

(a) One Activision document noted that concerns over the gaming industry being [redacted] continue to [redacted] as established franchises [redacted]. The top-grossing game charts are dominated by established IP, with multiple factors driving the durability of game franchises. The document further noted that [redacted] as Activision grows [redacted].¹⁰⁴⁷

(b) An analyst report prepared by a third party media and telecommunication research company also noted that, over the past decade, ‘three mega-trends – digitization of distribution, in-game monetization, and franchise management – have transformed the video game business from what was a solid, albeit volatile, business, to what today is a very good, and much less volatile, business’. The document also notes that ‘today’s video game business is vastly better than the hit or miss driven industry of the past’.¹⁰⁴⁸ Whilst Activision submitted that this document was prepared by a third party research company, not Activision itself, we consider that we can place weight on this evidence given that the document’s purpose was to provide information to institutional or professional clients considering investing in the video game industry (and hence could be considered to have views reflective of commercial reality).¹⁰⁴⁹

¹⁰⁴⁶ Activision Internal Document.

¹⁰⁴⁷ Activision Internal Document.

¹⁰⁴⁸ Activision Internal Document.

¹⁰⁴⁹ Activision response to working paper.

Other evidence on barriers to entry and expansion

9.24 In this section, we first consider whether the presence of network effects at a game and/or platform level has an impact on the barriers to entry and expansion for games on PlayStation and cloud gaming services. Second, we consider the following additional barriers faced by a publisher to build a new game/franchise or reposition an existing game to make it better and more attractive to console and/or cloud gamers: (i) development costs; (ii) developer personnel; (iii) time taken for development; and (iv) other potential barriers such as existing content, brand awareness and the likelihood of success.

- *Network effects*

9.25 As evidenced above, we consider there are strong direct network effects prevalent in gaming, particularly for multi-player games. This means that multi-player games create higher switching costs than single-player games because groups of gamers (eg friends) will have to coordinate their switch to a different franchise if they want to keep playing together. This therefore increases barriers to entry and expansion for new games.

9.26 On the other hand, the presence of network effects at a platform-level implies that any hypothetical withdrawal or degradation of CoD on PlayStation may generate an opportunity for other games to capture some of the players not willing to switch away from PlayStation and increase their user base. The persistence of these network effects at a platform-level post-Merger would lower barriers to entry and expansion for new games.

9.27 Therefore, assessing the impact of network effects on any barriers to expansion would require a comparison of the strength of network effects at the platform level to those at a game-level. Whilst the Parties submitted that network effects at a platform level are diluted by the presence of cross-play for large multi-player games and instead exist at a game-level,¹⁰⁵⁰ we note that it is difficult to measure the effect of network effects on barriers to entry and expansion empirically. We consider network effects in conjunction with other barriers to entry in the assessment below.

¹⁰⁵⁰ Microsoft response to working papers.

- *Development costs*

9.28 Data from the Parties and third parties shows that CoD had significantly higher development costs than other games, including SIE's games and third-party publisher games (including shooters).

(a) Activision data showed that Activision spent more than \$[REDACTED] in development costs on the CoD franchise in 2021, with an annual development cost of \$[REDACTED] for each title. The annual development cost was similarly approximately \$[REDACTED] in 2020, and \$[REDACTED] in 2019.¹⁰⁵¹

(b) By comparison, [REDACTED] data on the development costs of four of its AAA games – [REDACTED] – indicates that each of these titles cost [REDACTED] to develop overall, with annual costs of [REDACTED].¹⁰⁵² Similarly, as evidenced above, the costs of other games and shooters have been lower than CoD as per game industry reports; for example, Battlefield 4, the game closest to CoD in terms of gameplay features, is reported to have cost \$100 million in total.¹⁰⁵³

9.29 As noted by the Parties, development costs vary significantly depending on various factors such as the type of game being created, the size and experience of the development team, the length of the game development process, whether or not the game is offered as an ongoing live service, the amount of marketing and promoting, as well as the distribution channels.¹⁰⁵⁴

9.30 We note that CoD has various features noted by the Parties above that lead to it having significantly higher development and ongoing maintenance costs than most other games, such as:

(a) **Multi-player game with complex storyline:** CoD is a large multiplayer game, with high graphical intensity and complex storylines that takes time and resources to develop. CoD is also offered as a live-service game.

