Neutral citation [2026] CAT 86

Case No: 1527/7/7/22

IN THE COMPETITION APPEAL TRIBUNAL

Salisbury Square House
8 Salisbury Square
London EC4Y 8AP

17 November 2026

Before:

BEN TIDSWELL
(Chair)
THE HONOURABLE LORD RICHARDSON
DEREK RIDYARD

Sitting as a Tribunal in England and Wales

BETWEEN:

ALEX NEILL CLASS REPRESENTATIVE LIMITED

Class Representative

- v -

(1) SONY INTERACTIVE ENTERTAINMENT EUROPE LIMITED
(2) SONY INTERACTIVE ENTERTAINMENT NETWORK EUROPE LIMITED

Defendants

Heard at Salisbury Square House between 10 March and 8 May 2026

JUDGMENT (NON-CONFIDENTIAL)

APPEARANCES

Mr Robert Palmer KC, Mr Nikolaus Grubeck, Mr Stefan Kuppen and Ms Charlotte McLean (instructed by Milberg London LLP) appeared on behalf of the Class Representative.

Mr Daniel Beard KC, Ms Charlotte Thomas, Ms Gayatri Sarathy and Mr Firdaus Mohandas (instructed by Linklaters LLP) appeared on behalf of the Defendants.

Note: Excisions in this Judgment (marked "[✂]") relate to commercially confidential information: Schedule 4, paragraph 1 to the Enterprise Act 2002.

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A. INTRODUCTION

1. The Class Representative has brought these collective proceedings on behalf of a class of approximately 12.2 million consumers who made UK purchases of digital content on PlayStation gaming consoles between 19 August 2016 (for those domiciled in England and Wales), or 19 August 2017 (for those domiciled in Scotland), and 12 February 2026. The Class Representative is a limited company whose sole director is Alex Neill, an advocate for the support and protection of consumer rights.

2. The Defendants are subsidiaries in the Sony corporate group. Sony is one of the largest electronics manufacturers, distributors and technology platform operators in the world. It has developed and operated the PlayStation system over many years. The Defendants carry out various functions relevant to the UK operation of the PlayStation system. We will refer to the Defendants collectively as **Sony**.

3. We have concluded that the Class Representative has failed to establish that Sony has infringed competition law. In particular, the Class Representative has failed to satisfy us that its proposed market definition, by reference to which its allegations of infringement are to be assessed, is correct. The Class Representative has not advanced a case on an alternative market definition, so the claim fails altogether. As a consequence of our findings on this key issue of market definition, it is not strictly necessary for us to consider in full detail all of the other issues raised by the Class Representative's claim. We have however attempted to record in this Judgment, at least in outline, our views on the most significant of those other issues.

4. In these proceedings, we have had to consider a significant amount of information in respect of which confidentiality was asserted. This was largely information which Sony claimed was confidential, principally because it is commercially sensitive (such as pricing information) or because it contains details of the technology which Sony employs in its operations, which goes to security concerns as well as commercial sensitivity. Wherever possible, we have sought to give the reasons for our findings without referring to this material, but

that has not always been possible. That means that the public version of this judgment inevitably contains redactions.

(1) The claim

5. The Class Representative's claim, under s.18 of the Competition Act 1998 and (prior to 31 December 2020) Art. 102 of the Treaty on the Functioning of the European Union (**TFEU**), is that Sony has abused dominant positions in various markets in ways that have caused harm to the class in the form of higher prices for PlayStation games and add-on content.

6. In its Claim Form (as amended from time to time), the Class Representative alleged that Sony held dominant positions in each of:

   (1) A primary console market, comprising the PlayStation 4 (**PS4**), PlayStation 5 (**PS5**), and Microsoft's Xbox One and X/S Series consoles.

   (2) A connected series of aftermarkets for PlayStation system software.

   (3) A market for the digital distribution of games for the PlayStation.

   (4) A market for the digital distribution of add-on content for the PlayStation.

7. The geographic scope of each market was said to be the United Kingdom.

8. The Class Representative alleged that Sony abused its dominance by engaging in the following conduct:

   (1) Exclusive dealing: Sony is alleged to have imposed unlawful exclusive dealing obligations which had the effect of foreclosing all actual or potential competition on the market for the distribution of digital PlayStation games and any meaningful competition on the market for PlayStation add-on content, thereby depriving users of any choice as to their means of accessing digital content on the PlayStation.

(2) Tying: Sony is alleged to have unlawfully tied the PlayStation Store (the **PS Store**) to the PlayStation console and/or PlayStation system software by pre-installing the PS Store and system software onto PS4 and PS5 consoles and contractually requiring that digital content is distributed through the PS Store.

(3) Refusal to supply: Sony is alleged to have unlawfully refused access requests from third parties wishing themselves to distribute digital content on the PlayStation.

The exclusive dealing, tying and refusal to supply allegations described above are each an example of **exclusionary abuses** and are sometimes referred to collectively using this term throughout this Judgment.

(4) Excessive and unfair pricing: Sony is also alleged to have set retail prices and extracted an excessive and unfair target margin on the sale of third-party digital content on the PS Store. This is also alleged to have allowed Sony to charge more for first- and second-party titles on the PlayStation.

The excessive pricing allegation is an example of an **exploitative abuse** and is sometimes referred to in this way in this Judgment.

9. In the absence of the exclusionary abuses, the Class Representative alleged that there would have been appreciable entry into the markets for the distribution of digital PlayStation games and add-on content, with competing distributors, including publishers, offering alternative means of distribution of digital content on the PlayStation. In those conditions, it was alleged that retail prices of digital content sold by both third parties and Sony would have been approximately 20% lower, and the margin or commission earned by the digital retailer would have been lower than the margin charged through the PS Store. As a result, it was alleged that PlayStation users would have paid lower prices for PlayStation digital content, and would have benefitted from alternative, innovative and higher quality means of digital distribution.

10. In relation to the exploitative abuse, the Class Representative alleged that, if Sony had not engaged in excessive and unfair pricing, retail prices would have reflected prices under conditions of workable competition. It was alleged that such prices would have been approximately 20% lower.

11. The Class Representative, on behalf of the class, sought damages arising from this conduct by Sony in the sum of approximately £1.490 billion, plus simple interest of 8% per annum, giving a total claim of approximately £1.971 billion.

(2) The CMA's intervention

12. In accordance with r. 50(2) of the Competition Appeal Tribunal Rules 2015, the Competition and Markets Authority (**CMA**) submitted written observations dated 9 July 2025 to the Tribunal, primarily to address aspects of the law relating to refusal to supply.

13. Sony filed its own observations, dated 12 September 2025, in response to the CMA's written observations. The CMA responded to Sony's observations by letter dated 6 October 2025.

14. By a further letter dated 23 January 2026, the CMA wrote to the Tribunal to say that, having considered the treatment of the refusal to supply issue by the Tribunal in *Kent v Apple* [2025] CAT 67 (***Kent***), the CMA agreed with that Tribunal's application of the relevant legal test, which the CMA considered to be consistent with the CMA's own observations in these proceedings. On that basis, the CMA did not consider it necessary to apply to make oral representations at the trial of these proceedings.

15. We found the CMA's observations (and Sony's observations in response) helpful, and these are reflected in our later discussion in this Judgment of the law relating to refusal to supply.

(3) The trial

16. This Judgment records our findings following a ten-week trial, which took place between March and May 2026. The collective proceedings were first filed on 22 August 2022 and were certified on 21 November 2023. That these proceedings were able to proceed to full trial within around two and a half years after certification is testament to the hard work and professionalism of the parties and their teams.

17. In particular, we are grateful to the teams representing the parties for their efforts in preparing and conducting the trial, and especially to Mr Palmer KC and Mr Beard KC for their thoughtful and efficient management of the trial.

18. Over the course of eight weeks of submissions and evidence, we heard oral opening and closing submissions, factual evidence from twelve Sony witnesses, as well as expert evidence from technical, economic and valuation experts. The trial also included around five days of concurrent evidence from expert witnesses, in what is sometimes called an expert hot tub, conducted by the Tribunal. The Tribunal was ably assisted by the parties, their witnesses and the experts throughout the trial.

19. However, we do wish to record two aspects of the trial that made our work more difficult, and which were somewhat unsatisfactory.

    (1) First, the volume of evidence, particularly from the economic expert witnesses, was excessive and bordering on unmanageable. At trial, the parties ultimately relied on 14 expert reports (not including separately filed supplements and errata), in addition to lengthy joint statements. These reports, even excluding their exhibits, ran to thousands of pages. Parties and their experts are encouraged to take a more constructive approach, with particular reference to the recent Practice Direction 2/25 (Expert Evidence) dated 2 December 2025, in order to ensure that expert evidence is more digestible in future cases. It was certainly the case that not all of the expert evidence produced in these proceedings was either necessary or helpful.

(2) Secondly, as noted at §4 above, the trial involved consideration of large volumes of documents which were said (largely by Sony) to be confidential. There are obvious difficulties in cross-examining witnesses and making submissions in public hearings by reference to confidential documents. The unfortunate result was that significant parts of this trial were necessarily conducted in private session in order to preserve confidentiality. There was no live stream and there will be no publicly available transcript of those parts of the trial. This is problematic from the perspective of open justice. In our view, at least some of the claims of confidentiality were unnecessary. It was also the case that the parties had left this issue to such a late stage in the proceedings that it was not easily capable of management in a different way. The recent Practice Direction 2/26 (Disclosure – Management of Confidential Information) encourages parties to grasp the nettle on this difficult practical issue at an earlier stage.

20. Finally, in light of the significant volumes of evidence in this trial, we note that, in order to produce a manageable document, we have focused in this Judgment on the key points and key materials. The lack of a reference to any particular point or argument or piece of evidence does not mean that we have overlooked it. Rather, it signifies that we did not consider it of sufficient importance to alter our conclusions.

(4) Factual witnesses

21. Sony relied upon the evidence of 12 factual witnesses at trial, all of whom were cross-examined by the Class Representative's counsel. They were:

(1) Eric Lempel provided two witness statements and was cross-examined on days five and six of the trial. Mr Lempel is Senior Vice President and Head of Global Marketing, Sales & Business Operations at Sony. Mr Lempel has worked in the video games industry since 1993, initially in marketing, consumer services and retail research roles before joining Sony in September 2000 as a Senior Buying and E-Commerce Manager. In 2004, Mr Lempel became the Senior Manager of Online Development

and Loyalty Media and during the following years was involved in building Sony's business around the PlayStation Network (the **PS Network**), including the business and operational aspects of building and operating the PS Store. Mr Lempel has had a number of roles during his time with Sony. As a senior member of the executive leadership team, he has been involved in all significant decisions for the PS Network business since 2010 and the broader network and other traditional aspects of the PlayStation business since 2015. Mr Lempel was an enthusiastic and knowledgeable witness. Part of his evidence involved a "teach-in", in which he demonstrated the operation of PlayStation consoles and the PS Store to the Tribunal. We found his evidence about the gaming industry and Sony's decision making during the relevant period to be very helpful.

(2) Christian Svensson provided one witness statement (superseding his earlier witness statement from the certification stage in these proceedings) and was cross-examined on day eight of the trial. Mr Svensson has over thirty years of experience in the video games industry and his current role is Vice President of Second and Third-Party Content Ventures and Strategic Initiatives at Sony. Prior to joining Sony, Mr Svensson had roles in gaming journalism and publishing, including senior roles for the major developer Capcom where he managed sales, marketing, business development, product development and strategy, and negotiated with major gaming platforms including Sony, Microsoft and Valve. Mr Svensson was a thoughtful witness, who provided clear answers on Sony's contractual arrangements with publishers, as well as Sony's [✂].

(3) Christopher Kingsley provided one witness statement and was cross-examined on day nine of the trial. Mr Kingsley is the Co-Founder and Chief Technology Officer of the Rebellion group of companies, which develop and publish games. He therefore mainly gave evidence from the developer and publisher perspective on game development and interactions with Sony. Mr Kingsley was generally a careful and helpful

witness, although he was unable to give us clear answers on certain matters relating to pricing of games.

(4) Chris Early provided one witness statement and was cross-examined on days nine and 10 of the trial. Mr Early is the Senior Vice President (SVP) Corporate Partnerships at Ubisoft EMEA SAS. Ubisoft is a major game publisher, and Mr Early was able to give evidence on the commercial incentives of publishers and Ubisoft's interactions with Sony during the relevant period. Mr Early was a straightforward witness who answered questions fairly, directly and with obvious authority based on his extensive experience in the industry. His evidence was very helpful not least because of Mr Early's comparative independence from Sony.

(5) Geoffrey Norton provided two witness statements and was cross-examined on days 10 and 11 of the trial. Mr Norton is a Vice President in the Foundational Systems and Experiences Engineering team at Sony. Mr Norton had an obvious depth of experience from his engineering roles at Sony and was extremely knowledgeable about technical matters regarding the operation of the PlayStation. His evidence was of particular relevance to the feasibility and technical requirements of the counterfactual advanced by the Class Representative. Mr Norton tended to speak very quickly and on occasions was a little dogmatic, but in general he was a highly impressive witness. We found his evidence to be very helpful.

(6) Matthew Smith provided two witness statements and was cross-examined on day 12 of the trial. Mr Smith is the Vice President of Commerce Engineering at Sony. The major topics for Mr Smith's evidence were the PS Network, the PS Store and the operation of in-game storefronts. Mr Smith was a careful witness. We found his evidence helpful.

(7) Matthew Wilson provided two witness statements and was cross-examined on day 12 of the trial. Mr Wilson is the Vice President of Platform Certification & Operations at Sony. Mr Wilson joined Sony in

1996 and has held various roles in quality assurance, testing and certification over his career. He provided useful evidence about the certification process for games and content before it is made available to users on the PlayStation. He was a helpful witness.

(8) Radha Murphy provided one witness statement and was cross-examined on day 13 of the trial. Ms Murphy is the Vice President, Global Head of Intellectual Property at Sony. Ms Murphy is a lawyer specialising in intellectual property (**IP**) and gave evidence on Sony's research and development activities and IP portfolio. While Ms Murphy was slightly defensive in her answers to some questions, she was generally a straightforward and careful witness who provided helpful evidence.

(9) Simon Brown provided one witness statement and was cross-examined on days 13 and 14 of the trial. Mr Brown is the Director, Creator Platform and Policy in the Global Partner Developer Relations team at Sony. Mr Brown's evidence largely focussed on Sony's approach to cross-platform functionality and how this has evolved over time. Mr Brown came under some pressure about the credibility of Sony's position on this issue during cross examination, but we found his responses to be both credible and helpful.

(10) Frederick Webber provided one witness statement and was cross-examined on day 14 of the trial. Mr Webber is the Senior Manager, Sales Development for Europe, Middle East, Africa, India, Turkey, Australia and New Zealand for Sony. Mr Webber's evidence largely concerned the use and withdrawal of vouchers sold in physical retail outlets in order to sell digital content. He was a helpful witness.

(11) Charles Lowe provided one witness statement and was cross-examined on day 14 of the trial. Mr Lowe is the Senior Director of Global Financial Planning and Analysis at Sony. Mr Lowe's evidence was focussed on Sony's financial records, including revenues, costs, pricing and profit margins. Mr Lowe was a helpful and straightforward witness.

(12) William Cox provided two witness statements and was cross-examined on day 15 of the trial. Mr Cox is the Director of Digital Games Sales (**DGS**) Promotions for the PS Store at Sony. Mr Cox was mostly questioned about categorisation of titles, the relationship between wholesale and retail prices, and negotiations about price with publishers. He was also questioned about Sony's "promotional calendar" for games after their initial launch and how this typically impacts sales volumes, and about some examples of disagreements with publishers about pricing. Mr Cox was a confident witness who clearly had a great deal of experience of the matters he was asked about. We found his evidence to be very helpful.

22. The Class Representative did not call any factual witnesses to give evidence in this trial.

(5) Expert witnesses

23. The expert evidence in this case broadly fell into three categories, which were technical, economics and valuation.

(a) Technical experts

24. Each party called a single technical expert. In addition to the statements from the individual experts described below, the experts also produced a joint expert statement on technical evidence. The technical experts were cross-examined on their evidence on days 16, 17 and 18 of the trial. The Tribunal decided that it would not be productive to have a concurrent evidence session with the technical experts.

25. The technical expert instructed by the Class Representative was Peter Pietzuch. Professor Pietzuch is a Professor of Distributed Systems in the Department of Computing at Imperial College London. He produced two expert reports as well as errata to these reports. Professor Pietzuch's primary task was to provide an explanation of the feasibility of the technical aspects of the Class Representative's counterfactual. The Class Representative's technical

counterfactual evolved somewhat during the trial and particularly following the evidence of the factual witness, Mr Norton, who, during his oral evidence, raised several issues about aspects of Professor Pietzuch's proposals. This presented some difficulties for Professor Pietzuch, who was vigorously cross-examined on subjects such as encryption and processing capacity, in circumstances where those had not been fully ventilated in his report or the expert process generally. Professor Pietzuch did his best to respond to these questions, but we were left with the general impression that his understanding of the technical issues was more at an academic rather than practical level. Of course, this also reflected the fact that Professor Pietzuch inevitably lacked the detailed knowledge and experience of those, like Mr Norton, who had worked for Sony on the PlayStation system.

26. The technical expert instructed by Sony was Jason Coyne. Mr Coyne is a Senior Advisor at Kroll Advisory Limited, where he supports the Cyber and Data Resilience practice. He produced two expert reports as well as an erratum. Mr Coyne gave evidence, at a relatively high level, on security and cryptographic aspects of the Class Representative's technical counterfactual. He gave clear and consistent evidence about the risks inherent in the technical counterfactual as he perceived them and was able to explain concepts clearly to the Tribunal.

(b) Economic experts

27. Each of the parties called an expert in the field of economics. We have already commented on the extensive written evidence put forward by these witnesses. In addition, they also produced a Joint Expert Statement. Mr Ridyard led the Tribunal's questioning in a session of concurrent evidence with the economic experts on days 18, 19, 20 and 21 of the trial. In advance of the concurrent session, the Tribunal sent the economic experts a detailed list of questions for discussion. The Tribunal considered that the concurrent session was a very useful way for it to test the key aspects of the economic evidence. The expert economists were then cross-examined on days 21, 22 and 23.

28. The Class Representative instructed Greg Harman to give economic expert evidence. Mr Harman is a Managing Director at Berkeley Research Group, with

experience in various matters involving valuation, finance, dispute consulting, pricing, competition and economic regulation, including providing evidence as an expert witness. Mr Harman submitted various expert reports at earlier stages of these proceedings. His fifth, sixth and seventh reports (together with errata) were his key written evidence for the purposes of the trial. The detail of Mr Harman's evidence will be discussed later in this Judgment. However, at this stage, we note that Mr Harman struggled to explain both some of his positions on key issues and the consistency of some of his assumptions with the underlying factual material. He nevertheless endeavoured to assist the Tribunal, despite, at times, straying into advocacy for his client.

29. Sony instructed Liam Colley to give economic expert evidence. Mr Colley is an antitrust economist with extensive experience in giving expert evidence and leads the European antitrust practice at Cornerstone Research. Mr Colley initially provided a report at an early stage of these proceedings. His second, third and fourth reports were his key written evidence for the purposes of the trial. Mr Colley was, in the main, a thoughtful and coherent witness. However, he did have a tendency to adopt, on occasion, what seemed to the Tribunal to be indefensible positions which were favourable to his client. Like Mr Harman, he was, from time to time, also guilty of engaging in advocacy, including by giving long answers which were not directly responsive to questions. On a number of occasions, he also provided answers which were not properly thought through, even himself describing them as "knee jerk" reactions. All of this was unfortunate, as it tended to obscure the good points he was able to make.

