KEYSTONE

Assessing Microsoft's incentive to engage in targeted input foreclosure in the console gaming market in New Zealand

CONTENTS

INTRODUCTION

1. Agencies around the world have explored the question of whether Microsoft would have the incentive to withhold Activision Blizzard games, and in particular *Call of Duty* (“***CoD***”), from rival gaming consoles (namely Sony’s PlayStation) in an effort to gain market power and eventually “foreclose” them – that is, significantly reduce their ability to compete effectively in the gaming space.

2. In the Statement of Issues dated 20 June 2023 ("**SOI**"), the Commerce Commission ("**NZCC**") has stated that it is seeking further information to confirm there is no such concern in New Zealand – namely seeking further information to confirm its position that the merged entity is “*less likely to have the incentive to foreclose its rivals in the supply of video game consoles in New Zealand*"[1] through "*withhold[ing] Activision content from its rivals in the supply of video game consoles in such a way that limits their ability to compete effectively*”.[2]

3. As a general point, we note that any incentive to engage in a foreclosure strategy ought to depend on the likelihood of said strategy being effective in the first place. Input foreclosure by definition requires the withholding of the input from rivals – thereby foregoing any revenue and associated profits from distributing the input broadly. This practice is costly, or indeed significantly costly at times like the present case. And if there is no prospect of the withholding strategy significantly hurting rivals to a point that they cannot compete effectively, i.e. foreclosing them, then the incentive to bear the cost of a withholding strategy falls apart.

4. This is important in the present case given, as of 2022, consoles installed in New Zealand were estimated to account for only [ ]% of the overall global installed base of consoles worldwide. The concern that a global competitor like Sony would be “materially hurt” by a targeted foreclosure strategy in New Zealand, to the point of losing the ability to compete effectively in the New Zealand console market, by losing access to a single franchise, no matter how relevant, is of course irrational.[3] Regardless of the strategy Microsoft would adopt post-merger, and regardless of its effect in New Zealand, PlayStation and Nintendo would remain significantly ahead of Microsoft in console gaming globally, with Nintendo holding a [ ]% installed base share, followed by PlayStation with [ ]%, and Microsoft lagging significantly behind at just [ ]%. Furthermore, both Sony and Nintendo will continue to have the incentive to invest in any local market where gamers demand gaming consoles. It therefore follows that Microsoft is unlikely to have the incentive to engage in any targeted New Zealand foreclosure strategies.

5. We also note that the European Commission and the UK Competition and Markets Authority, among others, have already concluded that Microsoft would not have the incentive to engage in foreclosing strategies globally or locally. The EC concluded that “*Microsoft would have no incentive to refuse to distribute Activision's games to Sony, which is the leading distributor of console games worldwide, including in the European Economic Area (‘EEA') where there are four Sony PlayStation consoles for every Microsoft Xbox console bought by gamers*”.[4] The same logic applies to New Zealand where PlayStation accounts for double the number of Xbox consoles.

[1] SOI paragraphs 121.

[2] SOI paragraphs 116 and 117.

[3] This is recognized at paragraph 121 of the SOI: "*the hypothetical withholding of Activision content on PlayStation in New Zealand… is unlikely to have any impact on PlayStation more broadly, as New Zealand only accounts for a small proportion of the installed console base worldwide.*"

[4] See Commission clears acquisition of Activision Blizzard (europa.eu)

6. The UK CMA also concluded that "*Microsoft would not have an incentive to engage in a total foreclosure strategy of PlayStation using CoD*".[5] To reach that conclusion, the CMA carried out an incentive analysis comparing Microsoft's gains and losses from a hypothetical strategy where *CoD* would be withheld from PlayStation. The CMA's conclusion was definitive: Microsoft's overall net loss is estimated in the range of billions of dollars over a five-year time period.[6]

7. Notwithstanding the above, in this short document, we explore whether Microsoft would have the financial incentive to withhold *CoD* from PlayStation in New Zealand post transaction – that is whether Microsoft would have the financial incentive to engage in a targeted New Zealand-specific foreclosing, or withholding, strategy. Our analysis suggests that any such targeted withholding of *CoD* would generate significant losses for Microsoft with unlikely prospects of these being "recouped". While our analysis focuses specifically on *CoD*, we are of the view that our conclusion applies more generally to all Activision content – as *CoD* accounts for more than [ ]% of Activision Blizzard's revenue on console.