(b) **Frequent (annual) releases:** Activision releases a CoD game every year. This contributes to CoD's success as it draws gamers to the franchise due to its familiarity.

¹⁰⁵¹ Parties Internal Document.

¹⁰⁵² [REDACTED] Internal Document'.

¹⁰⁵³ [The 12 Most Expensive Games Ever Made & How Much It Cost To Make Them](#)', accessed by the CMA on 23 January 2023.

¹⁰⁵⁴ Parties, FMN.

- (c) **Developers:** As evidenced further below, CoD has a large number of developers working on it to enable the frequent releases and offer the complex multi-player experience noted above.
- (d) **Multiple rotating studios:** Each release in the CoD franchises takes 3–5 years to develop given the complexity of the game and frequency of release. Activision has four rotating lead studios (Sledgehammer, Infinity Ward, Treyarch and Raven Software), each supported by several other studios. For example, more than 11 studios reportedly contributed to developing Call of Duty: Modern Warfare 2.¹⁰⁵⁵ Evidence from Activision showed that in the UK alone, [REDACTED] worked on ‘development, localization, and tech’ of CoD games.¹⁰⁵⁶
- (e) **Marketing and distribution:** CoD also has high marketing and promotional budgets relative to most other games to support its frequent releases, and is distributed through various channels.

9.31 The evidence above indicates that developing a multi-player franchise with a complex storyline and frequent releases such as CoD would require significantly high development and promotional budgets.

- *Developer personnel*

9.32 The Parties stated at the site visit and the Main Party Hearing that [REDACTED].¹⁰⁵⁷ The Parties’ and third parties’ data shows that CoD had more developers working on the game than most other titles, including Microsoft and Sony’s first party titles.

(a) Activision data shows that CoD utilised more than 2000 full-time employees (FTE) in 2021.¹⁰⁵⁸ Activision’s Annual Report states that, of its c. 9000 employees, over 3000 people are now working on the franchise.¹⁰⁵⁹

(b) By comparison, in 2021 Halo utilised [REDACTED], Minecraft [REDACTED] and Forza used [REDACTED] developers only, which included both FTE and external developers.¹⁰⁶⁰

¹⁰⁵⁵ ‘Call of Duty Leaker Claims 11 Studios are Working on Modern Warfare 2’, accessed by the CMA on 30 December 2022.

¹⁰⁵⁶ Activision site visit.

¹⁰⁵⁷ Activision, Main Party Hearing transcript.

¹⁰⁵⁸ Parties’ response to the CMA’s RFI.

¹⁰⁵⁹ [Activision Annual Report 2021](#), p2, accessed by the CMA on 30 January 2023.

¹⁰⁶⁰ Parties’ response to the CMA’s RFI.

(c) Four of [REDACTED] top first-party AAA titles by revenue from the past five years had a combined peak workforce of [REDACTED] FTEs.¹⁰⁶¹

9.33 We therefore consider that a new entrant or an existing publisher would require a significant number of developers to build a game that is equivalent to CoD.

- *Development time*

9.34 We also note that a large multiplayer game like CoD takes significant time to develop. Evidence submitted by third parties and from public sources indicates that large AAA games take about 3 to 5 years to develop.¹⁰⁶²

9.35 We note that similar to development costs above, the time taken to develop a game can vary substantially depending on the type of game, its gameplay features, budget, etc. However, as above, given CoD is a multi-player game with a complex storyline and extensive gameplay features, we are of the view that it takes longer to develop a game like CoD relative to many other games.

- *Content, brand awareness and likelihood of success*

9.36 The evidence above also indicates that, in addition to the costs, time and developer resources required to build a game like CoD, there are additional barriers to entry and expansion:

(a) **Existing content:** Internal documents and third-party views mentioned above indicate that strong ‘intellectual property’ (which we understand to mean content in this context) makes franchises successful and durable, with very few big successes being from entirely new content/franchises.