(c) Valuation and accounting experts

30. Initially, the parties each called a single valuation and accounting expert. The position became more complicated after the first round of reports, as the Class Representative's valuation expert (Mr Harman) considered himself unable to deal with aspects of the report submitted by Sony's expert (Mark Bezant). The Class Representative therefore called an additional expert (Kalyan Dasgupta) to deal with some valuation issues. As a result, there were two reports from each of the original valuation experts and one reply report from the additional expert

called by the Class Representative. The experts also produced a Joint Expert Statement.

31. Mr Ridyard again led the Tribunal's questions in a concurrent evidence session for the valuation and accounting experts, after sharing a detailed list of questions with the experts in advance. The concurrent evidence session took place on day 24 of the trial, with cross-examination following on days 25 and 26.

32. As noted above, the Class Representative instructed Mr Harman to give evidence on matters of valuation and accounting as well as economics. His evidence on valuation and accounting matters was addressed in the reports already described above.

33. Sony instructed Mr Bezant to give valuation and accounting evidence. Mr Bezant is a Senior Managing Director at FTI Consulting and a Fellow of the Institute of Chartered Accountants in England and Wales. Mr Bezant provided three expert reports, the first of which was produced at an earlier stage of the proceedings. Mr Bezant was careful and considered in his evidence, including his critiques of the evidence of other experts.

34. As already noted, after seeing Mr Bezant's second report, the Class Representative instructed Mr Dasgupta to respond to valuation issues raised by Mr Bezant. Mr Dasgupta is a Director in the Competition and Antitrust practice of Berkeley Research Group. There was some dispute before the commencement of trial about whether Mr Dasgupta should be permitted to join Mr Harman in giving evidence. In the event, we did allow Mr Dasgupta's report to be admitted, but we were not in the end greatly assisted by his evidence.

B. THE FACTS

35. By way of high-level introduction, games are created by games publishers and played either on specialist games consoles or multi-purpose devices such as personal computers (**PCs**) and mobiles.

36. The Sony PlayStation is one of three main games console systems, alongside Microsoft's Xbox and Nintendo's Switch. All three consoles comprise standardised hardware, a proprietary operating system and integrated services, such as a dedicated storefront where users can purchase digital gaming content. There are also other providers who develop and sell console systems, such as Valve's Steam Deck, which is a handheld form of console which was available for purchase during the claim period.

37. These console systems occupy a position in between consumers and publishers, providing a service to both. For the consumer, they provide a specialist gaming console on which games can be played, and a managed environment that provides assurance to consumers that, once purchased and loaded onto the console, the games will work seamlessly. This assurance also provides a service to publishers who, by conforming to the standards operated by the console system, benefit from access to an important distribution channel to gaming consumers.

38. Some of the games console system suppliers (at least Sony and Microsoft, to our knowledge) operate a model of subsidy and recoupment. They sell consoles at attractive prices to encourage consumers to buy in to their system and then recoup that investment through a margin earned on the sale of games. The PlayStation and Xbox systems have a very similar dependence on game content produced by third-party publishers, though both systems also offer some self-created (first-party) games with varying degrees of exclusivity. Nintendo's Switch console carries a higher proportion of first-party content.

39. Games publishers and consumers have the option to connect with one another outside the console systems via the PC, mobile and cloud-based channels, and indeed some publishers operate without making their games available to the console systems at all. Consumers who opt to play games on PCs or mobiles must make their own decisions to invest in suitable hardware and take responsibility for ensuring that the games they buy through PC games retailers will work on their hardware. By doing so, such consumers do not benefit from any subsidy offered by the console suppliers or from the assurances they provide

on a seamless game experience, but they are also free to buy games from a retail channel that does not involve any payment to the console system suppliers.

40. We will explore the competitive landscape in more detail in this section, starting with the Sony PlayStation.

(1) The Sony PlayStation

(a) History of PlayStation and console generations

41. Sony entered the video games industry with the launch of the PlayStation in 1994 and has produced five generations of PlayStation to date, with the following key technical features:

(1) The PlayStation 1, launched in 1994 was notable for introducing advanced 3D graphics capabilities and CD-ROM technology, which enabled developers to create larger and more sophisticated games than had previously been possible using gaming cartridges.

(2) The PlayStation 2 (**PS2**), launched in 2000, represented a substantial technological advance through its proprietary processor and DVD-ROM drive. These developments increased storage capacity and enabled more complex and realistic games. The PS2 was a commercial success, selling more than 160 million units worldwide.

(3) The PlayStation 3 (**PS3**), launched in 2006, introduced high-definition gaming through HDMI connectivity and Blu-ray technology. It was the first PlayStation generation to incorporate the PS Network and the PS Store. Throughout the trial, Sony maintained that, despite its technological innovations, the PS3 was not a commercial success due to high manufacturing costs, a relatively high launch price, and gaming development difficulties faced by publishers. Sony reported that it incurred losses of approximately USD$[✂] billion during the PS3 generation.

(4) The PS4, released in 2013, adopted a processor architecture that simplified game development and lowered manufacturing costs (compared to the PS3) in an effort to regain commercial success, which is what happened. The PS4 also delivered improved graphics, increased processing speed, more memory and the DualShock 4 controller with touchpad functionality.

(5) The PS5, launched in 2020, was the current generation console as at the date of trial. The PS5 further enhanced performance through faster processors, significantly reduced loading times, ray-tracing technology, and other graphical improvements that were designed to enhance the realism and immersive nature of games. Sony also introduced, for the first time, a digital-only version of the PS5 without a disc drive, which initially retailed for around US$100 below the standard version.

42. The launch by Sony of each generation model of the PlayStation since the PS2 has broadly coincided with the launch by Microsoft of a corresponding generational model of the Xbox. Accordingly, the assessment of the success or failure of any of Sony's individual console generations has been in large part measured by its relative success against the counterpart console launched by Microsoft, and vice versa.

(b) The PS Network and PS Store

43. As set out above, the PS Network was introduced with the PS3 generation. The PS Network comprises a range of applications, services and associated network infrastructure that provides online functionality to PlayStation users. In particular, it enables games to be obtained through the PS Store, online multiplayer gaming, social interaction between users, leaderboards and other online community features and cloud gaming services.

44. The PS Store is the digital storefront on PlayStation devices, though it can also be accessed through other systems such as phone apps and web browsers. The PS Store allows games, add-on content and subscriptions to be purchased, downloaded, updated, and managed electronically. Sony negotiates wholesale

prices with publishers and sets retail prices for content on the PS Store. It retains a margin from digital sales, typically targeting approximately 30%, [✂]. Digital content for use on PlayStation consoles can only be obtained from the PS Store, although consumers also have the option to purchase PlayStation games on physical discs through a variety of online and physical retailers.

(c) The closed-system model

45. The Class Representative's case is founded in the concept of the PlayStation system being closed to any alternative means of distribution of digital content to PlayStation users. The Class Representative submitted that this amounted to a monopolistic position that was created through non-negotiable contractual provisions with users and publishers, as well as conscious technical and design choices taken to shield Sony from competitive pressure.

46. However, Sony also emphasised the "closed" nature of the PlayStation system, accepting that it retains control over important aspects of the PlayStation system and by extension excludes others from participating in those parts of the system. Sony claims that there are good reasons for doing so.

47. Mr Coyne explained that the relevant parts of the PlayStation system comprising the "closed" system include at least the console hardware, system software, developer tools, and online and network services (including the PS Store and Sony's subscription service, **PS Plus**). According to Mr Coyne, a "closed-system model" was said to deliver benefits to users, including:

(1) A frictionless "plug-and-play" user experience where users can begin playing games "out of the box".

(2) Optimisation of the PlayStation hardware and software for gaming, with a corollary of increased scope to optimise games for the PlayStation hardware.

(3) Predictability, compatibility and reliability (compared for example to PC and Android systems which have a greater range of potential configurations).

(4) Streamlined game development making the process easier and quicker.

(5) Digital rights management and IP protection (including anti-piracy).

(6) Security and safeguarding.

(7) Longevity of hardware (including because of the development of games and content which are playable on legacy hardware versions).

(8) Integrated and less fragmented aftersales support.

(9) A safe and inclusive gaming environment, including through the implementation of parental controls and monitoring by PlayStation of inappropriate content and online interactions.

(d) The cross subsidy from game sales to console manufacturing

48. The "closed" nature of the PlayStation system was also said to flow through to the way that Sony prices PlayStation consoles, games and other content. The evidence from the Sony witnesses was that Sony takes a "consumer lifetime value" approach to pricing, whereby it:

(1) Accepts low or negative gross margins on a per unit basis on the sale of PlayStation consoles in order to increase its installed base of users.

(2) Recovers value through subsequent sales of games, add-on content and subscriptions to those users.

49. In other words, Sony sells PlayStation consoles at low or negative profitability, but cross-subsidises that part of its business by targeting higher levels of profitability on the sale of games, add-on and subscription content. Such cross-subsidisation was said to be economically efficient in order to support price

competition between PlayStation and Xbox consoles (and potentially other gaming platforms) and to broaden the pool of users with access to consoles. Sony adopted this approach despite the relatively high production costs associated with creating new generations of gaming consoles, including research and development.

50. Notably, neither Mr Harman nor the Class Representative, which relied on his evidence, suggested that this business model was in itself problematic from a competition law perspective. The following is an extract from the economics concurrent evidence session, where this issue was the subject of the first question the Tribunal asked the economic experts:

> "MR RIDYARD: [...] Maybe Mr Harman I can address this to you in the first place. […] do you consider that a systems model in which you have sort of loss leading in a primary market and recoupment in a secondary market -- do you consider that kind of market model as being something that is inherently anti-competitive or undesirable?
>
> MR HARMAN: No, […] not at all. Those types of arrangement, almost inter-temporal, you know, pricing mechanisms are very common. I guess the question becomes whether there are factors, features of the system that may constrain competition. So, for example, if, on the one hand, there is competition in both fore- and aftermarkets within the system, that would allow competitive constraints to ensure that the overall pricing within the system were -- were reasonable."

(2) Game characteristics

(a) Games and add-on content

51. The claim brought by the Class Representative concerns both games and "add-on content".

52. PlayStation games are the core products purchased by consumers for use on PlayStation consoles. In general, games are developed across a multitude of genres, with varying levels of length, complexity of storyline, graphics and multiplayer functionality, among many other modalities. Console gaming was described to us by Mr Early as "10-foot distance, lean back gaming" that lends itself to be played in the living room on a big screen. In contrast to gaming on a

PC, console games tend to be more cinematic with simpler controls, such as, for example, action-adventure oriented games.

53. The PlayStation ecosystem has evolved to support various forms of content, including:

(1) Full digital game downloads or physical game media purchases.

(2) Downloadable content and other in-game purchases such as access to exclusive levels or additional items for use in-game.

(3) Virtual currencies to facilitate purchases of other digital content.

(4) Subscription-based content. For example, Sony has launched access to content through PS Plus, a subscription service providing users with access to selected games, online features, discounts, and additional benefits.

54. The Class Representative refers generally to all transactions for delivering game related digital content which happen after the download of a game as **add-on content** and we will use that same expression, recognising that it is not a technical term but one that is useful to distinguish between the sale of games and the sale of other content associated with those games (essentially items (2) and (3) in §53 above).

55. Add-on content augments the core gameplay on a PlayStation and may come in many forms. For example, add-on content may take the form of additional levels, in-game currency or cosmetic additions for characters. Add-on content is typically only available digitally and is often released periodically throughout the lifecycle of a game. Some add-on content is embedded in the game and may be unlocked by players as they progress through a game, while other add-on content must be downloaded by a player as and when required, and with or without an additional payment.

56. Many physically purchased games now depend on digital functionality to operate to full potential, allowing for access to updates, patches, as well as downloadable add-on content.

57. Digital content can generally be purchased on the PS Store through a variety of payment methods, including debit and credit cards. Sony has also from time to time offered vouchers for the purchase of specific content or for general application through the PS Store, generally involving a code which allows content to be downloaded. These vouchers are distributed in a variety of ways, including through third party retailers in a way that is similar to physical disc distribution.

(b) Development and sale of games and add-on content

58. Games are developed for the PlayStation through three broad channels, known as first-party, second-party and third-party games.

59. Sony sells a range of first-party games which are developed in the twenty video game studios which Sony owns.

60. Until approximately 2021, all of Sony's first-party games were published exclusively on PlayStation. As of 2025, approximately 85% of Sony's first-party games are released exclusively on the PlayStation, albeit that some of these are exclusively released on the PlayStation for only a limited period before being released elsewhere, such as for use on PCs (for example, *Spider Man 2*). The remaining 15% are always available on PC as well as PlayStation. There are few, if any, instances in which Sony's first-party games were available to play on Xbox or other console platforms.

61. Where first-party game titles are available only on PlayStation, Sony uses the development of these titles to help to differentiate the PlayStation from other games systems. First-party games are also often used by Sony to demonstrate the capabilities of the PlayStation to other game developers, by being specifically designed to take advantage of the latest technology on Sony's consoles.

62. Second-party games are those which are developed by third parties at Sony's request and then published by Sony (for example, *Rise of the Ronin* was published by Sony after being developed by Koei Tecmo). Many second-party games are available on PC as well as PlayStation. Second-party games (other than multiplayer games) may involve a period of exclusivity on the PlayStation following launch to ensure differentiation of the PlayStation platform.

63. Third-party games are those developed and published by third parties. The PlayStation compatible versions of these games can be purchased by Sony for sale through the PS Store or sold by the publishers through arrangements with third-party retailers in the physical distribution channel (see further below). These third-party games include popular franchises like *Call of Duty* (developed and published by Activision), *EA FC* (published by EA) and *Grand Theft Auto* (developed and published by Rockstar Games, a subsidiary of Take-Two Interactive). The majority of third-party games are available, in versions compatible with the relevant device, on multiple platforms (such as PlayStation, Xbox, PC, Nintendo Switch or Steam Deck).

64. The development function involves designing the game, creating its story line and writing its code, whereas the publisher function involves bringing the game to market and making it commercially available to players.

65. Sony provides tools and technologies to third-party developers to allow them to create games for the PlayStation. At a high-level, the mechanism for the technological support provided by Sony is as follows:

    (1) Developers enter into the Global Developer & Publisher Agreement (**GDPA**) with Sony, which among other things, grants them a licence to use the Sony IP necessary to develop PlayStation games and add-on content.

    (2) Sony provides software development tools called the software development kit (**SDK**). The SDK allows developers to create games for the PlayStation system that are compatible with PlayStation hardware, system software and network functions.

(3) Sony also provides access to additional custom developer hardware, including **Dev Kits**, which are used to build and develop games, and **Test Kits**, which are used to test games in conditions resembling the PlayStation consoles.

(4) The development tools discussed above are designed to ensure that developers can build games that are suitable for the "plug and play" environment of the PlayStation. Sony does not usually charge directly for use of the SDK (or associated IP licences). Dev Kits and Test Kits have small leasing fees that are often waived. Rather than charging significant fees for these tools and rights, Sony says that the value of these is reflected in its share of revenue from the sale of PlayStation games and other digital content.

(5) Beyond development tools, Sony's witnesses explained that it also provides support across the game lifecycle, including publishing support, optimisation, marketing assistance, consumer insights, advertising planning, PS Store promotion and discounting strategies.

66. Following development, a game becomes available for sale in retail channels. Consumers seeking to purchase PlayStation games have two broad options:

(1) Digital: where the consumer purchases the game digitally, which can only be done through the PS Store. Digital sales benefit from greater convenience by enabling the consumer to download games instantly, without having to incur delivery or store visit costs, and there is no risk of unavailability or stock issues. There is a greater variety of digital games and there is no risk of discs being damaged or lost.

(2) Physical: where the consumer purchases discs, usually through third-party retailers, who operate both online and bricks and mortar establishments. The discs are then inserted into PlayStation consoles to download or otherwise run the game. Buyers of physical discs are free to re-sell the discs and/or to share them with friends.

67. The pricing, contractual and royalty arrangements with publishers vary depending on whether a game is sold in digital format through the PS Store or through physical retail outlets.

68. For digital games, Sony first agrees a wholesale price with publishers. It then goes on to set the retail price on the PS Store. Sony targets a margin of 30% of the retail price [✂].

69. The retail price for physical PlayStation games (now, usually discs) is determined by arrangements between publishers and the third-party retailers, in which Sony plays no role. Mr Bezant's evidence was that retailers generally retain around 20-23% of the retail price of games to cover their own costs.

70. However, Sony controls the manufacturing process for the physical media. Publishers accordingly pay Sony approximately [✂]% of the initial wholesale price of the game to reimburse Sony for the cost of manufacturing discs, and for the provision by Sony of its IP and development tools used in the development phase. Mr Harman calculated that, after removing the costs of manufacturing, Sony charges publishers a platform royalty in the region of [✂]% of the retail price for its IP and development tools, effectively representing a charge for accessing the PlayStation platform.

71. The availability and utilisation of digital content through the PS Store have increased over time. While early generations of the PlayStation relied on physical media only (first through CDs and later DVDs and Blu-ray discs), there has been a sustained shift to digital content in more recent years. In Sony's financial year 2016, digital games accounted for only [✂]% of sales of PlayStation games. By FY 2019 the proportion of digital games increased to [✂]% and in FY 2020 and 2021 (as a consequence at least in part of Covid–19), that had increased to as much as [✂]%.

72. The proportions of digital and physical game sales have fluctuated a little since then, but by FY24 digital sales were still [✂]% of all PlayStation game sales. Between 2016 and 2025, of the [✂] PlayStation games sold, approximately [✂] were sold digitally.

73. At the time of trial, physical PlayStation games continued to be available and still made up a significant portion of purchases. However, after the trial we received correspondence from the Class Representative notifying us that on 1 July 2026 Sony had announced that, from January 2028, new PlayStation games would not be released on physical discs.

74. The above demonstrates that there has been a general trend towards digital content on PlayStations over the claim period, including through mixed modes of delivery with physical games supplemented by digital content. There was some dispute between the parties as to whether this was a consequence of, or had at least been influenced by, Sony's actions to facilitate the shift from physical to digital. Be that as it may, there is no doubt that at least part of the reason for the shift is consumer preference for digital content.

(c) Categorisation of games

75. In the video games industry, games are sometimes classified as "AAA", "AA", "III" and "Indie" but there is a degree of fluidity and there are no consistent criteria for determining which games fall into each category. Mr Svensson set out a broad categorisation of the games by reference to the costs of development:

(1) AAA relates to an industry-standard categorisation of video games and refers to major, complex games with high-quality graphics and music (for example, *Grand Theft Auto V* or *Red Dead Redemption 2*). AAA games typically cost at least US$100 million to develop.

(2) AA games usually cost between US$25 million – US$100 million to develop. An example of a publisher which develops AA games is Saber Interactive (for example, *Warhammer 40,000: Space Marine 2*).

(3) III games are games which typically cost between US$7 million – US$25 million to develop. The distinguishing features of III games are that they tend to have larger development teams of 20 to 30 people with access to better development tools than those which one could buy off-

the-shelf, but still do not have the same polish or production value as AAA or AA games.

(4) Indie games are those which typically cost less than US$7 million to develop. Indie games only started to be developed during the PS3 era (2006 – 2013), when digital distribution became more prominent.

76. We were also presented with evidence about differential pricing for different versions of the same game. For example, certain special edition physical versions of games may be produced with premium packaging (such as a "steelbook" version) and are of particular value for collection. Additionally, special editions may contain additional content such as levels or in-game items which are not available in the standard edition of the game. As a result, both the sales channel and the content of a game may vary between different editions.

(d) Cross-platform elements of gameplay

77. Over time there has been an increased technical ability to engage in cross-platform functionality between different gaming console systems while playing the same game. Important aspects of cross-platform functionality include:

(1) Cross-play, which allows users on different platforms to play the same online game together. For example, for some games, PlayStation users can play the same game online with another user playing on an Xbox, PC or Nintendo Switch. The availability of cross-play on the PlayStation has developed over time.