8. Our approach is simple but standard. We use a critical diversion analysis to compute the minimum number of PlayStation *CoD* gamers in New Zealand that would need to purchase an Xbox instead (or alongside) of a PlayStation for Microsoft to break even from a withholding strategy. Of course, by withholding *CoD* from Sony, Microsoft would forego the revenue, and associated margin, from sales of *CoD* content on PlayStation. But it could, in principle, expect to recoup this profit through the diversion of some PlayStation gamers that would purchase an Xbox in order to retain access to *CoD*. The question is: how many users?

9. Our analysis shows that **for Microsoft to recoup all of the foregone profits on PlayStation, [ ]% of Monthly Active Users ("MAU") on PlayStation in New Zealand who played *CoD* for any amount of time would need to purchase an Xbox. This seems unrealistic** – in particular, given that the CMA's survey of UK consumers found that only 24% of PlayStation *CoD* gamers would switch to another device if *CoD* were not available on Sony's console.[7]

10. **Based on this evidence, we conclude that Microsoft would not have a financial incentive to withhold *CoD* from PlayStation in New Zealand**. Doing so would put at risk up to USD $[ ] million in gross margin from New Zealand against the potential recoupment of only a portion of these "losses".

11. The rest of this document is set out as follows. In Section 1 we describe our methodology and approach to computing Microsoft's "gains" and "losses" in New Zealand from a withholding strategy. In Section 2 we compute the share of *CoD* MAU on PlayStation in New Zealand who would need to purchase an Xbox in order for Microsoft to recover the foregone margin. In Section 3, we explain how our analysis offers additional evidence in relation to the specific aspects the NZCC's SOI seeks more information on – namely, console multihoming in New Zealand, diversion levels and the extent to which Activision content drives sales of consoles in New Zealand, and the average spend of console gamers in New Zealand over the lifespan of the relevant console.[8] In the annex we include sensitivities to our main assumptions that incorporate different Lifetime Value (LTV) values, as well as allowing for a lower margin on *CoD* sales, neither of these sensitivities

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[5] Addendum to Provisional Findings, para 1.5.

[6] Addendum to Provisional Findings, para 4.15: "*we find that the results of our updated LTV-based analysis lead to a net loss of more than $[redacted] billion over a five-year time period under all scenarios.*"

[7] See CMA Provisional Findings, paragraph 7.173 and Final Report, paragraph 7.186.

[8] See SOI, paragraph 122.

change the prevailing conclusion that Microsoft would not have the financial incentive to withhold *CoD* from PlayStation in New Zealand post transaction.

1 APPROACH: A CRITICAL DIVERSION ANALYSIS

12. We carry out a critical diversion analysis to answer the question: what is the proportion of gamers playing *CoD* on PlayStation in New Zealand that would need to purchase an Xbox for Microsoft to break even from withholding *CoD* on PlayStation[9], all else being equal?

13. To answer this question, we compare Microsoft's "losses" from the foregone profits stemming from sales of *CoD* gaming content on PlayStation in New Zealand against the marginal "gain" from a PlayStation *CoD* gamer who opts to purchase an Xbox to retain access to *CoD* games moving forward. We then compute the minimum share of PlayStation *CoD* gamers who would need to switch to Xbox in order for Microsoft to at least break even.

14. Our analysis is based on a one-year timeframe. In other words, we focus on a one year cohort of PlayStation *CoD* gamers – and the margin that Microsoft can expect to generate from those gamers – and ask what proportion of that specific cohort in New Zealand would need to divert to Xbox to recoup the loss of this margin. This is consistent with the analysis carried out by the CMA in its Provisional Findings, Addendum Provisional Findings, and Final Report.[10] We use 2022 in our analysis, as data is available for the full year.[11]

1.1 Computing Microsoft's "gains" from a targeted foreclosure strategy

15. Each PlayStation gamer who would hypothetically purchase an Xbox as a result of *CoD* not being available on PlayStation any longer can be expected to generate a stream of revenue and profits for Microsoft. The value of an additional customer buying and playing on Xbox should include revenues from all sources of spend, namely games, add-ons, subscription, and hardware. In other words, this value should reflect the LTV of a new gamer. This is in line with Microsoft ordinary course [ ] LTV estimates for Xbox sales which anticipate the [ ] from the sale of an Xbox over the course of the following [ ].[12]

16. Microsoft's latest LTVs for Xbox sales in New Zealand are reported in Table 1 below along with an average of the LTV estimated over the course of the previous 12-month period.[13] On average (between Xbox Series X and Xbox Series S) a new Xbox purchase is expected to generate a [ ] of USD $[ ]. Looking at the average over a 12-month period the LTV is USD $[ ].