(b) **Brand awareness:** We further note that a large game such as CoD has a high level of gamer awareness and loyalty to the brand, which may be difficult to replicate for a new game. These barriers would be lower for existing games wanting to expand as they would already have an existing user base; however, the evidence in Chapter 7 shows that CoD’s closest alternatives are significantly behind CoD in terms of their consumer spend and gameplay time on PlayStation, and are likely to still face some barriers to expansion in terms of their existing user base.

¹⁰⁶¹ [REDACTED] Internal Document.

¹⁰⁶² See for example [How Long Does It Take To Develop a Video Game? \(geekygamingstuff.com\)](https://www.geekygamingstuff.com), accessed by the CMA on 27 January 2023.

(c) **Likelihood of success:** The evidence above also indicates that there is volatility in the gaming industry, which means that the probability of success is relatively low for a new game (or for the expansion of an existing small game). For example, as discussed in Chapter 7, our assessment of data submitted by the Parties shows that only [~~8~~] % of titles have made it to the top 25 games over the past five years.¹⁰⁶³ This implies that trying to emulate a game like CoD is very risky and poses an additional barrier to entry and expansion in game publishing.

9.37 Games like Fortnite and PUBG have been successful with lower development costs and no existing brand recognition. However, while successes such as these do emerge, Activision's success and importance has been durable over time. Whilst some publishers may enjoy significant success, individual examples of such success may not be sufficient to demonstrate that barriers to entry and expansion are 'low'.

Provisional conclusion on barriers to entry and expansion

9.38 The relevant question to our assessment here is whether new entry or expansion by rival games in response to the Merger will happen to such an extent that the impact of a withdrawal (or degradation) of Activision content from rival console and cloud competitors would be reduced to a level where any SLC is prevented or mitigated (relative to a scenario where Activision content, including CoD, continued to be available). It is in this context that we assessed barriers to entry and expansion. Based on the above evidence, our provisional view is that there are some significant barriers to entry and expansion pre-Merger in publishing a large, successful, and enduring franchise such as CoD (on console as well as on cloud gaming services), particularly in terms of budget and skilled employees. Moreover, established games have a competitive advantage relative to newly conceptualised games. While there are examples of successful AAA games that were developed with relatively low budget and in a short period of time (eg Fortnite, PUBG), we consider that this is not indicative of the barriers to entry and expansion for an exceptionally successful AAA game such as CoD more generally.

Recent entry or expansion and prospects of further entry and expansion

9.39 In this section, we consider whether there have been any examples of entry or expansion in the markets for game publishing on console and cloud-gaming services in recent years which may indicate whether this may also be likely post-Merger in the event of increasing price or worsening non-price terms to

¹⁰⁶³ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 3.43f.

customers and/or suppliers. We also consider the evidence relating to the prospects of entry or expansion following the Merger.

Parties' views

- 9.40 Microsoft submitted that there have been various tech and entertainment entrants in recent times in game publishing, such as Amazon (which has published two games in the top 10 most-played games on Steam—Lost Ark and New World); Warner Bros. Games (Lego, Mortal Combat, Harry Potter); Netflix and Facebook.¹⁰⁶⁴
- 9.41 Microsoft also submitted that there has been consistent entry and a reduction in concentration in game publishing over the past decade, as the industry has expanded and become fragmented. It submitted that academic research shows that, while the combined revenues of the 10 largest game publishers has grown from \$23 billion in 2002 to \$150 billion in 2021, their total market share in the global games industry has dropped from 90% to 57% over that same period.¹⁰⁶⁵ We however note that the article submitted by Microsoft to evidence this considers the whole video game industry rather than consoles or cloud gaming specifically, and that the article indicates that this growth is largely driven by digitalization that ‘managed to revitalise the PC market’ and the ‘popularisation of the smartphone’.¹⁰⁶⁶

Our assessment

Third party views

- 9.42 When we asked publishers of other games on PlayStation whether their strategy and incentives would change in the event that CoD were to be no longer available on PlayStation, publishers stated that their strategy would likely remain unchanged. For example, one publisher [X] told the CMA that it believes that its strategic incentives regarding video game development and publication would remain unchanged and that CoD no longer being available on PlayStation is ‘unlikely to materially affect the opportunities available to grow [their games’] user base.’¹⁰⁶⁷ Another publisher [X] stated that it does not believe that it would present them with a meaningful opportunity to grow and expand.¹⁰⁶⁸ We note, however, that the CEO of one rival publisher stated

¹⁰⁶⁴ Microsoft response to working papers.