(2) Cross-progression, which allows a user's progress in a game to carry across platforms. This can include saved games, unlocked levels, account progression and other gameplay achievements. For example, a user may play on PlayStation, then play the same game from the same point of progression on an Xbox or PC.

(3) Virtual currency is an in-game digital currency that users can buy, earn or redeem to acquire downloadable content or in-game items, such as

skins, weapons, levels, characters or other cosmetic or functional content. Examples are *Fortnite V-Bucks* and *Grand Theft Auto Shark Cards*. A cross-platform aspect of virtual currency may be for a user to access their virtual currency for a game across multiple gaming platforms.

(4) Cross-commerce allows users to access purchases made on one platform when playing on another. For example, a player might buy an in-game item or level on an Xbox and then use it while playing the same game on PlayStation. Cross-commerce is also used as a general term to describe cross platform economic activity.

78. Initially most forms of cross-platform functionality were not available on PlayStation consoles. There were limited early examples of cross-play on PlayStation devices, such as between PS2 and PC for titles including *Final Fantasy XI* and *Need for Speed: Underground* as early as 2002, along with other examples throughout the early to mid-2010's. However, it was not until 2017–2018 that Sony came under sustained pressure from Epic Games to enable broader cross-platform functionality.

79. In around September 2017, Epic Games enabled cross-play between Xbox and PS4 users for the *Fortnite* game, without Sony's permission. In 2018, Epic Games pushed for broader cross-platform functionality, and public pressure grew as users had become aware that cross-play between PlayStation and Xbox was technically possible. Sony ultimately introduced cross-play, cross-progression and cross-commerce with mobile, PC, Xbox and Nintendo Switch in a "beta phase" in September 2018. This introduction initially related only to *Fortnite*, but was later extended to enabling cross-play for *Rocket League* and *Dauntless*. In September 2019, Sony made cross-platform functionality generally available to all publishers and titles under its Cross-Platform Policy Framework. Sony requires publishers to enter into a Cross-Platform Policy Schedule (**CPPS**) if they intend to engage in cross-commerce. We will return to this document shortly.

80. In relation to virtual currency, in February 2022 Sony introduced a Unified Wallet Model, permitting cross-platform use of virtual currency in certain circumstances, provided the relevant publisher has entered into the CPPS. Sony does not generally permit virtual currency to be converted into real money.

(e) Game lifecycles and promotions

81. A typical promotional calendar for a digital game over its lifecycle is structured to maximise the price at launch when demand is highest, then discounts are progressively used to expand the audience, revive demand, and monetise the historic game catalogue. A game typically moves from premium launch pricing to selective promotional pricing, and then to regular catalogue discounting, with promotional activity becoming more frequent and more important as the game progresses through its lifecycle.

82. Sony has a team called **DGS Promotions** which manages promotional activity on the PS Store. Part of the role of DGS Promotions is to make recommendations about promotional strategies and pricing to publishers, as promotional discounts are generally funded by both the publisher and Sony agreeing to receive a lower absolute margin (though Sony generally retains its 30% margin proportion). This may include aligning any promotions with its broader PlayStation promotional calendar and negotiating with publishers about changes to the wholesale price over time. Sony also negotiates with publishers to ensure that there is an appropriate spread of promotional activity on a publisher's games throughout the financial year. Sony's ability to persuade publishers to accept a wholesale price reduction depends on convincing the publisher that the sales uplift of the promoted game will more than compensate for the lower absolute revenue per game sold. The evidence of Mr Cox contained details of the empirical analysis Sony has done to provide this assurance to publishers.

83. A digital game's lifecycle and the structure of promotions used to stimulate demand may be broken into three rough phases, as discussed below.

84. The Pre-order and launch phase: before and at release, promotional activity is focused on creating anticipation for the release of games at, or near, the full price when demand is highest. The focus is on securing sales that will provide users with access to the game as soon as it is released. Users who pre-order a digital game may receive it by automatic download upon release. Typical promotional activity during the pre-order and launch phase may include:

(1) Making the game available for pre-order availability on the PS Store.

(2) Pre-order incentives such as bonus content, early access, cosmetics, add-ons or bundled extras.

(3) Possible PS Plus member benefits, such as early access or limited member-specific offers.

(4) Store merchandising and marketing support to improve visibility in physical outlets and media.

85. The first six months after-launch: during this period, games may enter their first promotional cycles as demand begins to decline. This stage concerns maintaining momentum after launch demand starts to taper. Typical early lifecycle promotional activity includes:

(1) Sony generally recommends early discounting within the first three months after launch to maintain demand.

(2) Edition splitting, where different versions or releases of a game have different content or features from each other. Edition splitting allows differential pricing and promotions that Sony has found to increase sales.

(3) Promotions aligned with player engagement events, content updates or new downloadable content.

(4) Bundling with add-on content or deluxe upgrades.

86. The catalogue phase: as the title becomes older, typically six months after release, promotional activity may become more frequent, deeper and more important to sales. The goal is to monetise long-tail demand and reach consumers who were unwilling to buy at higher prices. Typical promotional activity includes:

(1) Consistent and frequent, but short term, deep discounts of at least 40%.

(2) Participation in "tentpole" seasonal or thematic promotions for certain types of content, deals of the week, "Games Under" a certain price, weekend promotions and flash sales, or targeted promotions.

87. The lifecycle of a physical game was less clear to us. It seems that there is a similar pre-launch period and a period of some months after that in which promotional activity begins to take place. However, we had no direct evidence before us about the pricing strategies of physical PlayStation game retailers. As far as we could tell, the strategies for retail of physical PlayStation games often diverged from Sony's digital game sales strategy, reflecting (as we understood it) the different economic conditions of the retailers (the need to hold inventory, for example), the publishers (who were required to pay Sony's royalty at manufacture, not sale) and the physical retail market generally.

88. We will say more about the difference between digital and physical PlayStation game pricing in the section below on Market Definition.

(3) Gaming platforms

89. In his Second Report, Mr Colley provided a useful summary of the three main established types of gaming platform: console gaming, PC gaming and mobile gaming. Mr Colley also provided a commentary on how ongoing shifts in technology affected the properties of the different platforms. In addition, cloud gaming services extend gaming capability to lower-specification devices by running games on remote servers and streaming the results to the device. These services enable gaming on basic laptops, mobile devices and smart TVs, although they require stable, high-speed internet connections with low latency.

(a) Consoles

90. Console gaming revolves around purpose-built, specialised devices that are designed primarily for gaming experiences, although they also enable consumers to access other entertainment options. The most popular platforms in console gaming during the claim period have been the PlayStation, Xbox and Nintendo Switch systems. They each comprise standardised hardware, a proprietary operating system and integrated services, such as a dedicated storefront that is integrated with the operating system and through which users can purchase digital gaming content optimised specifically for gaming.

91. Like PlayStation, the Xbox and Nintendo systems enable games to be purchased digitally through integrated storefronts via the Microsoft Store and Nintendo eShop, respectively. In addition, games for those consoles can be purchased physically (by discs/game cards or downloadable codes, which may be redeemed through the console's digital storefronts) from third-party online stores (such as Amazon.co.uk) and brick-and-mortar retailers (such as Currys).

92. There was agreement between the parties that the PlayStation and Xbox consoles are the closest competitors for each other, with considerable similarity in concept, technical configuration and capability, and in their commercial approach. They have competed with each other over many years in generational battles for market share, each releasing new versions of consoles at similar times and generally similar price points (suggesting a similar approach to subsidising their console businesses from their game distribution businesses). We understand that pricing of third-party games on Xbox is generally very similar to PlayStation, although there may be some differences in their approach to promotional activity and subscription models.

93. There are greater differences between the PlayStation and Xbox, on the one hand, and the Nintendo Switch. Unlike the PlayStation and Xbox consoles, Nintendo's Switch systems can operate as a handheld device, as well as by being capable of connecting to a TV or monitor. The Nintendo Switch has historically had a much higher proportion of first-party games.

94. Valve introduced the handheld console Steam Deck in February 2022 which, like the Nintendo Switch systems, can also be connected to a TV or monitor. The console runs Valve's proprietary operating system which is fully integrated with the Steam storefront for PC gaming content (content specifically developed for PCs). The Steam Deck's market share during the claim period was not material. We have no information about the economics of the console businesses of Nintendo or Steam.

(b) Personal Computers

95. A PC is a general-purpose computing hardware system typically used for a wide range of tasks. PCs can be used for video gaming and enable consumers to play a wide range of games, from simple titles that do not need powerful hardware to high-fidelity, graphically intensive games that require top tier components. This flexibility allows a consumer to play everything from a casual indie game on an entry-level laptop or desktop to a demanding, modern AAA title on a high-end computer.

96. Specialised gaming PCs are configured and marketed to deliver superior performance often exceeding that of dedicated gaming consoles. They tend however to be sold at price points which considerably exceed the price of the main console offerings. Mr Harman's fifth report identified that prices for PCs constructed specifically for gaming might be in the region of £1,200 to £1,300 on average. Even a "budget" gaming PC cost £809 in 2025, which was 16% more expensive than the most expensive PS5 (retailing at £700) and 69% more expensive than the cheapest version of a PS5 (retailing at £480).

97. PCs offer greater hardware flexibility and customisation compared to consoles, allowing consumers to choose and upgrade individual components such as graphics cards, central processing units, memory and storage. PC gaming is characterised by multiple digital gaming content distribution platforms rather than a single integrated store (some examples are Steam, Epic Games Store and the Microsoft Store for PC). Numerous PC game distribution platforms compete for developers and consumers. These can range from general appeal stores with

a very large repertoire of games, to stores for special interest audiences or a publisher's proprietary store selling its own games, such as EA Origin.

(c) Mobiles

98. In recent years mobile gaming has grown considerably. Smartphones and tablets function as general-purpose devices that have emerged as a significant platform for gaming over the past two decades. These devices offer significant portability and convenience, making gaming instantly accessible to consumers regardless of location. Mobile gaming has a substantial consumer base on Android and Apple devices globally. Mobile devices come with dedicated general purpose "app stores" (for example, Apple App Store and Google Play Store) that give consumers access to a wide variety of apps, beyond gaming apps. While mobile games historically featured simpler graphics compared to PC and console titles, technological advances have enabled increasingly sophisticated mobile games. The mobile gaming market has also pioneered the free-to-play monetisation models that have subsequently influenced PC and console gaming in-game monetisation strategies.

(4) Consumers

99. Consumers must create a PS Network account in order to use the PS Store. Use of a PS Network account is governed by the PS Network terms of service. Only digital games authorised by Sony are playable on PlayStation consoles, and they must be installed in accordance with the terms of service of the PS Network. Sony has the right to withdraw services from PlayStation users who breach its terms.

100. It is not possible for consumers to modify the PlayStation system software to download alternative gaming stores, save for a technically complex and unauthorised process known as "jailbreaking" the console. Jailbreaking would constitute a breach of licensing agreement. This means that there is no effective means for consumers to download games and add-on content to PlayStation devices other than through use of the PS Store.

101. Sony tends to think of its consumers in terms of market segments so that it knows which features of its products are valued most by each segment of its consumers.

102. By way of example, there was considerable focus in the trial on the category labelled by Sony as **Connoisseurs.** This is a categorisation by Sony of gamers with the highest average of hours played on PlayStation. Connoisseurs are said by Sony to be the earliest adopters, the loudest promoters or detractors and the most passionate and demanding players, being highly influential on others. They tend to be the biggest spenders and therefore are among Sony's most valuable customers. Sony's Consumer Insights Team analysis undertaken in 2020 showed that Connoisseurs had an average monthly gaming spend of US$[✂], and [✂]% had a monthly video game subscription.

103. However, Connoisseurs are the least brand loyal and most susceptible to switching to a rival platform if that experience is perceived as better, not least because they typically "multi-home" and play across multiple devices. Analysis in 2020 suggests that only [✂]% of Connoisseurs tended to stick to one device for most of their gaming.

(5) Developers and publishers

104. Developers design and implement the creation of games, producing the relevant software. Publishers market and distribute games and often also provide funding to developers. As already noted, Sony develops and publishes its own first-party games and also funds developers to create second-party games (for which Sony assumes the publisher function).

(a) Sony's approach to publishers and developers

105. As already noted, first- and second-party games are important to Sony because they allow it to differentiate the PlayStation from other gaming consoles, with exclusive games that are not available on other devices. These types of games are also used by Sony to showcase the technical capabilities of the PlayStation

and demonstrate new technologies to developers that can be included in their games.

106. This is part of Sony's approach to competing with other games systems and it is reflected in Microsoft's own approach of seeking to differentiate the Xbox by improving first-party content, deals with publishers and subscription services. As an indication of the potential importance of first-party games, when Microsoft sought in 2022 to obtain regulatory approval to purchase Activision, the developer of the popular game "*Call of Duty*", Sony expressed concern that *Call of Duty* might be made exclusive to Xbox (that is, effectively become a first-party game). Sony expressed concerns that this degree of vertical integration by Microsoft could distort the gaming market and have anti-competitive consequences.

107. However, third-party games make up the majority of PlayStation game sales by unit ([✂]% in FY23) and gross revenue ([✂]% in FY23) and are therefore very important to Sony. It is much more difficult for Sony to secure exclusivity of third-party games, as the operators of other platforms, in particular Microsoft, compete with Sony to secure distribution arrangements with the publishers of leading titles. Also, many publishers will seek to multi-home across platforms. For third-party games, Sony is more likely to negotiate limited time exclusives, exclusive in-game content or co-marketing support. At a high level:

(1) Limited time exclusives are unusual but involve the publisher agreeing a period of exclusivity for Sony (usually between six months and a year) in exchange for development funding.

(2) Exclusive in-game content is available on the PlayStation but not on other consoles and may involve levels or additional gameplay. Exclusive in-game content is also rare.

(3) Co-marketing support agreements usually involve Sony retaining a [✂]% share of media exposure, on an exclusive basis, in return for funding [✂] of the publisher's media spend. The goal of co-marketing

is to increase affinity of a game with the PlayStation relative to other consoles, in order to drive sales.

108. Overall, Sony seeks to ensure that it has a wide range of content available to users, which involves having relationships and content acquisition from small Indie publishers as well as very large publishers. However, between 2016 and 2024, the top five publishers accounted for over [✂]% of revenue derived from the PS Store. Mr Lempel described the catalogue of games originating from such publishers as being able to "make or break a console generation". Accordingly, games such as *Grand Theft Auto*, *Call of Duty*, *EA FC*, *Final Fantasy* (published by Square Enix) and *Fortnite* are of particular importance to Sony and can be regarded as "must have" content.

(b) Sony's contractual arrangements with developers and publishers

109. Sony governs its relationship with developers and publishers through its use of the GDPA. The GDPA is a detailed document setting out what publishers and developers are or are not permitted to do in relation to the PlayStation system. Important provisions of the GDPA include licensing for development activity, the publication of games and add-on content on the PlayStation, access to SDKs and other development tools, commercial terms including distribution on the PS Store, and confidentiality.

110. Key clauses of the GDPA for the purposes of these proceedings are:

(1) Clause 5 governs publishers' use of Sony development tools and specifically prohibits the creation or modification of tools that could bypass PlayStation system protections, conflict with Sony's guidelines, or compromise the security and integrity of the PlayStation system, development tools, or the PS Network.

(2) Clause 6 governs the development, assessment and quality assurance of PlayStation-compatible games and add-on content. Clause 6.1 grants third-party publishers the contractual right to develop products using Sony's development tools. Clause 6.3 requires games and add-on

content to undergo compatibility, assessment and quality assurance testing by Sony in accordance with its guidelines.

(3) Clause 7 concerns the handling, care and security of Sony's development tools and the maintenance of IP rights.

(4) Clause 8.1 concerns the manufacturing of PlayStation Blu-ray discs and requires orders to be placed through Sony's designated processes.

(5) Clause 9 governs the distribution of PlayStation games and add-on content and requires that content is distributed only with Sony's approval, following completion of assessment and testing processes. Clause 9.2.1 specifies that unless "*expressly approved in writing*" by Sony, digital distribution is only permitted through the PS Network. Clause 9.2.2 provides that publishers may sell PlayStation games and add-on content to Sony for onward sale to a user and that Sony has the right perpetually to provide a user with access to content that the user has purchased, even if Sony's relationship with the publisher comes to an end.

111. As noted above, Sony operates a wholesale pricing model whereby it targets a margin of 30% of the retail price of digital games, for which it sets the price on the PS Store. [✂]

112. [✂]

113. [✂]

(1) [✂]

(2) [✂]

(3) [✂]

114. [✂]

115. [✂]

116. Another important document in the trial was the CPPS, which, as noted above at §79, is an agreement which publishers who wish to offer cross platform functionality must enter into with Sony. The relevant provisions are as follows:

(1) [✂]

(2) Clause 4 contains a revenue sharing mechanism which compares the revenue attributable to PlayStation users on other platforms with the gameplaying time of PlayStation users on the PlayStation platform. If the proportion of the PlayStation revenue share divided by the PlayStation gameplay share drops below 85% then the publisher must pay Sony a Cross-Platform Revenue Share calculated as follows:

> "Cross Platform Revenue Share = [(Cross-Platform Revenue x PS4/PS5 Gameplay Share) – PS4/PS5 Cross-Platform Revenue] x [15%]"

Mr Brown told us that, as of 2024, Sony had only collected around US$30,000 under this provision.

C. MARKET DEFINITION

(1) Our Approach to market definition

117. For the most part, the approach we should take to market definition was uncontentious as between the parties, reflecting the conventional approach established in regulatory guidance and previous authorities.[1] There was some difference between the parties about which set of products or potential markets provided the most appropriate starting point for conducting the market definition exercise. We will explain those differing views in due course.

[1] See for example the discussion in *Kent* at §§141–174.

(a) Conducting a SSNIP on the focal product

118. For present purposes, we prefer to start with the focal products which are the subject of the Class Representative's allegations of anti-competitive behaviour, namely, digital PlayStation games and add-on content and their distribution. That seems the obvious first step in identifying the most suitable market in respect of which to analyse Sony's conduct. Both parties accepted that this was a permissible way to commence the exercise.

119. This market definition exercise involves identifying substitutes for the focal product to test whether there is a market in which market power in relation to that focal product can be exercised. If any given candidate market is rejected, then the proposed market needs to be widened to encompass a wider set of products to assess whether that wider market then meets the test.

120. The Hypothetical Monopolist Test or **HMT** is a conceptual exercise to assess substitution. It asks the question whether the imposition of a small, but significant, non-transitory increase in price of 5-10% (a **SSNIP**) of the focal product would be rendered uneconomic by reason of sufficient switching by consumers away from that product (demand-side substitution) and/or sufficient switching by adjacent suppliers towards the supply of the candidate product (supply-side substitution). The assessment of whether the SSNIP is uneconomic needs to take account of the aggregate effect of all substitution options. Where it is not possible to carry out a definitive, quantitative, test of the SSNIP hypothesis, it is necessary to make use of all available information and to apply an element of qualitative judgement in order to reach a conclusion.

121. Here, according to the Class Representative's allegations of infringement, the focal product, as far as the consumer facing activity is concerned, is digital PlayStation games and the relevant price is therefore the full digital price of games sold through the PS Store. In respect of the activity that takes place between publishers and Sony, the focal product appears to be the distribution service for digital games provided by the PS Store, with the relevant price being Sony's 30% commission (although that supply side activity assumed less significance in the case than the demand side, consumer facing activity).

122. We recognise that the Class Representative also alleged infringement in respect of add-on content. However, neither party placed any great weight on the distinction between digital games and add-on content (including virtual currency), although the Class Representative asserted that they are in distinct markets.

123. Potential substitution options for the supply of digital content come most obviously through:

(1) The sale to users of physical PlayStation games (not add-on content).