[9] For the avoidance of doubt, we note that the entire analysis in this document refers to New Zealand. In no scenario in this document, we consider Microsoft's potential withholding of *CoD* globally. We believe the EC and the CMA have provided clear indication that such a strategy would not be economically sensible.

[10] See "Appendices and glossary" page E16 paragraph 26.

[11] Note that the use of 2022 is conservative as Activision sales of *CoD* were significantly below average due to the poor performance of *CoD: Vanguard*.

[12] This methodology is in line the CMA analysis presented in the Final Report – see Appendices (publishing.service.gov.uk) page E16 para 64.

[13] Microsoft's methodology for gaming user LTVs is based on actual user data for the current console generation. Microsoft estimates LTVs for monthly cohort of gamers and requires 1 full year of purchasing behavior to compute LTVs. Hence, the latest LTV available at this time reflects gamers who purchased an Xbox in April 2022. The 12-month average reflects the period May 2021-April 2022. LTVs are available at the country level and in our analysis we use New Zealand specific LTVs.

Table 1: Average LTVs for Xbox Series X|S sold in New Zealand

	Series X	Series S	Average
Latest Xbox LTV	[ ]	[ ]	[ ]
12-month average LTV	[ ]	[ ]	[ ]

Source: Microsoft

1.2 Computing Microsoft's "losses" from a targeted foreclosure strategy

17. In 2022, an average of [ ] MAU played *CoD* on PlayStation in New Zealand. Upon the (hypothetical) withholding of *CoD* from PlayStation, none of these *CoD* gamers in New Zealand would be able to purchase future *CoD* titles for PlayStation. In 2022, Activision accrued USD $[ ] in gross revenue on PlayStation in New Zealand from the sale of *CoD* content. Using the global gross margin on *CoD* for 2022 ([ ]%), we compute a total margin on PlayStation in New Zealand from the sale of *CoD* content in one year at USD $[ ] million.[14] This implies that Activision accrued approximately USD $[ ] per MAU in margin from *CoD* content on PlayStation per year in New Zealand.

18. However, Microsoft would forego the margin from sales of *CoD* content in New Zealand in perpetuity not just in relation to 2022. This means, one needs to account for the foregone sales to the same [ ] MAU on PlayStation in future years. In other words, as also concluded by the CMA in their Final Report[15], the foregone value of a *CoD* gamer on PlayStation ought to reflect the opportunity cost of withholding *CoD* from PlayStation consistently with the time horizon used for the Xbox LTV – i.e., [ ].

19. In line with the CMA's analysis, the most immediate way to compute this is to simply sum the Net Present Value of USD $[ ] per MAU over a period of [ ].[16] This is computed in the table below and implies that the [ ] LTV of a *CoD* gamer on PlayStation for Microsoft is USD $[ ].

Table 2: NPV of annual yearly margin from *CoD* sales on PlayStation in New Zealand.

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Yearly gross margin	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Discount rate	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
NPV	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Source: Activision data

Note: WACC is set to [ ]% in line with what Microsoft uses to compute the latest Xbox LTV.

20. Given this, we compute the total loss from a withholding strategy as the average *CoD* MAU on PlayStation in a year multiplied by the [ ] LTV of a *CoD* on PlayStation for Microsoft. That is: [ ] * USD $[ ] = USD $[ ] million.

1.3 Estimating critical diversion levels

21. Given a total loss of USD $[ ] million in New Zealand, we ask how many PlayStation users in New Zealand would need to purchase an Xbox as a result of Microsoft's withholding strategy if each purchase is valued at USD $[ ]? The answer to this question is simply USD $[ ] million divided by USD $[ ] which equals [ ]. That is [ ] PlayStation gamers in New Zealand would need to purchase an Xbox for Microsoft to simply break even from withholding *CoD* from PlayStation.

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[14] The gross margin is computed as net revenue minus manufacturing costs, logistics, platform commissions, and licensing costs. It reflects the average gross margin accrued on *CoD* titles including: *CoD: Black Ops 4*, *CoD: Cold War*, *CoD: Modern Warfare*, and *CoD: Vanguard*.