¹⁰⁶⁵ Microsoft response to working papers.

¹⁰⁶⁶ Microsoft response to working papers.

¹⁰⁶⁷ [X] response to the CMA’s RFI.

¹⁰⁶⁸ [X] response to the CMA’s RFI.

that, if CoD were no longer available on certain platforms, it would provide a tremendous opportunity for their rival shooter franchise.¹⁰⁶⁹

9.43 We also asked SIE to provide internal documents that refer to or discuss plans, contingency plans, and/or strategies aimed at reacting to and/or reducing any perceived impact of the Merger.

(a) SIE emphasised the importance of CoD to PlayStation and the impact that losing it would have on PlayStation, [REDACTED]. SIE also submitted that if the Transaction were allowed to proceed, [REDACTED].¹⁰⁷⁰

(b) A review of SIE's internal documents was consistent with the above statements [REDACTED], albeit the CMA considers limited weight should be placed on this given these strategies and documents were developed in the context of the ongoing merger review. In any event, given the evidence set out above regarding the importance of CoD to PlayStation, we provisionally consider that SIE would not be able to effectively mitigate any SLC that arises as a result of the Merger through expansion.

Internal documents

9.44 The Parties' internal documents discuss the failure of large [REDACTED] companies previously not present in game publishing in building successful game software businesses.

(a) One Activision document notes how many new entrants in gaming, despite being '[REDACTED]', have failed over the years. For example, it discusses how:¹⁰⁷¹

(i) Between 2005 and 2016, [REDACTED], before exiting the game publishing business.

(ii) [REDACTED] in the category in 2014.

(iii) [REDACTED].

(b) Another Activision document notes that [REDACTED] continue to get bigger, and invest in gaming [REDACTED], while lacking [REDACTED]. The document cited examples of [REDACTED].¹⁰⁷²

¹⁰⁶⁹ 'Electronic Arts, Inc. (EA) Goldman Sachs Communacopia + Technology Conference Call Transcript' accessed by the CMA on 18 January 2023.

¹⁰⁷⁰ See, for instance, SIE response to the CMA's s109; SIE response to the CMA's s109; SIE response to the CMA's s109; SIE, follow-up responses to the CMA's s109.

¹⁰⁷¹ Activision Internal Document.

¹⁰⁷² Activision Internal Document.

- 9.45 While we note that the documents also discuss [REDACTED], we consider the evidence overall indicates the difficulty in creating high-quality successful content [REDACTED].

Provisional conclusion on recent entry of expansion and prospect of further entry or expansion

- 9.46 Overall, while there has been entry and expansion of games published on console and cloud-gaming services, we note that, with the exception of Fortnite, there are few games that (i) are at a similar size and scale to CoD; and (ii) are sufficiently undifferentiated from CoD that they do not affect the range of games available to console and cloud-gamers.
- 9.47 Additionally, we have not seen evidence to suggest that SIE or third party publishers would enter or expand by creating a new shooter game that can replace CoD.

Provisional conclusion on entry and expansion in game publishing

- 9.48 We have considered the timeliness, likelihood and sufficiency of any entry or expansion from existing players and third parties in game publishing on console and cloud gaming services, and the extent to which this could prevent or reduce the impact of any SLC from arising as a result of the Merger.
- (a) In relation to likelihood, the evidence above shows that it is unlikely that publishers would create a new game or expand an existing game that becomes sufficiently large and similar to CoD to mitigate the impact of any SLC in console or cloud gaming services; given the evidence on their plans to expand and the significant barriers to entry and expansion. Additionally, for consoles in particular, to the extent that Microsoft is unwilling to support a rival first person shooter to CoD, publishers would have a lower user base from which to recoup costs of development (ie potentially just PlayStation). This would further decrease likelihood of entry of expansion.
- (b) In relation to timeliness, entry or expansion in game publishing would need to occur in a short timeframe. Given the evidence above on the time taken to develop a franchise such as CoD, we consider it to be very unlikely that a game on the same scale as CoD would emerge in the near future, either on consoles or cloud gaming services.
- (c) In relation to sufficiency, we first note that it is not sufficient for other games to just “become larger” after foreclosure happens. Even if some of them accrue increased market share after CoD is not available on PlayStation, it does not mean that rivalry-enhancing expansion has taken