(2) The purchase by users of the same game on Xbox and Switch and through the PC channel via multi-homing (for games and add-on content) and cross-commerce (for add-on content).

124. It therefore makes sense to start the analysis by looking closely at these options, which is what we will do in the next section. However, while that will be informative about the consequences of a SSNIP, it does not represent the full range of inputs into the HMT, which anticipates consideration of all substitution options that might make the SSNIP uneconomic. This would include, for example, consideration of the possibility that a SSNIP might cause consumers not to purchase a game at all. It would also potentially include options which are open to publishers on the supply side of the PlayStation platform.

125. As will become apparent, the conclusions we have reached in the next section on the SSNIP analysis as applied to physical games, multi-homing and cross commerce mean that it is not necessary to complete the SSNIP analysis by looking at all of the substitution options in detail. That is partly because of the concessions made by the Class Representative about the case if we reach the conclusions which we have below. It is also because of the apparent materiality of the findings we have made. Nothing in this next section should however be taken as suggesting that the SSNIP exercise is conceptually limited only to the points we have discussed in detail.

(b) The alternative analysis at a systems level

126. Another important consideration is that the market in which the Class Representative's focal products are sold is an aftermarket to console sales. In other words, the sale of digital PlayStation games and add-on content only occurs as a consequence of a consumer first acquiring a PlayStation console.

127. An alternative way of approaching the market definition exercise would be to look at the primary market (the console market) and the aftermarkets (the markets for the sale of digital PlayStation games and for the sale of add-on content) in a holistic way, by considering the extent to which competition in the console systems market constrains Sony's behaviour in the aftermarkets. Sony encouraged us to begin the market definition exercise by hypothesising such a systems market. We prefer to consider the issue of whether a systems market is appropriate as an alternative and secondary exercise, after first conducting the conventional HMT/SSNIP on the focal product which is the focus of the Class Representative's complaint. We understood Sony to accept that this was an approach that was reasonably open to us.

128. Accordingly, after we have considered the SSNIP in relation to a focal product of digital games, we will therefore turn to consider the alternative question of whether inter-system competition between different console platforms provides a sufficient constraint to justify viewing the relevant market as a systems market.

129. A systems market could be said to exist if it could be established that the supplier's conduct in the supply of the secondary product is effectively constrained by competition in the primary market. According to the European Commission's Notice on the Definition of the Relevant Market for the Purposes of Union Competition Law (C/2024/1645) (the **Commission Notice**):

> "99. In certain circumstances, the consumption of a durable product (primary product) leads to the consumption of another connected product (secondary product). This is often called an 'after-market'. In these circumstances, the Commission also takes into account the competitive constraints imposed by market conditions in the respective connected markets when defining the relevant markets for the primary and secondary products and/or in the competitive assessment.

[…]

101. The definition of a system market may be more appropriate:

(a) the more likely it is that customers take the whole-life costs into account when purchasing the primary product;

(b) the higher the expenditure on (or the value of) the secondary product(s) compared to the expenditure on (or the value of) the primary product;

(c) the higher the degree of substitutability between primary products and the lower the switching costs between primary products;

(d) when there are no or few suppliers specialised only in the secondary product(s).

[…]

104. (Digital) ecosystems can, in certain circumstances, be thought of as consisting of a primary core product and several secondary (digital) products whose consumption is connected to the core product, for instance, by technological links or interoperability. When considering (digital) ecosystems, the Commission may thus apply similar principles to those applied to after-markets to define the relevant product market(s). When the secondary (digital) products are offered as a bundle, the Commission may also assess the possibility of that bundle constituting a relevant market on its own. Although not all (digital) ecosystems fit an after-market or bundle market approach, the Commission takes into account, where relevant, factors such as network effects, switching costs (including factors capable of leading to customer lock-in) and (single- or multi-) homing decisions for the purpose of defining the relevant product market(s)."

(footnotes omitted).

130. Assessing the constraint arising from consumer purchasing decisions in a primary market conventionally involves the fourfold considerations set out in *EFIM v Commission* C-56/12 P, EUT:2010:517 (***EFIM***), which both parties referred to in their submissions, namely that:

(1) Consumers are able to make informed choices, including with regard to prices over the lifetime of the console.

(2) Consumers are likely to make such informed choices when making their purchases.

(3) Where it appears that an operating policy is being pursued on the secondary market, a sufficient number of consumers adjust their purchasing practices on the primary market.

(4) This adjustment of purchasing practices takes place within a reasonable period of time.

We refer to this analytical framework in this Judgment as the ***EFIM* Criteria**.

131. It is apparent that the *EFIM* Criteria may not address all aspects of inter-system competition. In this case, the existence of multi-homing, especially among some categories of high value spenders (such as Connoisseurs), provides a direct means of switching game purchase and usage without the need for a fresh console purchase. This is an element of inter-system competition, but one which should arguably be taken into account as a direct substitution option in assessing a SSNIP of the digital distribution price.

132. More generally, it seems inappropriate to treat the *EFIM* Criteria as a rigid set of requirements that have to be met against some fixed standard. The point of the test is, as can be seen from the way it was used in the *EFIM* case itself, to assess whether the prospect of competition in the primary market (consoles) is sufficient to discipline anti-competitive activity in the secondary market (the supply of digital content). That is a nuanced question of judgement on the facts, and we consider that the *EFIM* Criteria should be seen as being descriptive rather than prescriptive. The extracts from the Commission Notice referred to above support this approach of making a judgement based on a broad assessment of the relevant facts.

133. There is a question about where in the analytical framework for assessing market definition and dominance the *EFIM* Criteria should be applied: should we consider it when considering market definition, or when considering dominance? Either approach seems open to us, as long as it deals with the issue properly at some stage (the systems market question is a very significant one, as the Class Representative accepts that the entire case - both exclusionary and exploitative abuses - fails if we conclude that there is a systems market). Both

parties seemed to prefer to deal with it at the market definition stage and that is the approach we have adopted.

(c) Other issues relating to market definition

134. There are a number of other issues which potentially impact on market definition. We will mention them briefly here and will expand on them further where relevant in the market definition analysis below.

135. First, as we have already mentioned, it is possible that publishers who are supplying games to Sony for onwards sale could be a constraint on Sony's behaviour. We are dealing in this case with a form of two-sided market, in which Sony deals with two different groups of users (publishers using the Sony PlayStation system to distribute their games and consumers purchasing digital PlayStation games). Where the demand from one group of users has an influence on the demand of the other group, this is said to create network effects which might operate to constrain the platform's behaviour. For example, the extent to which Sony encounters publisher power when negotiating discounts and limited exclusivity arrangements might operate to constrain Sony's pricing activity in the distribution of games to users.

136. In this case, we think the network effects are of limited significance in our analysis. While there are places where it has been appropriate to recognise their existence and their impact on the economic context of the markets being analysed, we have not found it necessary to consider them in any detail.

137. Secondly, it is necessary as part of any substitution analysis to consider the concentration of users who purchase the relevant products, both in terms of the number and value of purchases. The question here will be to what extent the threat of switching by high volume/high value purchasers (such as Connoisseurs) can operate to discipline Sony's pricing and other behaviour.

138. Thirdly, there are also issues about "Cellophane fallacy" effects which potentially arise in relation to the SSNIP on both console prices and on game

prices.[2] The question here is whether the current prices have already been elevated to the monopoly level, such that a SSNIP from this elevated level generates a misleadingly high degree of substitution and therefore leads to an unjustifiably wide market definition.

139. In relation to game prices, it is a core part of the Class Representative's case that Sony charges excessively high prices for digital PlayStation games and that, as a consequence, Sony earns exploitatively high profits on those sales and across the PlayStation system as a whole. Logically, that would suggest that PlayStation digital game prices are artificially high and that the SSNIP ought to be conducted at a lower (competitive) game price level.

140. Despite that, there was, until the very last minute, no suggestion in the Class Representative's case that Cellophane fallacy considerations might impact upon the market definition analysis. Mr Harman did not address the point at all in his expert reports. When asked about it in the concurrent evidence session, he did not engage with the issue but instead sought to explain his position (of ignoring the Cellophane fallacy issues) by referring to constraints placed on Sony at a system level, such as the need to be competitive on price with Xbox. That is of course inconsistent with the Class Representative's case.

141. In closing arguments, Mr Palmer sought to introduce the concept that current prices were supra-competitive. While this position is consistent with the Class Representative's case, it was unsupported by any analysis and had not been mentioned in the Class Representative's case at any prior stage.

142. That has left us in the difficult and unsatisfactory position that, if the Class Representative's allegations had any merit, there would likely be a Cellophane fallacy issue to deal with. Otherwise, it would, rather surprisingly, suggest that the alleged monopolist, Sony, had decided not to profit maximise by raising prices above competitive levels. However, no expert analysis whatsoever was advanced by the Class Representative to assist us in resolving that issue. We

[2] So called after the US case, *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956), in which it was first identified.

will return to address that problem in the context of the evidence available to us about the competitive level of digital PlayStation game prices.

143. In relation to console prices, Mr Colley identified what might be called a "*reverse Cellophane fallacy issue*". This arises from the cross-subsidisation of the console business by the game distribution business. As already noted, that cross-subsidy is said by Sony to be an inherent part of its business model, by which it sells consoles for little or no gross margin and recovers margin from games sales. If it was necessary to look at the console market separately from the game sale aftermarkets, then Mr Colley argued that it would be appropriate to adjust the console price to remove the effect of the cross-subsidy in order to perform a SSNIP analysis from the base of a higher price that would represent the competitive price for a standalone console supplier.

144. We agree with that approach. It has potentially significant implications for consideration of the console market, which we will explore in section C(4).

145. Fourthly, we note that Mr Harman's approach to market definition was to identify the console market and a number of what he said were distinct aftermarkets, including a separate aftermarket for the supply of the operating system software which is installed on the PlayStation console when it is purchased. There seems to be no sensible basis on which one could identify an operating system software market, separate from the console market. It adds nothing to the overall analysis in any event, which we understood the Class Representative to accept by the time of closing submissions. We will not therefore spend any further time in this Judgment discussing that potential market.

(2) SSNIP analysis – likely substitutes for digital PlayStation games

146. As noted in §123 above, there are several obvious ways in which substitution might occur in relation to the sale of digital PlayStation games and/or add-on content in response to a SSNIP, most notably:

(1) Users switching to physical PlayStation game purchases.

(2) Users switching game and add-on content purchases by way of multi-homing or cross-commerce.

(a) Physical games as a substitute

147. The question here is whether and to what extent, in the face of a SSNIP for digital PlayStation games, PlayStation console users would switch to purchasing PlayStation games through physical distribution routes.

148. It is clear that the question of whether physical games are a substitute for digital games is a key issue. While the HMT requires the consideration of the aggregate of all substitution options available to consumers, the Class Representative accepted that if physical and digital PlayStation games were to be considered to be close substitutes for each other (and therefore almost certainly in the same market), then the claim fails in relation to digital PlayStation game sales (but not necessarily for the sale of digital PlayStation add-on content).

149. We will first consider contextual evidence about the scope for substitution between digital and physical PlayStation games and will then consider the quantitative analysis advanced by the experts, and, particularly, the assertion by the Class Representative that there is a substantial difference in price between the two products, which in its view would suggest they are not close substitutes.

Context

150. Sony argued that there is little functional difference between the physical and digital PlayStation game product, which are more or less identical save for the delivery mechanism, suggesting they are likely to be in the same market unless there is compelling evidence to the contrary. For most standard editions of games, the product sold is essentially the same, regardless of which channel it is sold through.

151. Sony noted that some [✂]% of PlayStation users have access to both physical and digital games by reason of the configuration of their consoles. Around [✂]% to [✂]% of PlayStation users have consoles which are digital only and

cannot access physical games without purchasing an external device (which was not always an available option for these users). The Class Representative argued that for at least this group there is no real substitution option.

152. Sony relied on various internal documents to illustrate consumer preference and to demonstrate that Sony viewed digital and physical games to be close substitution options. For example:

(1) A document from October 2019 entitled "Impact of Software Pricing Changes" contains survey responses to a question about the impact on purchasing behaviour if a retailer reduced the price of physical games by US$10. The responses indicated a willingness to switch from digital to physical games, with 52% of respondents saying they would buy a lot more physical games versus digital games and a further 33% saying they would buy a little more.

(2) A document from the first quarter of 2020, the "Global Brand Tracker SIE Quarterly Report", contains detailed comparisons of market position and consumer preference for physical and digital PlayStation games, indicating that Sony considers there to be competition between physical and digital retailing.

(3) A document from February 2022 entitled "Global Platform Engagement Tracker" contains survey responses which show considerable willingness among console owners to use both physical and digital games. In relation to the standard edition of the PS5, 36% of respondents preferred physical games, while 41% said they preferred digital games. However, only 18% of respondents said they always preferred digital games as opposed to mostly doing so. For the digital only version of the PS5, the proportion of console owners who preferred digital games was, unsurprisingly, much higher, at 82%.

(4) A document from April 2024 entitled "Q2 SW Sku Review and Pricing Alignment v.2" shows Sony considering physical and digital launch prices for games and indicates a desire to achieve parity between them.

(5) A document from April 2025 entitled "The Wanderer Pricing Discussion" contains some analysis of the relationship between physical and digital PlayStation game prices. [✂] However, the slides also suggest that a decrease in digital price would not alter physical share, which seems an odd asymmetry. This analysis appears near the end of the slide pack and it was unclear what the precise status of the work was. We did not hear directly from any witness involved in the preparation of the analysis.

(6) A series of documents known as "Store v Market" show Sony monitoring prices and promotional activity across the games market, including physical PlayStation game distribution channels.

153. The Class Representative identified Sony documents which suggest that consumers have different preferences for digital and physical products and that Sony does not seek to compete with physical distribution when it sets prices for digital PlayStation games:

(1) Documents such as the 2020 "Global Brand Tracker SIE Quarterly Report" show that consumers attach different value to the attributes of physical and digital games, with the top 5 reasons for preferring one or the other being quite distinct.

(2) A "Pricing and Promotion Optimisation" slide deck from 2024 discusses the pricing by Sony of two games - *God of War Ragnarok* and *Hogwarts* – compared with pricing for the same games by Amazon. [✂] We will return to the relationship between digital and physical game prices in greater detail shortly.

154. In a written submission made after the trial, the Class Representative also pointed to Sony's decision to cease the release of physical discs for new titles from January 2028, arguing that Sony's ability at will to remove any constraint on digital PlayStation game sales from physical sales showed there was no effective constraint in the first place and cast doubt on whether physical and digital sales are in the same market.

155. Sony's witnesses, and especially Mr Lempel and Mr Cox, were asked to comment on whether Sony took account of physical game prices in its pricing strategy:

(1) [✂]

(2) [✂]

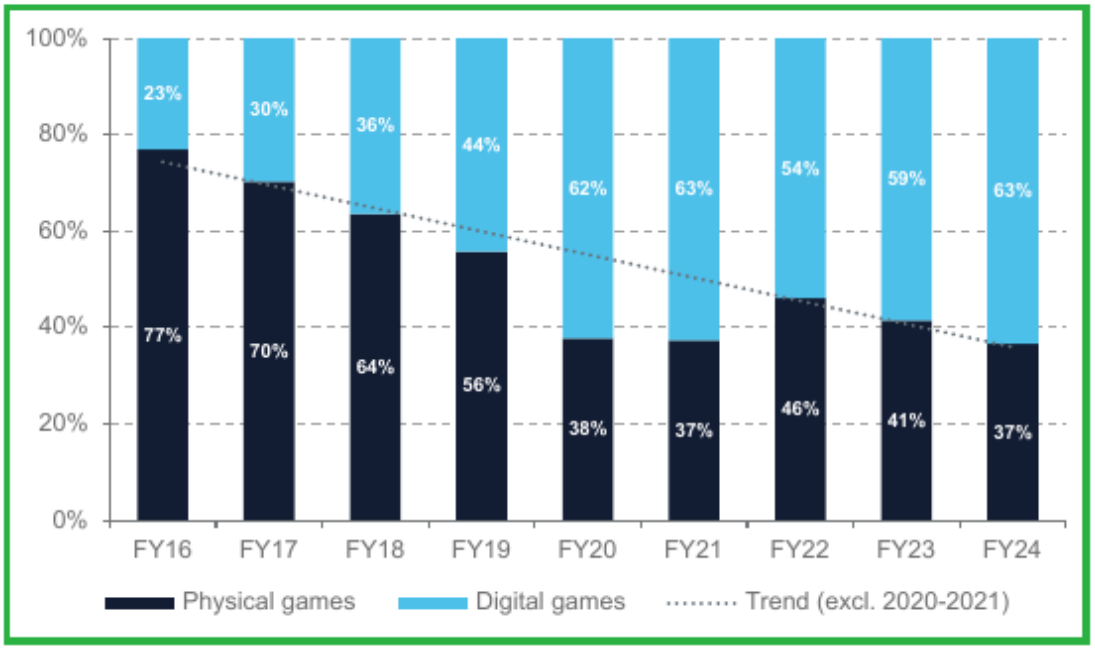
(3) [✂]

(4) [✂]

(5) [✂]

156. We also note that, as is common ground, there has been a shift over time from physical to digital game usage, although this was accentuated by the move towards digital sales during 2020 and 2021, the two years most affected by Covid-19:

Figure 4-9 Comparison of physical versus digital game sale volumes in UK



157. On the face of things, the shift in demand over time from physical to digital might suggest that digital PlayStation games are a close substitute for

physical PlayStation game sales. However, the Class Representative argued that this shift is merely reflective of a growing preference for a product that is sufficiently differentiated that it is in a different market. The fact that over time demand has indeed shifted in favour of digital sales does not in itself reveal anything about the sensitivity of demand to relative prices of the two formats.

158. The Class Representative also sought to demonstrate that Sony attempted to accelerate the shift from physical to digital, as it makes more margin on digital sales and the shift reduces the competitive threat of an alternative distribution channel. It is not clear to us how the latter point sits with the Class Representative's insistence that physical game sales are not a constraint on digital game sales. In any event, we do not think that Sony's intentions in this regard (whatever they might be) are particularly relevant to the market definition exercise.

159. It is also not clear to us that Sony does make more margin on digital sales than it does on physical sales. When this point was put to Mr Lowe, he said it was unclear to him which of digital and physical sales was contributing more on a per unit basis. One complication here is that Sony's royalty on physical game sales is levied on the wholesale price at which the retailer purchases the game from the publisher, whereas retailers frequently have to discount the retail prices of physical stock in order to sell it to consumers.

160. We should also deal with the Class Representative's post-trial submissions about Sony's decision to release new games only in digital format after January 2028. This is well beyond the claim period. We are only concerned with assessing whether physical distribution has been a reasonably likely form of substitution in response to a SSNIP during the claim period. It also seems to be inconsistent with the Class Representative's case. If there is no substitution between physical and digital games, then a decision to cease physical sales would mean that those sales would be lost altogether. If there is a legitimate concern with this decision, it would be (contrary to the Class Representative's case) that it eliminates a competitive constraint on Sony from independent retailers and allows Sony to increase digital pricing once that constraint has gone.

The Class Representative's claim of a substantial difference in price

161. Against that background, the key argument relied on by the Class Representative to establish that physical and digital PlayStation games are not close substitutes is the contention that there has been a significant and persistent difference between digital PlayStation game prices and physical PlayStation game prices. The Class Representative relied on an analysis carried out by Mr Harman which he said established that consumer prices for physical games were on average [✂]% lower than digital games. In his view, this difference was sufficiently large that physical games could not be seen as a close substitute for digital ones.