[15] See CMA Final Report, paragraph 7.342 at Final report.

[16] See CMA Final Report, Appendix E paragraph 65-c. We note that in the process of correcting its own analysis in the Provisional Findings, [ ] [ ]%. [ ],[ ][ ].

2 THE DERIVED LEVEL OF DIVERSION IN NEW ZEALAND IS NOT REALISTIC AND MICROSOFT WOULD NOT HAVE A FINANCIAL INCENTIVE TO WITHHOLD CALL OF DUTY

22. It is one thing to simply derive the number of gamers that would have to purchase an Xbox for Microsoft to recoup its foregone margin, it is another to consider this figure against local market dynamics to assess how realistic this critical number is and whether, in practice, Microsoft would have an incentive to withhold *CoD* in the first place. Based on the data and the analysis above it is highly unlikely that this would be the case.

23. Given a total of [ ] *CoD* MAU on PlayStation in a year in New Zealand, our estimates suggest that [ ]% (i.e. [ ]/[ ]) of them would need to purchase an Xbox as a result of the withholding of *CoD*. This is not plausible. It would require almost [ ]% of the MAUs on PlayStation who played *CoD* in a year to purchase an Xbox (or approximately [ ]% correcting for the over-estimation in the CMA's model). [17]

24. Even the CMA's own survey – which Microsoft has critiqued in multiple submissions to the CMA – estimates that at most 24% of *CoD* PlayStation gamers in the UK would have switched away from PlayStation if *CoD* were not to be available on PlayStation.[18] This is less than [ ] of the required diversion ratio for New Zealand (or less than [ ], even correcting for the over-estimation in the CMA's model).

3 OUR ANALYSIS IN THE CONTEXT OF THE SOI

25. We note that in the SOI the NZCC seeks further information in relation to:[19]

    a. "the extent to which NZ gamers 'multi-home' with respect to gaming consoles;

    b. diversion of NZ gamers and the extent to which CoD and other Activision content drives sales of video game consoles in New Zealand; and

    c. *the average spend of console gamers in New Zealand over the lifespan of the relevant console."*

26. We agree these are all relevant aspects that feed into the assessment of whether the combined entity would have an incentive to engage in input foreclosure vis-à-vis rival consoles (Sony). While we are not in possession of all of the data that speaks directly to these matters, we believe our analysis will provide comfort to the NZCC that our conclusions hold regardless of these considerations. We discuss these in turn in this section.

27. **New Zealand gamers 'multi-homing' with respect to consoles.** We agree with the NZCC that this is an important metric in the context of assessing Microsoft's incentive to engage in a foreclosure strategy. Specifically, the more *CoD* gamers on PlayStation in New Zealand that multi-home today (by also owning an Xbox alongside their PlayStation), the less likely it is that Microsoft will withhold *CoD* from PlayStation. This is because Microsoft's potential gains from a foreclosure strategy stem from the possibility of diverting PlayStation gamers to Xbox, leading to the sale of a new console. If gamers playing *CoD* on PlayStation already own an Xbox, then the potential gains from the foreclosure strategy fall drastically.[20] While we are not in

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[17] See footnote 16.

[18] See CMA Provisional Findings, paragraph 7.173 and Final Report, paragraph 7.186.

[19] SOI para 122.

[20] These gains do not fall to zero as Microsoft recognises 100% of the consumer spend on content sold on Xbox, while it would distribute CoD on PlayStation under a revenue share agreement which entitles Sony to retain part of the consumer spend on PlayStation games.

possession of data on gamers multi-homing habits in New Zealand, we note that our model described in the sections above assumes no multi-homing by *CoD* gamers on PlayStation. This implies that our results are conservative and that they hold regardless of the level of multi-homing assumed or indeed present in New Zealand. Introducing multi-homing into our model would only decrease the gains from foreclosure, leaving losses unaffected and then by further reducing any incentive to withhold *CoD* from PlayStation.

28. **Diversion of New Zealand gamers and the extent to which *CoD* and other Activision content drives sales of video game consoles in New Zealand.** We understand the NZCC is interested in understanding how much diversion a hypothetical withholding of *CoD* from PlayStation would give rise to. This is indeed an important question, as it underpins the value of the gains for Microsoft from a foreclosure strategy.