place: consumers may have still suffered an impact on choice of game that was previously available to them. The evidence shows that whilst it is likely that there will be new games that are developed, they are not likely to be on a similar scale as CoD and sufficiently undifferentiated from CoD such that the reduction in the range of games available to consumers on console and/or cloud-gaming services is mitigated.

9.49 Therefore, our provisional view is that it is not likely that entry or expansion of sufficient scale would occur in a timely manner in order to prevent or reduce the impact of any SLC from arising as a result of the Merger.

Efficiencies

9.50 Efficiencies arising from a merger may enhance rivalry with the result that the merger does not give rise to an SLC. In order for us to take efficiencies into account, they must:

- (a) enhance rivalry in the supply of those products where an SLC may otherwise arise;
- (b) be timely, likely and sufficient to prevent an SLC from arising;
- (c) be merger-specific; and
- (d) benefit customers in the UK.¹⁰⁷³

9.51 The MAGs make it clear that merger firms who do wish to make efficiency claims are encouraged to provide verifiable evidence to support their claims in line with the CMA's framework.¹⁰⁷⁴ The MAGs note that it is for the merger firms to demonstrate that the merger will result in efficiencies.¹⁰⁷⁵ In this case, the Parties have not yet made specific efficiency submissions on each of the cumulative conditions set out above. However, we have assessed the information provided to date by the Parties and other evidence available that could be viewed in terms of rivalry-enhancing efficiencies.

Parties' views

9.52 Microsoft submitted that the addition of Activision content to Game Pass will be beneficial for gamers. Microsoft noted that it had publicly stated that it plans to launch Activision games into Game Pass and that its intention is that future Activision releases, including CoD, will be made available on Game

¹⁰⁷³ CMA129, paragraph 8.8.

¹⁰⁷⁴ CMA129, paragraph 8.7.

¹⁰⁷⁵ CMA129, paragraph 8.15.

Pass on the day of release, similar to Microsoft's first-party content.¹⁰⁷⁶

Microsoft submitted that, absent the Merger, every consumer who wants to play CoD or another Activision title would need to purchase the game at full price,¹⁰⁷⁷ such that their availability on Game Pass is a clear benefit to gamers that would not exist absent the Transaction on any reasonable time horizon.¹⁰⁷⁸ Microsoft expressed these intentions regarding Game Pass as subject to Activision's existing contractual obligations.¹⁰⁷⁹

- 9.53 Microsoft submitted that adding a valuable piece of content to a bundle at a low price point is beneficial to gamers and drives further innovation and competition in the industry.¹⁰⁸⁰ Microsoft submitted that, in addition to being able to buy-to-play on their preferred console or PC, gamers will get the option of subscription payments via Game Pass on multiple devices including Xbox console, PC, mobile and certain smart TVs.¹⁰⁸¹
- 9.54 Microsoft further submitted that improvements in Game Pass could prompt Sony to improve its PS+ offering (for example through the addition of content and/or availability on a day and date basis) and that this is objectively welfare enhancing and beneficial for gamers.¹⁰⁸² Microsoft noted that if Sony chose to support PS+ with additional content day-and-date, the effect of drawing additional subscribers from its own player base would be significant, [redacted].¹⁰⁸³ Microsoft's view is that Sony chooses not to support PS+ with its best content day-and-date and instead seeks to protect a strategy where gamers do not have the option to access this content via subscription – instead preferring that gamers pay full price to access this content.¹⁰⁸⁴

Our assessment

Merger-specificity

- 9.55 In Chapter 7, we provisionally found that it was unlikely that Activision would make its most valuable games available on MGS services on the date of release. We also noted that the evidence suggests that Activision would likely place increasingly valuable parts of its gaming catalogue on MGS services as these services continue to grow.