162. In addition to Mr Harman's analysis (which we will examine in detail shortly), the Class Representative relied on some documents which appeared to show Sony acknowledging such a price difference. For example:

(1) An internal chain of emails about a game called *No Man's Sky* in October 2016 recorded a review of differences between digital and physical game prices. However, the discussion apparently related to second-party games in the US and is difficult in some respects to understand. The emails were not, unfortunately, put to Mr Lempel, who had been copied and commented, contemporaneously, on the chain.

(2) An internal Sony spreadsheet from July 2017 with a tab called "competitor analysis", which shows a range of price differences for a number of games. This shows prices for a number of new releases and pre-orders being between 10 and 25% cheaper for the physical versions, although with some outlying differences (one being 42% cheaper for the physical version and one being 0.3% cheaper for the digital version). It also shows the top 5 promotional titles, where digital versions are generally cheaper than physical ones by between 16.5 to 78.1% (although one title is 5.7% cheaper for the physical version).

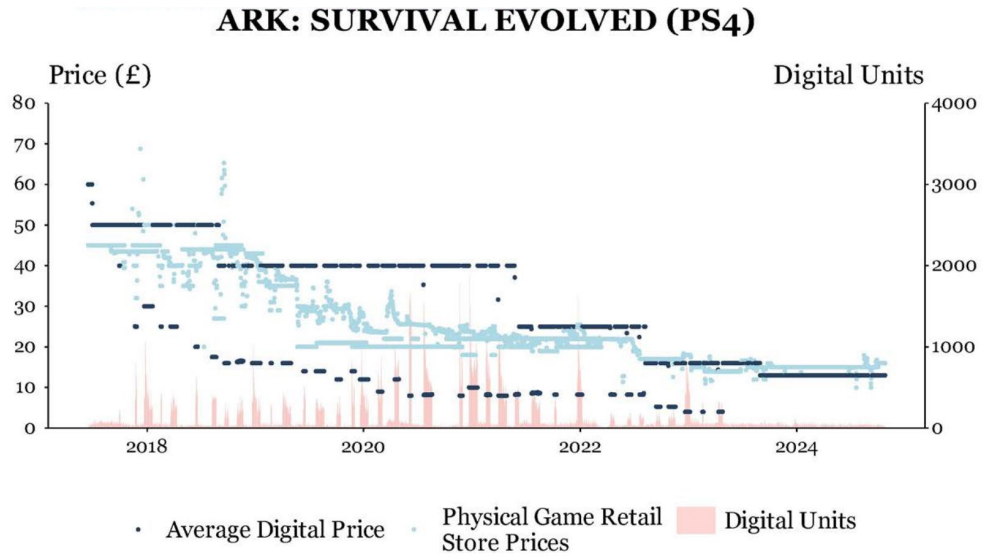
Mr Harman's initial analysis

163. Mr Harman's initial approach, set out in his fifth report, appendices I and O, was to compare prices of digital PlayStation game titles on the PS Store with the average price of the same title sold as a physical disc by a group of six major retailers. In order to express the difference between digital and physical game prices across the periods observed in a single statistic, it was necessary to find some way to compute an average price difference for each game over that period. While Mr Harman was able to use transaction volumes supplied by Sony to weight the digital prices, he did not have that information for the physical sales and so was unable to weight those for volume. He did weight the importance of the game by reference to its share of total PlayStation game sales. The result of his analysis was to identify a difference in average daily price such that the average price of a game in the physical retailers was [✂]% below the digital price of the same game in the PS Store.

164. There is no disagreement between the experts that the simple (unweighted) average price comparison between digital and physical versions of the same PlayStation game yields this [✂]% price premium for digital prices. However, Mr Harman's approach gives equal weight to every day on which a game price is observed, regardless of the number of game sales actually made on that day. As highlighted by Mr Colley, there are two factors which make this approach misleading.

165. The first is that game sales volumes are typically much higher in the period close to product launch and then tail off over time. Mr Harman showed in Table 5-2 of the supplement to his sixth report that [✂]% of digital game sales are made in the first five weeks after launch of a game. This means it is particularly important to understand if the price difference between physical and digital games in this launch period is different from its relationship in other periods. The corollary of this is that games sales are thin or even non-existent in some of the later periods of a game's life. Including observations of price differences on days when no games are sold and giving these comparisons equal significance to observations drawn from post-release days in which sales are high, clearly has the potential to yield misleading results. As Table 5-2 also shows, the first five weeks after launch only accounted for 5% of the observations which Mr Harman used for his unweighted average.

166. The pattern of price variation and volume (at least for digital game sales) can be seen clearly from charts prepared by Mr Colley in Annex C of his third report, which plot average digital and physical game prices and the volume of digital units over time. For example, in relation to *Ark: Survival Evolved*, the picture looks like this:



167. We have clear evidence that the front-loading of game sales towards the product launch date is more pronounced for digital than physical sales. This means that a perfectly constructed weighted average might yield an average price premium for digital games even if (hypothetically) the prices of the digital and physical version of each game were always identical at any point in time. This point was not specifically highlighted by the experts, but it casts some doubt on whether even an accurate weighted average price comparison would yield useful results for the comparison of digital and physical game prices.

168. The second factor is that there is a complicated relationship between prices and quantities sold. On the one hand, the standard result to be expected from downward-sloping demand curves is that consumers increase their purchases when prices fall. If more units are purchased when a product is discounted, then the average transaction price will be lower than a simple average that gives equal weight to each day's price. This picture is, however, complicated by the fact that price is not the sole determinant of volumes, and that the causal relationship between price and quantity sold can work in the opposite direction.

So game prices tend to be higher in the period immediately after product launch because demand is strongest then (and there is less need for sellers to discount the price).

169. Since these phenomena push in opposite directions, we cannot even be sure whether a weighted average price will be higher or lower than the unweighted average price. Mr Harman adopted the standard assumption that weighted will be lower than unweighted averages (because consumers will be attracted to lower prices). He said it is "counter-intuitive" to think that a weighted average would be higher than the unweighted average. Mr Colley pointed out that Mr Harman's "intuition" on this is unreliable, and that this relationship could be overturned if stronger demand causes higher prices and suppliers react to weak demand by cutting prices.

170. There was agreement in principle between Mr Harman and Mr Colley that a weighted average price comparison would be more insightful. However, given that it is not possible to derive an accurate measure of the weighted average of physical prices, there was substantial disagreement between Mr Harman and Mr Colley about how to deal with that problem.

171. Mr Colley proposed alternative proxies for the missing data on physical transaction volumes, which showed the difference in price between the two distribution channels to be lower than Mr Harman's [✂]% result. He also carried out econometric analysis on the relationship between physical and digital prices. Mr Harman carried out further analysis to support his original findings. Both experts conducted various sensitivity analyses.

Mr Colley's proxies

172. Mr Colley's proposed proxies to enable him to estimate a weighted average physical price were as follows:

(1) The (known) date on which a physical disc is first activated on the PlayStation system (that is, assuming that physical discs are activated on the same day as consumers make their physical disc purchase).

(2) The (known) profile of digital sales of the same game on the PS Store (that is, assuming that physical sales patterns for any given game are the same as those for its digital sales).

173. Mr Colley's activation proxy yields a weighted price comparison between £[✂] for digital and £[✂] for physical games. This £[✂] price gap is [✂]% of the weighted average digital price. It is not necessary (as will become apparent) to say anything more about the outcome of the use of digital sales as a proxy.

174. Mr Harman criticised both of Mr Colley's proxies:

(1) Disc activation dates can differ from purchase dates. For example, if a disc is bought at a low Black Friday price and then gifted to (and activated by) someone on Christmas Day (when prices are higher), that will mean that Mr Colley's approach will assign an unfairly high price to the physical game sale.

(2) Using PS Store sales profiles to weight physical game sales will be misleading if discounts on the PS Store do not correspond with the dates on which physical discs are discounted, since it will assign an unduly high sales volume weighting to physical game sales that took place when physical game prices were high, and an unduly low weighting to disc sales that took place at times when they were low. Mr Colley argued that the timing of physical and digital discounting was highly correlated, but this is obviously insufficient to establish that they are identical. The weaknesses of the PS Store sales proxy became especially clear during the course of the trial, and it was more or less abandoned by Mr Colley and by Sony.

175. The experts considered a number of checks and sensitivities to explore the robustness (or lack thereof) of Mr Colley's proxies:

(1) Christmas sales: Mr Colley removed the Christmas sales period from his observations to deal with the criticism that his activation proxy might pick up cases where a purchase is made at a discount prior to Christmas

and activated after being given as a present when prices are undiscounted. Mr Harman identified a number of possibilities where this distortion might arise, but it is not at all clear that there is a systematic problem. In any case, Mr Colley found that removing Christmas sales does not change his conclusions about the weighted average price.

(2) Introducing a lag between purchase and activation: to deal with the criticism that consumers might need to wait for delivery of a game before activating it. Mr Colley introduced a three-day lag by applying the prices that were observed three days prior to activation. This made no difference, although it is a crude adjustment, since there is no good reason to believe that the three-day lag would be appropriate for all physical deliveries. The same is true for the other arbitrary lags introduced by Mr Colley in his fourth report. No single lag or rolling average can be assumed to capture the (unknown) diversity of the actual lags between the purchase and activation of physical games.

(3) Experimenting with different lifecycle periods: to address the point that prices are higher at launch than in later stages of a game's life, both experts provided variants of the calculations looking at different lifecycle periods. Mr Harman adopted three separate lifecycle periods: launch (up to 5 weeks); maturity (6 to 22 weeks) and catalogue (23 weeks onwards). This classification was taken from an internal Sony document. Mr Harman found that this reduced the price disparity, but only by [✂] percentage points to [✂]% when using a simple average of physical retailer prices. Mr Colley responded by breaking the analysis down to shorter lifecycle periods and found that the [✂]% price difference falls to [✂]% in one of his many scenarios. All of this shows that it is very hard to draw useful conclusions from the multiple attempts to cut the data into different slices.

176. Mr Harman also produced price/quantity scatter plots to give a visual picture of the relationship between the change in physical price and each of Mr Colley's volume proxies, and to compare this with the same data for digital sales.

Figure 4-4 Physical price v activations and digital price v digital volume

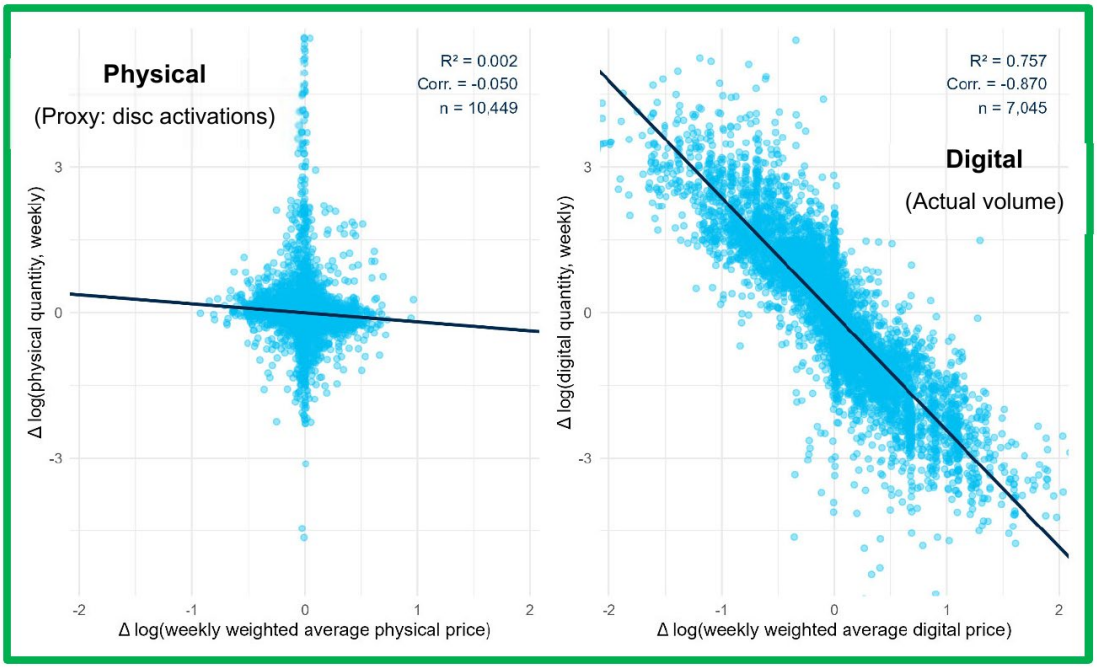
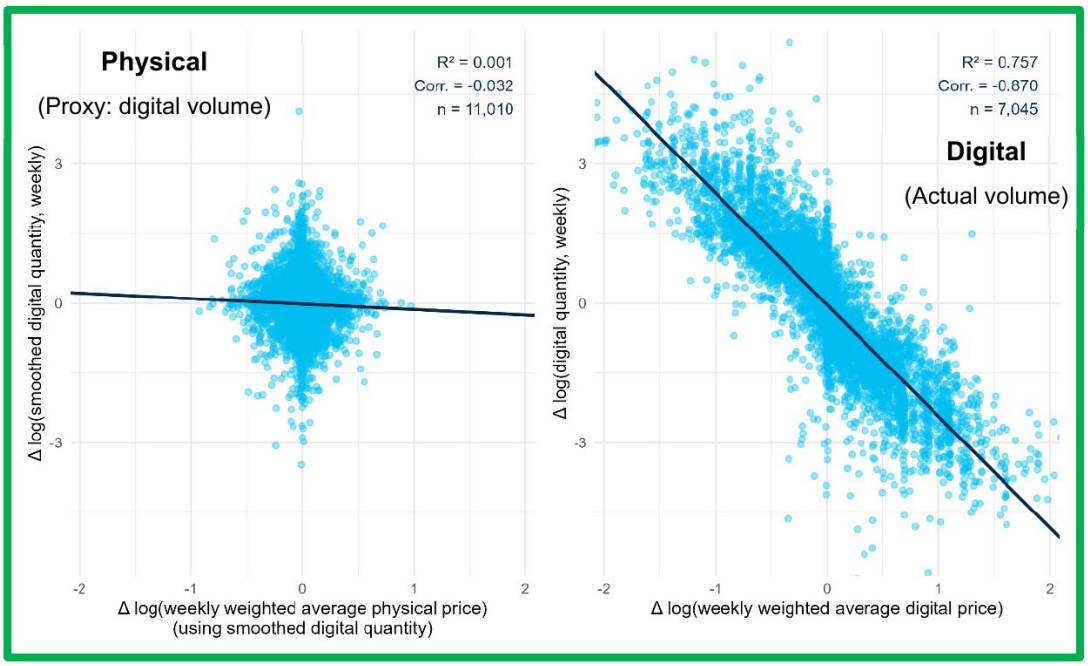


Figure 4-5 Physical price v moving average digital volume and digital price v digital volume



177. The digital part of these charts shows a clear negative relationship between price and volume, and the R-squared diagnostic statistic of 76% indicates the very high degree to which the observed variations in volume are associated with changes in price. Mr Harman contrasted this reassuringly consistent result with the two physical charts, which both show an R-squared of much less than 1%

and (correspondingly) no visual sign at all of the expected relationship between price and quantity.

178. Mr Harman argued that the very poor performance of the physical price charts illustrates that neither of Mr Colley's proxies provides a robust measure of actual quantities associated with each price observation – if they did, one would expect to see a similar negative relationship between prices and volumes in these charts.

179. When Mr Colley responded to these charts in his fourth report, he failed to address directly the points made by Mr Harman. In the discussion of the charts during the concurrent evidence, Mr Colley argued that the lack of relationship between physical prices and volumes in the charts was due to a failure to distinguish between movements down a given demand curve (which would show the expected negative relationship) and cases where the demand curve shifts position (for example, between the high demand scenario at game launch and the low demand at product maturity).

180. However, under cross-examination Mr Colley admitted that this explanation was a "knee-jerk" reaction and that the explanation he gave in the concurrent evidence session was "wrong". He then advanced another explanation, which was that the lack of correlation is caused by the fact that the physical price is an average across six retailers, whereas a price cut by just one of those six retailers (typically Amazon) might be the factor that causes physical demand in that period to increase.

181. In closing submissions, Mr Palmer observed that, even if the averaging across the physical retailers might weaken the correlation (because a large price cut by one retailer would be diluted by the prices charged by the other five retailers), it should not make the relationship disappear altogether. That seems correct and we are left without any real explanation from Mr Colley as to why the physical correlation between price and volume in the charts is virtually zero (0.002, or 0.2%).

182. In our assessment of this evidence, Mr Harman's scatter plot analysis does raise some genuine concerns about Mr Colley's proxies and suggests that we should be cautious about both of Mr Colley's proxies and their ability to capture the short-term relationship between physical prices and quantities.

Sensitivity analyses on the Harman approach

183. Mr Colley conducted a sensitivity analysis in relation to Mr Harman's original observations. He showed that simply removing the last 1% of the price observations in Harman's physical games data caused the gap between digital and physical game prices to fall from [✂]% to [✂]%.

184. This exercise shows how Mr Harman's result depends on a period at the end of the game's lifecycle when (according to Mr Colley) virtually no digital sales take place. In other words, it illustrates the instability of Mr Harman's measure and the problems with giving equal weight to days when few if any sales are made, and those when sales volumes are high.

185. In his seventh report, responding to Mr Colley's criticisms of the [✂]% conclusion in Mr Harman's fifth report, Mr Harman conducted further analysis (including using some data not available when he prepared his previous reports) to check the reliability of his simple average approach. He used the retailer data from which he derived the simple average and:

(1) Carried out a price comparison that, rather than using a simple average price of the six physical retailers in his sample, computed an average price that was weighted by the actual relative sales of the different physical retailers in any given time period. This weighting exercise (which adjusts observed physical retail prices at any point in time without addressing the problems of converting those prices into a single statistic across the period) generated a lower physical price and widened the price difference between physical and digital games to [✂]%.

(2) Assumed that consumers always purchase at the minimum price offered by any retailer, which produced a price difference of [✂]%.

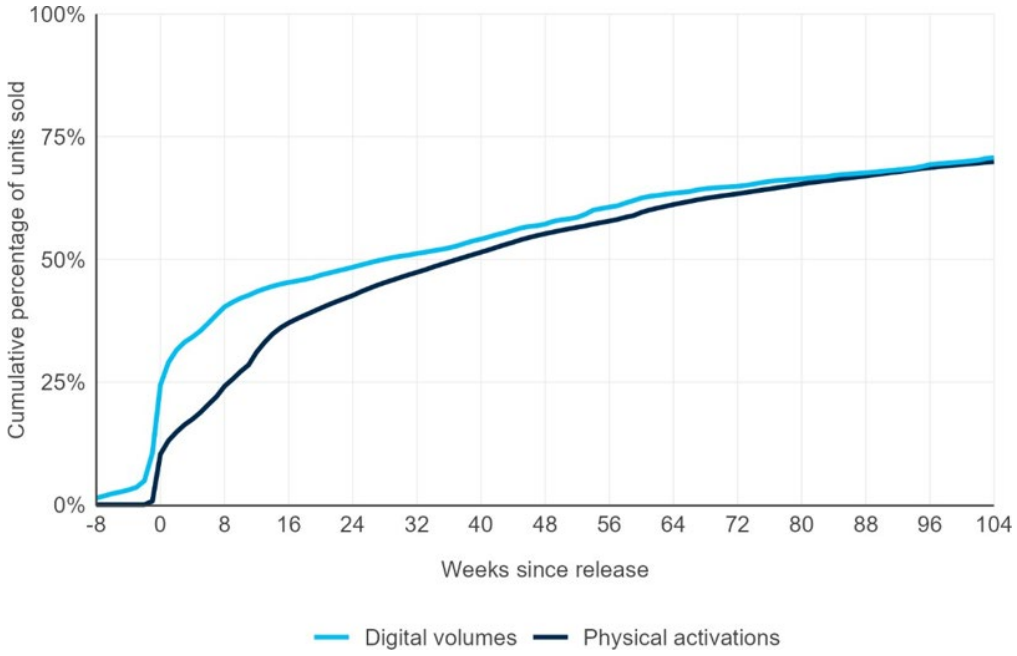
186. Mr Colley observed in response that the weightings were very crude and dependent on broad assumptions. He argued that choosing to focus exclusively on the minimum retailer price was irrational, as it ignores real world inventory and shipping considerations. Since the average prices of the individual physical retailers observed by Mr Harman differed from one another by much more than 10%, he noted that this would, on Mr Harman's approach, also imply that these retailers did not even compete in the same market as one another.