29. When choosing between gaming platforms, users consider a spectrum of features that shape the offering around the platform. For consoles in particular, gamers are likely to consider inter alia prices (of hardware and software), pricing options for accessing and playing games (e.g., subscriptions vs. "buy to play"), hardware power and graphics capability, brand affinity, quality of user experience, advice from friends and fellow gamers, and the range of games available on the console. But even restricting attention to just games, there are hundreds of titles released on consoles on a yearly basis. This poses a challenge on how to identify the relevant effect of a single game or piece of content on device adoption. However, the analysis provided in the sections above is consistent with the conclusion that it is highly unlikely that a single franchise, or a handful of franchises, could influence console adoption enough for Microsoft to have the incentive to withhold these franchises from console rivals.

30. **The average spend of console gamers in New Zealand over the lifespan of the relevant console.** As described in the context of section 2, we note that Microsoft in the ordinary course of business computes LTVs for new console gamers and that these are usually computed on a [ ]. These LTVs are computed [ ] but provide a critical indication of how profitable is to sell an additional Xbox console in New Zealand. Based on the latest LTVs for New Zealand, a new Xbox purchase is expected to generate a [ ] of USD $[ ].

ANNEX 1: SENSITIVITY ANALYSIS

12-month average LTVs

31. The LTVs presented above are computed based on a cohort of Xbox Series X and S gamers in April 2022, the most up to date cohort available for this analysis as LTVs require at least one year of purchasing behavior in order to be estimated. As a sensitivity, we look at an unweighted average LTV of the last 12 monthly cohorts of Xbox X|S gamers (from May 2021 through to April 2022) of USD $[ ], as set out in Table 1.

32. Looking at this average over 12 months has both benefits and drawbacks. On the one hand, observing 12 distinct monthly cohorts allows for a more complete picture of the LTVs of various Xbox gamers in New Zealand, and fully captures any seasonality effects that one month alone may not. Conversely, the cohort analysed from May 2021 to April 2022 may not be a sufficient comparison group to those gamers that might swap from PlayStation to Xbox as a result of any withholding strategy. This is because the ninth generation of Xbox was released in November 2020 with limited supply due to the Covid-19 pandemic among other factors, meaning many of the most intense Xbox gamers, who spend the most on the platform, may have been unable to purchase an Xbox until later after release.[21] As a result, the cohort examined from mid-2021 is likely to overstate the true LTV of Xbox gamers due to its proximity to the ninth generation consoles' release date, and the likely inclusion of very intense gamers that do not make an appropriate counterfactual.

33. Nonetheless, for completeness, we apply this USD $[ ] LTV value to our analysis. Intuitively, a higher LTV results in higher gains to Microsoft from a withholding strategy. However, given a total loss of USD $[ ], the number of PlayStation users in New Zealand that would need to purchase an Xbox for the strategy to breakeven is still significant. It equals: USD $[ ] / USD $[ ] = [ ]. In total [ ] PlayStation gamers would need to divert to Xbox for Microsoft to break even. This represents [ ]% of PlayStation *CoD* MAU in New Zealand, still an implausibly high number relative to the CMA's switching rate of 24%.[22]

Allowing for lower margin on *CoD* sales

34. As outlined above, Activision average gross margin for the *CoD* franchise is [ ]%. [ ].

35. While "vertical arithmetic" incentive analysis of the type in this document are *ceteris paribus* analysis, one could argue that post-merger the partnership would end. To cover this possibility, in the table below, we outline the share of PlayStation *CoD* MAU in New Zealand that would need to purchase an Xbox in order for a withholding strategy to break even under a reduced gross margin from [ ]%. Even if the gross margin was to fall by almost [ ] percentage points to [ ]%, the share of PS *CoD* MAU that would need to purchase an Xbox remains unrealistically high, at almost [ ]%.[23]

Table 3: Critical switching rate under different gross margins

Gross margin on *CoD*	[ ]	[ ]	[ ]	[ ]	[ ]
Critical switching rate as % of *CoD* MAU	[ ]	[ ]	[ ]	[ ]	[ ]

Source: Activision data

[21] See https://www.nme.com/news/gaming-news/xbox-series-x-limited-short-supply-2021-2818525 for example.

[22] [ ][ ], [ ][ ][ ].

[23] [ ][ ], [ ]