¹⁰⁷⁶ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.10.

¹⁰⁷⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 1.8e.

¹⁰⁷⁸ Microsoft response to working papers.

¹⁰⁷⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.10.

¹⁰⁸⁰ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.12.

¹⁰⁸¹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.11.

¹⁰⁸² Microsoft response to working papers.

¹⁰⁸³ Microsoft response to working papers.

¹⁰⁸⁴ Microsoft response to working papers.

- 9.56 We therefore acknowledge that inclusion of Activision content in Game Pass on a ‘day and date’ basis is a potential benefit for gamers in the UK that would not arise absent the merger. This benefit would mean that gamers could access Activision content such as the most recent releases of CoD as part of Microsoft’s multi-game subscription bundle where, absent the Merger, only older games might have become available.

Timeliness

- 9.57 In Chapter 7, we considered the duration of the existing contract between Activision and SIE. We provisionally consider that the duration of this contract is sufficiently short that any impact on Microsoft’s ability to add Activision’s content to Game Pass would not prevent any efficiency from being timely.
- 9.58 We have not received any other evidence to suggest possible impacts on timeliness of any rivalry enhancing efficiency relating to Game Pass.

Likelihood

- 9.59 We also provisionally consider that based on Microsoft’s public statements, its stated rationale for the Merger, and its observed practice of including all first party games on Game Pass on a ‘day and date’ basis (including popular games such as Forza and Halo Infinite), it is likely that Microsoft will pursue a strategy of placing Activision’s content on Game Pass on a day-and-date basis post-merger.

Rivalry-enhancing/sufficiency

- 9.60 As noted in Chapter 7, we have provisionally found that the Merger is expected to give rise to an SLC in the supply of gaming consoles. We have provisionally found that buy-to-play distribution and multi-game subscription form part of this overall market. As a result, any efficiency arising as a result of the Merged Entity’s multi-game subscription strategy would potentially be capable of impacting our provisional SLC finding in relation to the supply of gaming consoles.
- 9.61 The MAGs explain that efficiencies need to enhance rivalry in a way that counteracts the effects on competition identified in the SLC assessment. The MAGs further note that efficiencies due to the merger must be likely to strengthen the ability and incentive of the merged entity to act pro-

competitively for the benefit of consumers.¹⁰⁸⁵ The greater the expected adverse effect of a merger, the greater the expected efficiencies must be.¹⁰⁸⁶

9.62 An efficiency benefit we have considered is whether an efficiency arises because Xbox gamers are provided with an alternative payment model for consuming games that are already available on Xbox on a buy-to-play basis.

9.63 Any efficiency benefit must be considered in the context of our provisional conclusion that the Merged Entity would have the ability and incentive to pursue a foreclosure strategy in the supply of gaming consoles, having an impact on the offering of Sony, Microsoft's closest competitor in that market, as well as in the supply of gaming consoles, where our provisional view is that Microsoft would have a significant position. In that context, we make the following observations:

(a) We have provisionally concluded, consistent with submissions made by the Parties, that MGS services and buy-to-play distribution are sufficiently substitutable from a demand-side perspective to be included in the same market for console gaming. While we recognise some differentiation between those services, the inclusion of a new mode of payment as a means to consume a product that is already available on Xbox on a buy-to-play basis is likely to be of much lesser materiality than the total foreclosure of that same content on rival services. In addition, the latter foreclosure would apply to the B2P channel, which is larger than the subscription model. By way of illustration using data from console gaming: Microsoft submitted that, although MGS services were growing, the vast majority of gaming revenues would still come from gamers purchasing individual games.¹⁰⁸⁷ According to this data, subscription is unlikely to be more than [X]% of gamer spend by Xbox players in 2030.¹⁰⁸⁸ Where Xbox gains the ability to offer access to CoD via a new payment model to this subset of gamers, this would be unlikely to offset the lack of ability of PlayStation to offer CoD on any basis.