187. Mr Harman's final position was essentially that he recognised that weighting the physical game sales by volume was the best option if the data was available. If the data was not available, his (imperfect) unweighted average comparison is a significantly better option than Mr Colley's unreliable proxies. He relied on a visual representation of average digital and physical game prices to emphasise the apparent difference in prices across the life cycle of a game:

[✂]

188. Mr Harman also produced a chart showing the cumulative percentage of units sold over time (using physical activations as a proxy for physical sales). This showed that a significant proportion of digital games were sold and physical games were activated in the period from eight weeks prior to launch until twenty-four weeks after launch:

Figure A-1 Digital purchase volumes and physical activations over first two years of game lifecycle (% of total lifetime sales)



189. In his seventh report, Mr Harman also usefully pointed out that, for digital games (where both prices and volumes are available from Sony's data), the weighted average price (£[✂]) is just [✂]% below the unweighted price (£[✂]). This might suggest that weighting for volume has a limited impact. However, it is unclear how this net result breaks down between the tendency for prices to be higher at launch (which would tend to push the weighted price *above* the unweighted price), and the opposing tendency for discounts to generate extra sales during the catalogue period (which would tend to bring the weighted price *below* the unweighted price).

Mr Colley's regression analysis

190. In section A2 of his third report, Mr Colley reported the results of a regression analysis, from which he drew the conclusion that there is no statistically significant difference between digital and physical PlayStation game prices. The econometric analysis aimed to test two things:

(1) The gap between physical and digital game prices.

(2) How the prices of digital and physical games change over their respective life cycles.

191. The physical/digital price difference: On the simple comparison of any given game's prices in the two formats, Mr Colley found that physical prices (determined by using his activations proxy) are on average £[✂] *higher* than digital game prices (i.e. 5.5% of the typical game price of £[✂]). Using a specification that converts the input data into logs (a common practice that converts the results to percentage differences) he found that the physical game price is on average [✂]% higher than the digital equivalent – the very opposite of Mr Harman's simple average result. Mr Colley provided no explanation or commentary on why the absolute and percentage results should differ so much.

192. These results are both described by Mr Colley as "positive and statistically significant". The standard test for significance in scientific research is 95%, which means that a result is deemed "significant" if the researcher can be 95% sure that the "null hypothesis" can be rejected. In this case, the null hypothesis would be that there is no difference between physical and digital prices. However, closer inspection of the results shows that the £[✂] higher result is <u>not</u> statistically significant at this level (though it does meet a reduced 90% confidence level test).

193. Even then, however, the reliability of such results depends on the model being correctly specified. Given the lack of any real discussion or testing of these econometric results, the limited reporting of results leaves a number of troubling questions unanswered:

    (1) There is no commentary or discussion on why the level and log versions yield such different results.

    (2) The volume weightings for physical game sales rely on the activations proxy being accurate. If they are not, then the entire regression is compromised. It is important to bear in mind that the statistical significance of results only applies if the model itself has been properly constructed and meets certain criteria. If the model is flawed, the results that come out of it will also be flawed.

(3) The regression results cite a "within-R-squared" result for both specifications that is extremely low. It is [✂]% for the levels regression and [✂]% for the logs regression. R-squared measures the degree of variation that is accounted for by the factors taken into account by the model, and a low R-squared highlights the scope for the model results to be unreliable because the model does not capture some very important influences. "Within" R-squared normally refers to the variation within the specific variable that is being measured, as distinct from the differences between that variable and other variables.

194. The way physical and digital prices move over time: Again, Mr Colley adopted both a levels and a logs approach in this analysis. He interpreted the levels regression as showing that digital prices decline faster (at [✂]p per month) than physical prices ([✂]p per month). He did not comment at all on the logs regression, though it also shows a faster decline for digital than physical prices.

195. These results are both highly statistically significant (even at the 99% level) but the null hypothesis here is whether or not game prices decline. It would have been more interesting to know whether the estimated difference between the decline in physical and digital prices is significant, but Mr Colley does not appear to have addressed this. The within-R-squared results for these regressions are much higher than for the price level comparisons at [✂]% and [✂]%.

196. In closing submissions, Mr Beard KC asserted that Mr Colley's regression results had not been challenged and so should be accepted by us. However, given that the results have not been fully explained by Mr Colley, the relatively short discussion of the regression exercise in the concurrent evidence, and the concerns we have identified above, we are reluctant to place reliance on them. In any event, we do not consider that they add materially to our understanding of the relationship between digital and physical PlayStation game prices.

Our conclusions on the difference between digital and physical PlayStation game prices

197. As a preliminary point, we note that evidence of price differences between digital and physical PlayStation games is not necessarily determinative, or possibly not even informative, of the market definition question. The prices of two differentiated products do not have to be identical to be effective substitutes for one another. The extent of the price difference may call into question the willingness of consumers to switch, but we have cited a number of factors that do differentiate physical and digital games in the eyes of the consumer, and so there is no necessary reason to expect the prices to be identical.

198. It is also noteworthy that the [✂]% price difference claimed by Mr Harman is relevant for the broader assessment of the Class Representative's case on abuse and damages, since it is the lynchpin of Mr Harman's, and the Class Representative's, arguments about excessive digital prices and how they are affected by the lack of retail competition such as occurs in the physical distribution channel.

199. Whatever the reason for taking an interest in the digital/physical price difference, it is clear that an average price difference which is unweighted for volume is not a very satisfactory way to compare digital and physical prices. The question is whether the deficiencies of that approach make the outcome so unreliable that we cannot accept it. Alternatively, do the proxies that Mr Colley has suggested overcome the absence of accurate sales data for physical games.

200. Mr Harman's "intuition" that weighted averages should be lower because consumers will buy more when prices are discounted is valid for the way games are sold later in the lifecycle, but it presents an incomplete explanation. There are various asymmetries which complicate the picture and which Mr Harman has not sufficiently addressed:

    (1) As noted in §167 above, the fact that game sales are concentrated towards the early post-release period will tend to make weighted average prices higher than unweighted average prices, since a greater volume of weight is attached to the early high price than the later low price. Furthermore, the fact that this skew of sales towards the post-release period is more pronounced for digital than for physical games

sales means that this phenomenon applies differently to the two categories, and this asymmetry can cause a further distortion in any unweighted price comparison of the two games categories.

(2) There appear to be different promotional pricing strategies applied between the sales channels, notably during the "catalogue period". As explained by Mr Cox and as is apparent from Mr Colley's Annex C charts, for digital prices, the general pattern is for the PS Store to [✂]. Even the simple snapshot provided by the July 2017 spreadsheet relied on by the Class Representative (see §162(2) above) showed considerable variation in the pricing relationship between the two channels, especially in relation to promotions.

(3) For physical retailers there is a tendency for more consistent discounting throughout the catalogue period, with most of the price observations for physical retailers falling in between the list and discount prices that are observed for digital games. It is plausible (as suggested by Mr Svensson in his evidence) that publishers and retailers are incentivised to fund price reductions in the physical channel as part of their inventory management, whereas for digital sales neither the developer nor the PS Store hold any stock and hence face no such risk.

(4) The physical prices used by Mr Harman are themselves an average price across the six largest retailers, whereas the digital price is a single PS Store price. There is some logic in focusing on the weighted average price across the physical retailers in the sample at any point in time. Doing so tends to reduce the level of physical game prices (if consumers are attracted to retailers with lower prices) and hence increase any digital price premium. However, exploring the implications of the diversity of individual retailer prices for physical games raises a number of obvious problems for the Class Representative's case that Mr Harman failed to address. The fact that the gap between one physical retailer price and another is generally more than 10% (and often considerably greater) tends to emphasise that substantial price differences can exist between the suppliers competing within any given market, which in turn

questions the validity of the test Mr Harman proposed for distinguishing physical and digital retailers.

(5) The latter point also prompted the (reasonable) observation that, in Mr Harman's Figure 4-3 average price chart, it would be more appropriate to show the physical price line as a broad band encapsulating the range of physical prices, in which case one would eliminate much if not all of the observed gap between the digital and physical prices.

201. We therefore know enough about the pricing and sales patterns of the two game formats to see that:

(1) Weighted averages could be very different (higher or lower) from unweighted averages.

(2) There are some important asymmetries between physical and digital game sales that could be expected to exert a systematic effect in making the unweighted average price higher than the weighted average.

(3) An unspecified part of any average weighted price premium for digital games could be ascribed to the different sales profile of digital versus physical sales rather than any difference in their prices at any point in time.

202. As regards the exercise of estimating weighted price averages, Mr Colley and Sony more or less abandoned the use of a proxy which uses digital sales volumes as a reference point for physical sales volumes. Using physical activations as the proxy does seem more plausible, but even small mismatches between the dates of purchase and activation could distort the estimated weighted average price of physical games. If demand is highly responsive to short term price changes, it is important to be confident that weighted averages accurately match up the price with actual purchase dates.

203. None of the sensitivities and checks proposed by the experts provide clarity on this. Mr Harman's scatter plot analysis gives real cause for concern about Mr

Colley's proxies, and Mr Colley's various responses on this were either unconvincing or inconclusive. Mr Colley's econometric analysis of the question is interesting but was not subjected to the scrutiny that would be required to test its results properly (and would in any event be undermined by any deficiencies in the activation proxy on which it relies).

204. Mr Harman's further analysis in his seventh report tended to reinforce the view that the complicated relationship between the pricing in the digital and physical channels was difficult to measure accurately, given the issues we have identified above:

(1) The exercise of breaking down the lifecycle of games into three broad periods and weighting the average prices within these periods suffers from the same problem of using unweighted average prices for physical sales within each period. As Mr Colley has demonstrated, the unweighted average price difference is very sensitive to changes in the number and length of periods chosen for analysis, which means that Mr Harman's further analysis is really no more reliable than his original unweighted approach.

(2) We have already commented on the difficulties inherent in Mr Harman's use of the minimum physical retailer price. It is not in our view possible to form a view of the reliability of this approach without considerably more information about the market conditions involved, which themselves are likely to introduce considerable complication into the analysis. Inventory and shippings costs are but two examples of these. We also agree with Sony that the disparity in price between the maximum and minimum prices looks surprisingly large, as does the [✂]% price difference between physical and digital sales which Mr Harman produces from this analysis.

205. We have therefore concluded that Mr Harman's further analysis is of little assistance.

206. Overall, we think neither expert's approach gives a reliable outcome. We agree with Mr Colley that Mr Harman's conclusion of a [✂]% difference cannot be relied on, and that there are clear and systematic reasons to believe that an unweighted average comparison will exaggerate any price premium of digital over physical PlayStation game prices. However, we also think Mr Colley's alternative approaches suffer from significant defects, and that several of the claims he made during the trial were shown to be incorrect.

207. We therefore conclude that Mr Harman and the Class Representative have failed to establish that there is a material price difference of the order of [✂]% between digital and physical games. The Class Representative's reliance on this difference for the purposes of market definition and for other important aspects of this case is unsafe. The Class Representative has failed to discharge the burden of proof it has in relation to this issue.

208. We have considered whether we are able to determine what the actual price difference (if any) between these two formats might be. As a result of the concerns we have already expressed about all the expert evidence before us on this subject, that is not a straightforward task. We do not consider any of the various outcomes that have emerged from the analysis conducted by the experts to be reliable. However, we do feel able to make the following observations.

209. We think that Figure 4-3 and Figure A-1 in Mr Harman's seventh report (see §187 and 188 above), as well as Annex C of Colley 3 (which shows price level relationships for some 50 game titles, see for example at §166 above), tend to suggest a degree of price difference between digital and physical games in the prelaunch period (which appears to drive much more volume on digital) and for up to eight weeks after launch. Given these are periods in which significant promotional activity is unlikely (according to Mr Cox's evidence and as demonstrated in Mr Colley's Annexes C and D), these figures, taken together, are crude but probably reliable evidence of a digital game price premium of no more than £[✂]-[✂] (or about [✂] to [✂]%), reducing over the eight-week post-launch period. That is substantially less than 20%.

210. The digital and physical prices in Figure 4-3 are more or less aligned between eight and 26 weeks, and once promotions start to take place it becomes difficult to reach any reliable understanding of the physical volumes sold at particular prices and therefore the relationship between volume weighted physical prices and volume weighted digital prices. There is, however, good reason to suppose that digital sales are highly concentrated in the relatively short periods in which the PS Store applies discounts, and that the failure of Mr Harman's unweighted average to take this into account is a serious and obvious deficiency that is likely to overstate average digital prices. We cannot exclude the possibility that, after eight weeks post-launch, there is no material price difference for weighted average purchases, or even that digital games might on average be cheaper than physical.

211. Even if we were to take [✂]% as a crude measure of the highest price difference apparent from the figures for the pre- and early post-launch period for a game, it seems that the overall price differences are quite likely to be lower when the whole life cycle period of the game is taken into account. Indeed, it is possible that there is no price difference at all across this longer period.

Our conclusions on physical PlayStation games as a substitute for digital PlayStation games

212. Taking all this into consideration, our findings about the potential for substitution from digital to physical PlayStation games in the event of a SSNIP are as follows:

(1) The existence of an absolute price difference between two products (even if that difference was equal to, or greater than, the 5-10% normally associated with a SSNIP) does not in itself establish whether those products might be substitutes for one another in the sense that is relevant for the SSNIP test.

(2) Given the considerable similarities between physical and digital games in terms of the functional game that is being supplied to consumers and the significant proportion of users who can access both channels, we

would expect them to be close substitutes for each other, absent evidence to the contrary.

(3) There is some consumer survey evidence which suggests that large volumes of users would switch given a US$10 decrease in physical prices. That is not a precise SSNIP (being more than 10%), and it measures stated intentions rather than actual choices, but it is a plausible indication of likely consumer behaviour. We take into account that this is evidence of consumer intent rather than any empirical assessment of actual consumption decisions, but it does seem to be consistent with the view that the two are close substitutes.

(4) The fact that some [✂]% to [✂]% of consumers with digital only consoles may have more difficulty switching does not indicate that the SSNIP would be economic, given the large proportion who can switch easily and the survey evidence indicating an inclination to do so.

(5) There is a variety of evidence on the factors that might make consumers prefer either physical or digital games at any point in time, and which points to a degree of product differentiation between the two formats. As preferences and technology change over time, there is also a clear secular trend towards digital and away from physical which suggests the appeal of digital is increasing over time across the game-buying population as a whole. That might explain a difference in price (if there is one) and could be perfectly consistent with the notion that such a differential was a naturally occurring price relationship between two effective substitutes.

(6) In fact, for the reasons we have set out in detail above, we do not have sufficient evidence before us to establish whether there is a material difference in price between physical and digital games. The only reliable evidence we have of a difference (which is essentially an "eyeball test") suggests at most a modest difference and perhaps little difference at all.

(7) Sony's internal documents suggest that Sony does view physical retail as a channel which competes with the PS Store and that Sony wishes to maintain a degree of competitiveness between the PS Store prices and physical retail prices, through the means of persuading publishers to support promotional activity.

(8) It does seem to be the case that there is little if any direct price matching, but that is apparently because there are very different pricing strategies in operation once the initial sales period is over, probably at least in part reflecting the additional inventory and retailing costs which physical retailers face. Digital prices tend to remain high for a period (to meet regulatory requirements as to promotional advertising) and then to discount heavily for short periods. Physical prices tend to remain at lower headline levels and to reduce over time.

(9) We do not think the "*No Man's Sky*" email chain is helpful as it is in a different context (second-party games and US market) and has various unexplained aspects.

(10) As for the "*Wanderer*" slides, the conclusion [✂] seems puzzling and is unexplained. While there are some indications in the slides that Sony thought that price differentials between physical and digital might affect sales volumes to some extent, it is also said that the digital mix was unlikely to change. Given the ambiguities and the other concerns we have with this study, this is not evidence we want, or need, to rely on.

213. In light of these findings, our conclusion is that physical PlayStation games are likely to be substitutes for digital PlayStation games, suggesting that a SSNIP in the price of digital games would result in material switching by digital users to the physical channel.

(b) Multi-homing and cross-commerce

214. In relation to multi-homing and cross-commerce, the question is whether a SSNIP in relation to games or add-on content would lead to a user purchasing those on a different platform which the user already has access to, and either:

(1) playing the game on that different platform; or

(2) purchasing the game or add-on content on that different platform and making use of cross-commerce functionality to use the game or content on the PlayStation console.

215. In each case, it is said by Sony to be significant that, as a result of multi-homing, purchases could be diverted away from the PS Store through the use of another device without the friction of purchasing a new device. A 2021 GameTrack UK Data Report showed the extent of use of multiple devices to play games and the cross-ownership by household. For example:

(1) [✂]% of PS5 players also played on an Xbox X/S, while [✂]% of PS5 players also played on a Nintendo Switch/Lite.

(2) [✂]% of PS5/Xbox X/S owners also (in their household) own a PC, while [✂]% of all PlayStation owners (PS3, 4 or 5) also (in their household) own a Nintendo Switch/Lite.

216. Broadly speaking, the report shows considerable degrees of cross-ownership and use of different devices on which games can be played, although the data at this level is much less informative about what use is made in what circumstances by particular groups of users.

Multi-homing – arguments of the parties

217. In relation to multi-homing, Sony argued that:

(1) There are games available on Xbox which are for all practical purposes identical to PlayStation games and a similar or more extensive range of games available on PC, with some overlap with Nintendo.

(2) There is a high concentration of spend among a small number of users, in particular the Connoisseurs, who make up [✂]% of active UK gamers and spend materially more than other categories of PlayStation consumers.

(3) Connoisseurs are the least brand loyal and most price sensitive in relation to games. They have high rates of joint ownership of PlayStation and Xbox consoles. A January 2021 document entitled "*Seg Sizing 2.1*" suggests that [✂]% of PS4 owning Connoisseurs also owned an Xbox, compared with only [✂]% of all PS4 owners.

218. Mr Colley estimated the proportion of total PlayStation game spend at risk from switching by Connoisseurs to Xbox was in excess of [✂]%. This estimate was based on a rough assumption that a large portion of the [✂]% of multi-homing Connoisseurs would fall into the top 20% of user spend on the PS Store, suggesting that the share of spend by Connoisseurs would be materially higher than the [✂]% of all PS4 users who also have an Xbox.

219. The Class Representative argued that real world evidence showed there was not substitution through multi-homing, pointing to the following:

(1) There was a persistent £10 price difference between digital and PC games (confirmed by the evidence of Mr Early, at least in relation to launch prices of AAA titles), which suggested a SSNIP would not cause switching.

(2) Sony increased first-party games prices in 2020, when Xbox did not increase its prices. That is a natural experiment which does not suggest that Sony's pricing conduct was effectively constrained by the threat of significant switching of consumer game spending to Xbox.

(3) A lack of evidence that promotions drive switching between platforms, despite substantial price differences arising.

(4) The apparent correlation, in relation to games where cross-commerce was possible, between the platform on which users spent and the platform on which they gamed, suggesting a lack of switching by way of multi-homing.

(5) Sony's analysis of the Connoisseurs was not borne out by the data – they are not marginal customers, but instead dedicated gamers with a high willingness to pay.

(6) Evidence that social factors – a desire to game with friends and other players on the same network – provide a significant switching cost even for consumers that had access to alternative platforms. Network factors such as choice of primary device, friend networks and loss of unitary game libraries, together with limitations in games libraries on Nintendo devices and lower quality on Nintendo and PC devices, all provide a disincentive to switch.