(b) Given there remains differentiation between MGS services and buy-to-play services for console gaming, consumers with a preference for buy-to-play services will benefit to a limited extent, if not at all, from the addition of Activision content to MGS services. A range of evidence set out in our

¹⁰⁸⁵ CMA129, paragraph 8.9.

¹⁰⁸⁶ CMA129, paragraph 8.14.

¹⁰⁸⁷ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.9.

¹⁰⁸⁸ Parties, FMN, 5 July 2022; Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.24 and Microsoft Internal Document; Because of the way the estimates are constructed, the share of subscription spend in Microsoft data does not include in-game transactions within XGP, which are instead counted as 'other transactions'. Therefore, the [X]% share underestimates the actual share of subscription spend by Xbox players.

assessment of the future growth of MGS services in chapter 7 (see paragraphs 7.88 to 7.102) suggests that buy-to-play is set to remain the majority manner through which games will be distributed (and some evidence suggests it will account for a large majority).

- 9.64 Microsoft also submitted that the Game Pass catalogue is offered for a lower price than the collective price of games it contains.¹⁰⁸⁹ However, it is unclear to what extent adding content to Game Pass amounts to an overall price reduction and, where it does, to what extent such a price reduction would be significant. While the nominal price of a subscription is clearly lower in a single month than purchasing a game outright, those prices are not comparable – gamers may play games for many months (increasing the total cost of playing any particular game via subscription), and on termination of the subscription, the player loses the right to play the game. It is therefore unclear whether there would be an effective price reduction to consumers (taking into account the value of continued ownership), and how significant this would be when considered across the full base of Xbox users (not just gamers that already subscribe to Game Pass).
- 9.65 In addition, while we accept that it is likely that Call of Duty and other Activision content would be added to Game Pass, particularly in light of Microsoft's past practice of doing so with other first party content, there is less evidence to be confident that Game Pass would continue to be provided at pre-Merger prices. Prices for subscriptions can easily be revised, and Microsoft may have an incentive to do so once it adds content that is as popular as Activision's, including CoD. Further, to the extent that competition is lessened as a result of the Merger, the Merged Entity will be also less constrained in its pricing.
- 9.66 In relation to cloud gaming services, any efficiency benefit must be considered in the context of our provisional conclusion that the Merged Entity would have the ability and incentive to pursue a foreclosure strategy in the supply of cloud gaming services, reducing the constraint from a range of actual and potential competitors in a market where Microsoft has a strong position. We have provisionally concluded that Activision content, including day and date releases, would likely have been made available on cloud gaming services absent the Merger. While we consider that this is more likely for cloud gaming services which do not have an MGS-based model, there is evidence that some cloud gaming platforms are planning to expand the BYOG features in their cloud gaming services and, in any event, we consider BYOG and MGS cloud gaming services to be substitutes within the same market (as discussed

¹⁰⁸⁹ Microsoft [response to the phase 2 Issues Statement](#), 31 October 2022, paragraph 4.60

in the Market Definition chapter). As such, any added benefit of Activision content being available on Microsoft's MGS cloud gaming service absent the Merger is likely to be considerably less significant in magnitude than the harm of it being foreclosed from rival cloud gaming services. Further, we consider harm to competition is particularly significant in a nascent market which has the potential to introduce more competition into a context where it has previously only been possible for a small number of suppliers to compete.

Provisional conclusion on efficiencies

9.67 Taking into account the available evidence and the considerations set out above, our provisional view is that it is not likely that any efficiencies arising from the Merger will be of sufficient magnitude and benefit to UK consumers to prevent an SLC in either of the two Theories of Harm identified.

10. Provisional Conclusions

- 10.1 As a result of our assessment, we have provisionally concluded that the anticipated acquisition of Activision by Microsoft constitutes arrangements in progress or in contemplation which, if carried into effect, will result in the creation of an RMS.
- 10.2 We have also provisionally concluded that the creation of that situation may be expected to result in an SLC in the supply of console gaming in the UK and in the supply of cloud gaming services in the UK, in each case due to vertical effects resulting from input foreclosure.