220. The Class Representative noted that there are relatively low levels of Xbox X/S ownership among PS5 owners (around [✂]% according to a 2024 Brand Presentation), which was consistent with Sony's submissions to the CMA during the Microsoft/Activision merger investigation.

221. Further, the fact of multiple ownership and the amount of play on multiple devices says nothing about actual substitution.

Multi-homing – our analysis

222. As a starting point, based on the evidence before us, we do not consider we have any natural experiment or other quantitative data which provides a definitive test of the question of switching by multi-homers. We therefore have to form a judgement about the potential for switching based on an assessment of all the

evidence before us, as set out below. We will address this in the same order as the Class Representative's arguments recorded above.

223. First, it seems that there is typically a £10 difference between console and PC games prices for at least some AAA titles at launch. Notwithstanding the fact that the parties directed various witnesses to a barrage of screen shots showing different or similar prices for titles in different channels, we prefer to rely on the clear evidence of such a difference from Mr Early, who had no reason to tell us anything other than the truth.

224. Mr Early did not seem particularly clear as to the reasons for this difference. He thought the difference might be explained by the approach of publishers to product differentiation, reflecting the investment in consoles to provide a higher quality gaming experience. Mr Early also referred to previous approaches taken by publishers in different geographical markets. In any event, it seems to have persisted, to some extent, over a long period, and it therefore tells us little about how the effect of a SSNIP, which (absent distortions created by Cellophane fallacy issues) should be applied to the conditions in the market as they exist.

225. Second, Sony's unilateral price increase in 2020 for its first-party games only involved [✂]% of games, which were not (by definition, as first-party games) generally available on other platforms. There was also evidence that Sony decided [✂] (we will return to this evidence in a different context below). The 2020 price increase is not therefore very useful as a natural experiment for a SSNIP.

226. Thirdly, discounts are not a SSNIP either, as they only apply to some games and we know that there will be promotions on different platforms at different times. The HMT test requires consideration of a SSNIP across the whole games portfolio on a non-transitory basis.

227. Fourthly, in relation to cross platform spend and engagement, we find from the evidence before us that:

(1) There is material multi-homing generally (see the discussion of the GameTrack Data Report above).

(2) There are significant numbers of PlayStation owners who also own an Xbox. For PS4 owners, this was [✂]% in 2021. The number of Connoisseurs who owned a PS4 and an Xbox in 2021 was even higher, at just over [✂]%.

(3) According to Figure 3-7 of Mr Harman's sixth report, around [✂]% of PS5 owners also owned an Xbox of any sort in Q1 FY2023 and only [✂]% in Q4 FY2024. We do not have cross-ownership data for Connoisseurs for this period, but there are reasonable grounds to conclude that the PlayStation consumers who buy more games are also more likely to multi-home.

[✂]

(4) We have little information about PlayStation owners who also own PCs that are suitable for high-quality gaming. While we have data for ownership and usage of PlayStation consoles and PCs, this does not provide information about the quality (for gaming purposes) of the PC.

(5) According to Mr Harman's sixth report, Figure 3-8, PlayStation owners spent less than [✂]% of their gaming spend on a PlayStation device, with the rest being spent on Xbox, Nintendo and PC. Around [✂] - [✂]% of that spend was on Nintendo, between [✂] and [✂]% on PC and about [✂]% on Xbox.

[✂]

228. It follows that, in principle, it is possible for significant numbers of PlayStation users to switch game spend to another existing device if they wish to. There is evidence that PlayStation console owners do precisely that, although it is not clear why they have chosen to spend [✂]% of their gaming spend elsewhere.

The reasons for this might be quite different for spend on Nintendo as opposed to spend on PC.

229. Fifthly, it seems the case that Connoisseurs are among the highest spenders on games, and, therefore, it seems logical that they would be disproportionately represented in the skew of small numbers of users who spend the most. For the higher spenders, a [✂]% increase in price of games would be a meaningful amount (possibly up to £[✂] per annum, according to Mr Colley). This means they have a higher pay-off from switching to a cheaper game, and that the loss of their business to other platforms would hurt Sony more than the loss of low-spending consumers.

230. Sixthly, the disincentives to switching identified by the Class Representative seem inconsistent with the fact that [✂]% of PS5 user spend already takes place elsewhere, suggesting the frictions are not really discouraging that. However, we do not know what that spending is on, or why it takes place (for example, some of it may be on first-party games available on other platforms, and not on the PlayStation). There is survey evidence which also seems to suggest that the price of software is more important to users than network factors, though we think this material needs to be approached with caution.

231. It is therefore difficult to form a firm view about the likelihood of substitution, but it is certainly something which is possible and that must be seen as a credible threat to Sony. Assessing the extent of that threat seems to depend on ascertaining the strength of the disincentives identified by the Class Representative, but we have little evidence about how those really operate. Overall, we do not think we can exclude the possibility that a SSNIP in game prices might cause material switching to other devices by multi-homing consumers, and especially by higher value users such as Connoisseurs, which would have a disproportionately large financial impact on Sony.

232. In any event, given at least the similarity in games pricing between PlayStation and Xbox, multi-homing seems to provide a material constraint on Sony's game pricing behaviour. This is recognised by Sony in internal documents, which

express concerns about being competitive with other platforms. This is particularly the case if the Class Representative is right about users having a primary console on which they do most of their gaming, as switching in response to a SSNIP might put at risk lifetime spend. As Mr Lempel put it in response to a question from the Tribunal about the economic impact of Connoisseurs switching to other platforms:

[✂]

233. In summary, we think it plausible that switching game purchases from the PlayStation to other platforms is a material substitution option for multi-homers, and especially for large spenders on games and add-on content. We are unsure about the extent to which this switching might be muted in practice by the disincentives the Class Representative has identified, but the evidence we have reviewed is indicative of multi-homer switching being a credible threat and it also seems to be a subject of concern to Sony, which suggests it is a realistic threat and constraint.

Cross-commerce – arguments of the parties

234. The most important elements of cross-commerce for market definition purposes are those which allow the user to purchase games and add-on content on another platform and to use that game or add-on content on the PlayStation. In that way, users have an option to divert their purchasing away from the PS Store to an alternative supplier of digital content.

235. In relation to cross-commerce, as described in section B(2)(d) above, Sony permitted cross-play, cross-progression and cross-commerce for *Fortnite* only in September 2018. This was effectively forced on Sony by Epic. In September 2019, Sony later introduced cross-play, cross-progression and cross-commerce for all publishers, but this did not extend to virtual currency which was only allowed to be used by way of cross-commerce after February 2022.

236. The Class Representative accepted that these options for substitution have existed from time to time but relies on the terms of the CPPS to argue that publishers would not induce switching as a result of the economic disincentives

in that document. As a consequence, the Class Representative said that there is no real-world opportunity for substitution by way of cross-commerce.

237. Sony says that the [✂] have no relevance, as they would have no economic impact on the hypothetical monopolist as a consequence of it raising prices. When asked about this during closing submissions, Mr Palmer introduced the Cellophane fallacy for the first time in the case (see the discussion in section C(1)(c) above), saying that the [✂] had caused prices to be higher than the competitive level, so the SSNIP should be conducted at a lower price.

Cross-commerce – our analysis

238. There are three key issues to consider:

(1) The timing of the introduction of different aspects of cross-platform functionality.

(2) How the Cellophane fallacy affects the analysis.

(3) The consequences for the SSNIP analysis of the [✂] and revenue sharing arrangements in the CPPS.

The timing of the introduction of cross-platform functionality

239. The substitution options available to users by way of cross-commerce during the claim period were different at different times:

(1) Between 2016 and September 2018 there was no real substitution option.

(2) Between September 2018 and September 2019 substitution was limited to *Fortnite*.

(3) Between September 2019 and February 2022 there were substitution options, but they did not include virtual currency, which is

a significant part of add-on content. This meant that, because of the possibility of cross-progression, there could be easier switching between platforms for the purpose of buying add-on content, at least for free games like *Fortnite,* which (according to Mr Colley) alone accounted for [✂]% of consumer spend on PlayStation add-on content between FY17 and FY 23, and [✂]% of overall PS Store revenue during the period from August 2016 to October 2024.

(4) From February 2022 until the end of the claim period there was the technical possibility of almost full substitution of purchases of games and all add-on content. (Mr Brown explained some limited exceptions in his first witness statement, but they are not material to the analysis here).

240. Mr Harman's fifth report identified that spending on add-on content of £860 million on consoles represented over a third more than expenditure on console game sales of £641 million in the UK in 2024. In practice, switching is more likely when the game is free to play (as a paid game would require a further purchase on another console). According to Mr Colley, [✂]% of total digital gaming content spend in the PS Store in FY23 was attributable to add-on content for free to play games.

241. There is therefore a significant portion of Sony revenue in the PS Store which is exposed to potential switching in the event of a SSNIP on PlayStation add-on content prices, assuming other platforms kept their add-on content prices constant.

The Cellophane fallacy

242. Turning to the likelihood of switching in response to a SSNIP, we now encounter the Cellophane fallacy and the potential need to adjust add-on content prices to reflect a competitive level before applying the SSNIP. This was unfortunately not any part of the reasoning of Mr Harman in any of his seven expert reports. Indeed, as we have noted above, he expressly rejected the

relevance of the Cellophane fallacy in the concurrent evidence session, albeit that he was eventually forced to accept the logic of the point.

243. Accordingly, notwithstanding the broader logic that if Sony had sufficient market power, it might be expected to increase prices to a supra-competitive level at which switching levels might appear misleadingly high, there was simply no economic analysis in the expert evidence relied upon by the Class Representative to support this contention.

244. It is not open to the Class Representative to invent a new case in closing, unsupported by expert evidence. As a consequence, the Class Representative's analysis in relation to add-on content suffers from a fundamental flaw, which was largely unaddressed by the conclusion of the trial.

The CPPS provisions

245. Against that background, we now turn to the likely effect of the relevant CPPS provisions. By way of reminder, these are as follows:

(1) [✂]

(2) As set out in more detail in section B(5)(b) above, the revenue sharing clause specifies that the publisher must share revenue earned on other platforms if the proportion of the PlayStation revenue share divided by the PlayStation gameplay share drops below [✂]%.

246. The question is what relevance these clauses have to a SSNIP analysis, and specifically whether they increase Sony's ability to impose a unilateral price increase for PlayStation add-on content which would not be constrained by consumers switching to buying that add-on content through other channels.

247. [✂]

248. The revenue sharing provision might impact the HMT if the price increase caused sufficient switching to trigger revenue sharing. That could in principle

create further revenue for the hypothetical monopolist, making the SSNIP more profitable than it would otherwise be, by offsetting some of the loss caused by consumer switching to other systems/platforms. However, that depends on whether the SSNIP caused sufficient switching to trigger the clause (that is, whether it caused the ratio to fall below 85%) and what the relationship between any revenue sharing payment and lost revenue from the SSNIP might be.

249. According to Mr Brown's first witness statement, the revenue sharing clause has rarely been triggered, resulting in some [✂]. Beyond that, we have little data to assess the likely effect of the clause.

250. Stepping back, it is clear that Sony had considerable concern about the economic consequences of allowing cross-commerce, presumably because it feared that PlayStation console owners might buy add-on content from other platforms. Mr Brown explained, in his first witness statement, that a working group was established in June 2018. That group was tasked with assessing the available options and making a recommendation to senior management. In analysis set out in a July 2018 slide pack, the group identified the risk that cross progress and commerce had the "[✂]".

251. It became apparent during the trial period of allowing cross-commerce for *Fortnite* that the financial effects would not necessarily be as disadvantageous as feared. That was in part because of [✂]. Importantly, it was also because cross-platform functionality increased sales across the whole market.

252. Sony's apparent concern about cross-platform functionality allowing users to switch their add-on content spend to other platforms is consistent with that functionality having the scope to act as a constraint on Sony's pricing for games and add-on content. It is however difficult to conclude (given the potential impact of the revenue sharing clause and the confusion around the application of the Cellophane fallacy) whether, or to what extent, cross-platform functionality could enable substitution, even after February 2022, when it became very easy for a user to purchase add-on content of all types on another platform and use it on the PlayStation.

253. In this situation of uncertainty, the Class Representative has not persuaded us that we should exclude material substitution by way of cross-commerce purchases as a possible outcome from a SSNIP.

(c) Conclusion on likely substitutes for digital PlayStation games

254. We have concluded on the evidence before us that physical PlayStation games are likely to be significant substitutes for digital PlayStation games, suggesting that a SSNIP in the price of digital games would result in material switching by digital users to the physical channel.

255. Our conclusion on multi-homing and cross-platform functionality is that they are both potential routes whereby consumers could substitute away from Sony and towards other providers of games and game content (albeit, in relation to cross-platform functionality, not for the whole period, or for all types of games). We cannot exclude the possibility that a SSNIP in digital PlayStation game prices would have resulted in material switching through both routes. In any event, they are both likely to be material constraints on Sony's game pricing.

256. These conclusions strongly suggest that, even before considering other substitution options or constraints which might affect the profitability of a SSNIP on digital PS games and add-on content, there are substitutes which are likely to give rise to significant levels of switching in the event of a SSNIP.

(d) Conclusion on digital distribution market

257. We are not comfortable with a market definition for digital distribution that excludes physical distribution of games and the ability to switch through multi-homing and cross-commerce for games and add-on content. Taken as a whole, the potential for switching through these routes in response to a SSNIP is clearly significant, at least in the case of physical channels and multi-homing by high value users.

258. As a consequence, we are not satisfied that the Class Representative has established that PlayStation digital games comprise a relevant product market

by reference to an HMT. It seems to us that the most appropriate market to consider game sales and add-on content sales should include at least physical distribution and potentially the availability of digital content through other channels via multi-homing/cross-commerce. We disagree with the Class Representative's proposed PlayStation only digital distribution market, which we think is an unsafe basis on which to assess Sony's conduct.

259. In any event, we consider that there are real difficulties in looking at a digital distribution market in isolation from competition at the system level, for reasons which we will now explore.

(3) Is there a systems market?

260. We are here concerned with whether competition at a system level (most obviously between PlayStation and Xbox, but also potentially with Nintendo Switch and the PC channel) is sufficient to constrain Sony's pricing of digital games. This could be considered as part of the dominance analysis, but both parties addressed it in the context of the market definition analysis, and it is convenient to deal with it in that way. The question then becomes whether the level of consumers switching, or otherwise expressing a preference for another platform, in the light of a SSNIP in game prices in the PS Store, would render the SSNIP uneconomic.

261. In addressing that question, the *EFIM* Criteria identify the key issue as being whether pricing in the after-market is effectively "regulated" (or competitively constrained) by the competition and rivalry that exists between systems in the primary market. This is consistent with the hypothesis that forms the basis for the SSNIP in the HMT framework, where a substitution option (which can therefore operate as a constraint) is identified by likely consumer response to a small but significant change in price in the focal product, while other product prices remain constant. The *EFIM* Criteria operate by looking, first, at the ability of consumers to understand and act on the implications of price differences in the aftermarket (in this case, games and add-on content) in the context of the overall costs they might face in making decisions about purchasing a product (in this case, the console) in the primary market. It then

assesses their ability to switch in a meaningful way (including in a time frame that might exert a suitable constraint and make the assumed price change uneconomic).

262. However, it should be noted that, while the evidence sought by the four limbs of the *EFIM* Criteria relates mainly to consumer conduct, the underlying question that matters here is whether rival systems represent a competitive constraint. In order to determine that, we must assess how a supplier would react to evidence of that consumer conduct.

263. Sony's case on these issues relied heavily on two documents:

(1) A Shopper Insight Survey carried out in 2021. This addressed the motivation for consumer choices and in the process explored many of the issues outlined in the *EFIM* Criteria. It asked approximately 5,600 respondents from three groups (recent purchasers, intending purchasers and non-intending purchasers) about the "shopping journey" and also involved a small number of interviews. It set out the sources used by the respondents to gain information about gaming and identified the pieces of information which the respondents considered they needed to make a console purchase decision (at an early or "passive" stage and also at a later "active" stage). For present purposes, the key outcome was that [✂]% of respondents reported considering or needing information about the price of games, compared with [✂]% who reported considering or needing information about the price of the console.

(2) The Project Leprechaun Report of April 2019 (the **Leprechaun Report**). This was focused on the factors that might constrain Sony from raising game prices unilaterally, shedding light on the broader *EFIM* question of whether those constraints "regulated" Sony's conduct. It surveyed 8,000 8th generation console owners and users about their console purchasing preferences in the event that the PlayStation alone (or, alternatively, PlayStation and Xbox together) implemented an increase in game prices of £10 in the UK, or similar increases elsewhere.

The conclusion was that if Sony was to increase PlayStation game prices unilaterally by that amount, then it could lose [✂] to [✂]% of initial hardware volumes, with a cumulative loss of volume of [✂] to [✂]% over five years.

264. Against that background, we will consider the four limbs of the *EFIM* Criteria.

(a) Consumers are able to make informed choices, including with regard to prices over the lifetime of the console

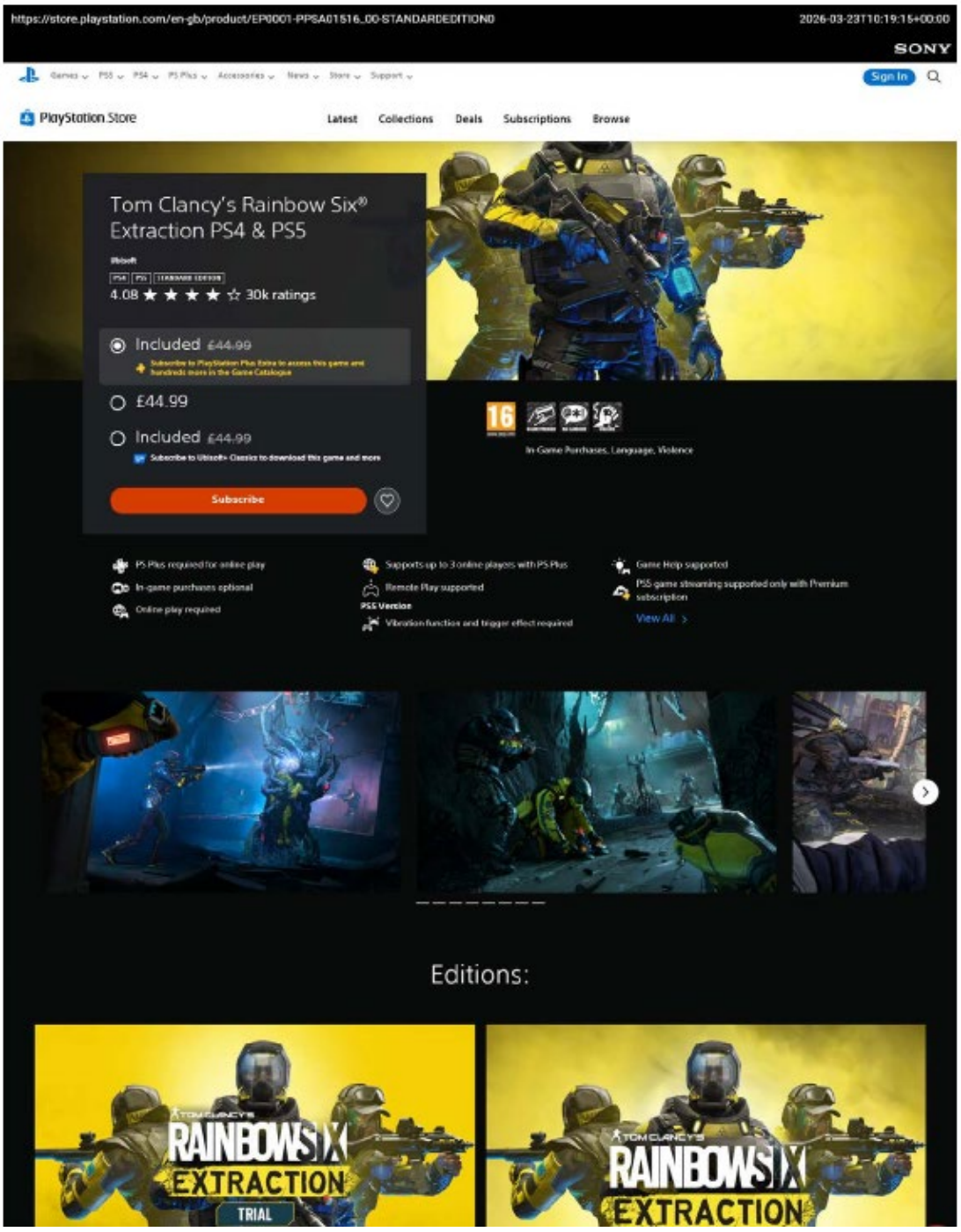
265. Despite the considerable availability of pricing information about games and add-on content prices to any interested consumer, the Class Representative argued that there was real uncertainty for a consumer in making an assessment of prices over the lifetime of the console. This was because of variables such as the frequency of purchases over the console lifetime, the variation in game and add-on content prices, the possibility of changes in game and add-on content prices and the evolution of different products and services which might have different pricing implications. The Class Representative devoted considerable effort to this argument, making comparisons with other products where whole life costing was more obvious and cross-examining witnesses about the uncertainties inherent in the console purchasing decision.

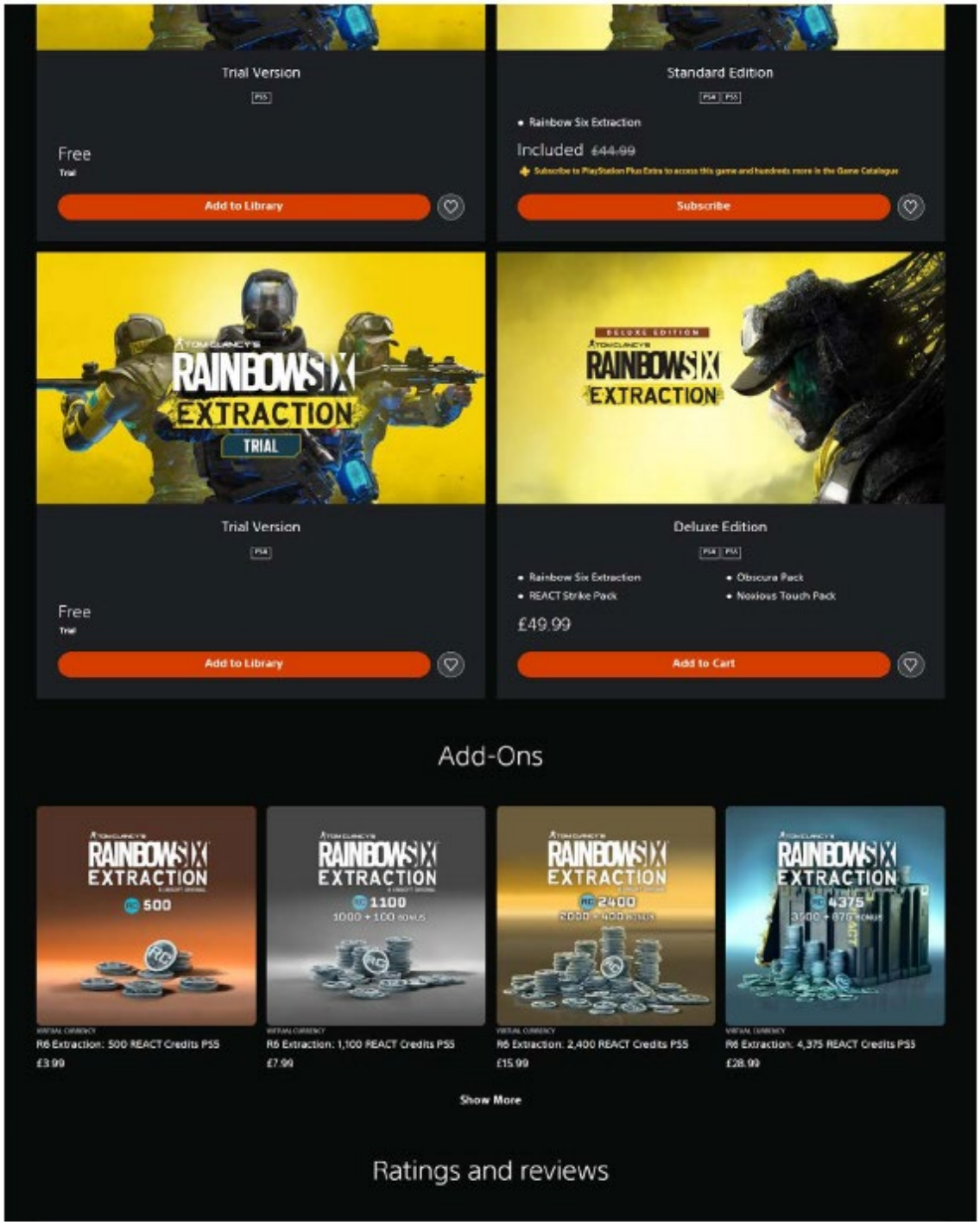
266. Sony's response to this was that: consumers are highly engaged; that PlayStation users tend to have prior experience; game prices have been broadly consistent over time, with consumers having high levels of knowledge of such prices; and little information would be needed to make a reasonable assessment, given the low average number of games purchased per year. Sony argued that it was not necessary for consumers to have perfect information or foresight on game prices in order for them to be sufficiently informed.

267. Based on the evidence we have heard, we find the factual position is as follows:

(1) Game prices are readily available online, and comparison between the pricing on different online stores is easily undertaken. This includes headline prices, promotional prices and the pricing for different editions

of the games, which are usually shown separately. By way of example, this is what the user will see on the PS Store page for the game *Tom Clancy's Rainbow Six Extraction:*





(2) Where add-on content is available in the game, the pricing for this is not necessarily apparent in the PS Store listing for the game. Instead, the listing will generally say that in-game purchases are optional and may give some information about the price of some aspects of that. See the listing above for an example of this.

(3) There seems to be considerable continuity in console ownership, with more than [✂]% of PS5 owners in 2023/2024 indicating that they had previously owned an 8th generation console. This suggests widespread experience and knowledge of the actual costs of games and add-on content by reference to the user's own preferences and decision making.

(4) The headline prices for games at launch have been broadly consistent on the PlayStation over a long period of time, with the pricing of AAA games remaining fairly stable (and transparently so) for many years. It also appears that there is a high degree of similarity in headline pricing as between PlayStation and Xbox, again especially for AAA games.

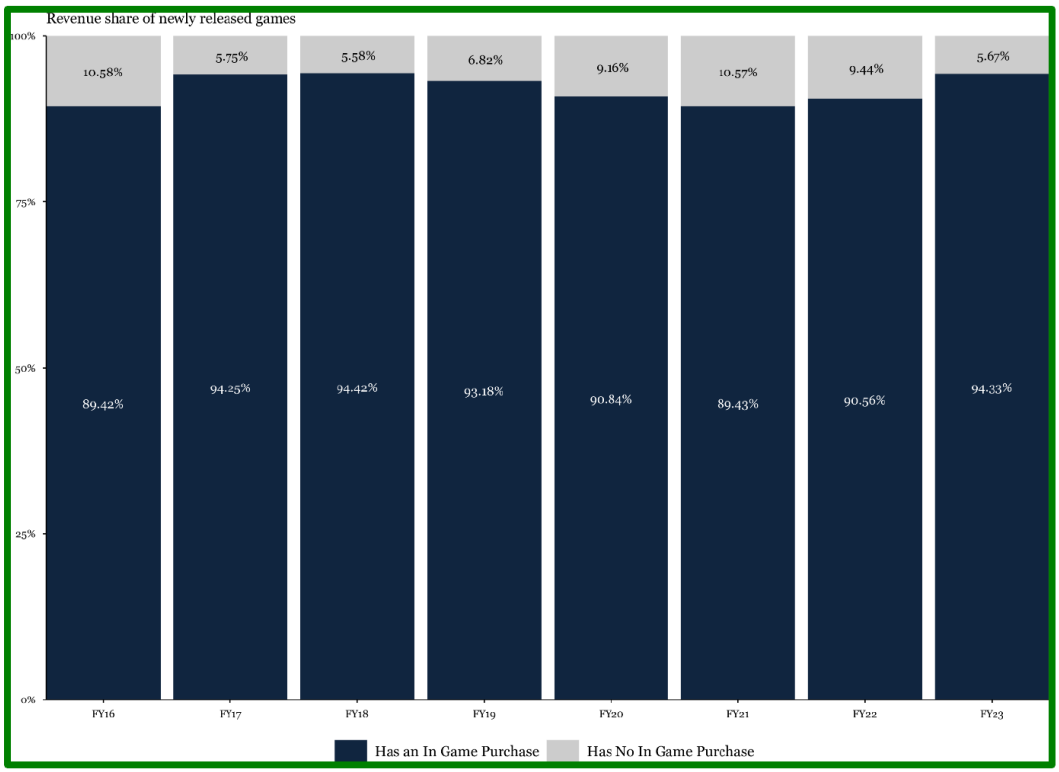
(5) There is considerable promotional activity for games on the PlayStation, especially further into the lifecycle of the game. We understand that Xbox approaches promotional pricing in a similar way to PlayStation, although there may be differences in the patterns of promotional activity and in subscription offerings.

(6) The proportion of virtual currency spend as part of overall PlayStation user spend has increased materially over time. The increasing use of subscription models and the advent of cross-commerce have created a degree of opacity in overall gaming costs and the ability to predict spend on a particular console. The following chart from Mr Harman's fifth report illustrates some of the changing trends.

[✂]

(7) However, add-on content has been a fairly stable and consistent feature of the revenue share of newly released games throughout the claim period. The following is Exhibit 16 from Mr Colley's second report:

***Exhibit 16** The revenue-weighted proportion of newly released PS games offering add-on content in the UK (FY16–FY23)*



(8) There is constant innovation in the industry, with developers and the console platforms offering new technical features and economic terms to users. One example of this is the emergence of "free to play" games, like *Fortnite,* as a common business model, where the game has no cost to download but there are numerous purchase options for add-on content when the game is played.

(9) Owners might keep their consoles for a number of years. Mr Lempel told us that the expected lifetime for a console was greater than eight years and might be as long as thirteen years.

(10) The Shopper Insight Survey indicates a level of existing knowledge about game prices and a high level of interest in obtaining more information about that. [✂]% of respondents said they already had knowledge about game prices and respondents were more or less as interested in the game prices as they were in the console price. There is no reason to think that this interest would not extend to add-on content,

or subscription arrangements, although the Shopper Insight Survey did not deal expressly with those items.

(11) According to Mr Colley, over the lifetime of the console, the median PS4 user purchased [✂] games per year, while the corresponding figure for PS5 users is [✂]. The number of transactions for add-on content and virtual currency are likely to be materially higher, accounting for [✂] of the spend of all PlayStation users.

(12) High spending PlayStation users (such as Connoisseurs) might spend as much as £[✂] or more on annual gaming console activity, which is in excess of £[✂] over a seven-year console lifetime. There is a significant concentration of higher spenders among a small proportion of PlayStation users. Mr Colley told us that the top [✂]% of users accounted for [✂]% of Sony's digital PlayStation revenue, while the top [✂]% of users accounted for over [✂]% of that revenue. It is evident that these high-spending consumers are highly engaged in their gaming choices, and that Sony places considerable importance in ensuring that it retains their custom.

268. As a starting point in our analysis of those facts, it is useful to return to the essential point of this first limb of the *EFIM* Criteria. The Class Representative appears to approach the matter by asking, as an absolute rather than relative question, whether a consumer can predict with some accuracy the total value of games and add-on content which they will spend over the lifetime of the console.

269. So, for example, Mr Palmer put considerable emphasis on the use of the word "informed" in the first limb of the *EFIM* Criteria. He sought to bolster that with references to a European Commission Decision, *Pelikan/Kyocera* (Case no. IV/34.330) (***Pelikan***) and the General Court's decision in *CEAHR v European Commission* [2011] 4 CMLR 14 (***CEAHR***).

270. *Pelikan* is one of a number of cases about printers and printer ink. We have seen nothing in the facts of that particular decision which assists the Class

Representative. The Commission confirmed, at §61, that the purpose of the first limb of the *EFIM* Criteria is to identify whether the customer can make an informed choice. It then recognised, at §64, that some aspects of the costs per page price might be difficult to gauge. All this establishes is that the inquiry is very much a fact specific one and that a degree of uncertainty might be present in many, if not most, cases.

271. *CEAHR* involved a primary market for watch sales and an aftermarket for watch repair services. At §106 of its judgment, the Court rejected the Commission's view that the costs of service might cause switching in the primary market. The Commission had not taken into account the fact that the repair services were minor compared with the price of a watch, which made it unlikely that a potential purchaser would calculate that cost over the likely life of the product. Again, all this demonstrates is the need for a careful factual inquiry in each case.

272. Both parties relied on academic commentary, but we did not find any of that helpful in relation to the question of what level of knowledge was required for a potential purchaser to be "informed". It seems to us that (consistent with our view that the *EFIM* Criteria are to be treated as descriptive, rather than setting out a rigid test) "informed" has no special meaning in this context.

273. In any event, we think the key question is a different one. That is whether a potential console purchaser is able to assess whether the cost of buying games and add-on content which will be used on a PlayStation console will be materially higher, lower or the same as the cost they would face if they bought (say) an Xbox. That is reflected in the first limb of the *EFIM* Criteria, which refers to consumers "making an informed choice", with "choice" equating to that comparative exercise. The question is therefore aimed at determining whether a differential in price between systems can be measured and assessed in a meaningful way, so such a choice can be exercised.

274. This of course requires some degree of awareness of future consumption patterns (the first limb of the EFIM Criteria refers expressly to "prices over the lifetime of the machine"), but only to the extent that is useful in constructing the overall cost of one option or the other. As long as a consumer can make a

reasonable assumption about how many games and how much add-on content they might consume (which will be the reference point for comparing the lifetime cost of (say) the PlayStation and the Xbox), the important information becomes the price of those components and whether there is any material difference between the options on offer.

275. Near perfect foresight is not therefore required, and nor does it matter if there are uncertainties which the consumer might not be able to predict. As long as there is reasonable transparency about current prices for games and add-on content on each of the PlayStation and Xbox platforms, a consumer should be able to identify the materiality of any difference in those prices and to factor that into the console purchasing decision.

276. While there might be some difference in the approach to subscriptions and other pricing models, a difference between PlayStation and Xbox in game price at the level of a SSNIP would be readily apparent and most users would have some experience or knowledge about their likely future consumption on which to make a sensibly informed purchasing decision. The fact that the majority of games are supplied by third party publishers and that an identical game title price can readily be compared across the competing gaming systems is itself an important feature of the industry that tends to increase transparency.

277. To this can be added the long history of price stability for headline prices for games at launch, and especially AAA games. That stability applies both to the historical prices of games on PlayStation, and also to the consistency of prices between Xbox and PlayStation. That has two consequences:

(1) It makes it easier for a consumer to identify a price difference (at least for game prices on launch, when there is considerable demand for the game).

(2) It rather suggests that there is a degree of constraint operating on Sony's setting of game prices as a result of the potential for consumers to identify persistent and materially different prices offered by Xbox and to make console purchasing decisions on that basis.

278. It may well be that there is a degree of uncertainty about the pricing of subscriptions and add-on content, neither of which is as transparent as game prices. However, we agree with Sony that the experience of the high proportion of PlayStation users who have previously owned an earlier generation console is likely to give them a reasonable understanding of both their likely consumption of add-on content and the cost of that.

279. As for subscriptions, the transparency problem arises not from the pricing (which is very transparent), but rather from the differing content contained in different subscription packages across platforms. While these packages might change from time to time, the price at least will be easily capable of comparison and experienced users ought to be able to form some view about relative value. In any event, the proportion of Sony's digital PlayStation revenue attributable to subscription services is relatively low. Mr Harman's Table 8-1 in his fifth report indicates that PS Plus products generated [✂] of total PlayStation digital content revenues in 2024, and [✂] in earlier years.

280. Further, given the importance to potential purchasers of pricing information, which is apparent from the Shopper Insight Survey, it is reasonable to assume that they would seek information about add-on content prices as well as game prices, if they did not have that information already. It would be odd if game price was an important factor but (knowing that add-on content was an important financial factor) the price of add-on content was ignored.

281. For high value users, a SSNIP might amount to £[✂] (being 10% of the £[✂] costs over the console life, as identified above). That is not far short of the price of a console. As the Commission Notice observes at §101, the high value of the secondary purchases seems very relevant to the question of a systems market, as it suggests that purchasers have a real incentive to look at substitution options.

282. The fact that there might be changes in the future which consumers cannot predict is therefore not really relevant – we are not concerned with perfect estimation, but instead with whether consumers could make a sensible switching decision which takes into account add-on content or game prices, and

particularly any identifiable difference in prices between platforms, when making a console purchase decision.

283. They clearly can in relation to game prices, and we think that persistent differences in add-on content prices, such as in the price of virtual currency, would be apparent to users, and especially high value users, fairly quickly. If not already apparent from store listings, that might happen through one of a number of means identified in the Shopper Insight Survey, such as through friends, online search, video sharing sites, social media, gaming stores, family members and so on – all of which (and many more) were identified in the Shopper Insight Survey as places from where potential purchasers do in fact seek information about gaming.

284. In our view, there is ample evidence that potential PlayStation console purchasers have both access to sufficient information and an incentive to consider that information in order to make informed purchasing decisions at the console level, especially in the case of high value users who spend significant amounts in the aftermarket (and represent a considerable amount of PlayStation digital revenue).

285. We therefore conclude that this first limb of the *EFIM* Criteria is met.

(b) Consumers likely to make informed choices when making purchases

286. The Class Representative suggested that the interest in game prices expressed in the Shopper Insight Survey was limited to the games bought at the time of purchase and that the intention expressed in the Shopper Insight Survey said nothing about an intention to work out an overall cost of games. This suggestion of customer "myopia" seemed an artificially narrow interpretation of the Shopper Insight Survey and does not in our view represent the natural reading. Such a narrow interpretation would call into question why Sony would bother investing time and money into what was obviously an extremely detailed survey exercise and seems, therefore, inherently unlikely.

287. While Mr Palmer sought to extract from Mr Lempel various concessions about the short term and impulsive nature of consumer decision making, the points made by Mr Palmer related mainly to in-game add-on content purchases, which (as discussed above) is not addressing the key question for these purposes.

288. We regard the Shopper Insight Survey as strong evidence that consumers are likely to make informed choices when purchasing consoles, using the information available to them about game prices. The Class Representative has been unable to suggest any credible reason why that would not be the case and in our view the evidence in the Shopper Insight Survey comfortably satisfies the second limb of the *EFIM* Criteria.

(c) A sufficient number of consumers adjust their purchasing practices on the primary market

289. The Leprechaun Report is, on its face, strong evidence of a willingness of consumers to switch consoles if games prices go up, to an extent that would make a SSNIP uneconomic. Critically, it indicates that Sony itself was sufficiently persuaded by research results that it led to warnings about the commercial harm to Sony if it allowed PlayStation game prices to be uncompetitive with Xbox.

290. The Class Representative had little to say to contradict this:

(1) The Class Representative argued that the price increase postulated in the Leprechaun Report was more than a SSNIP (£[✂], or around [✂]%). That is technically correct, but it is so close to 10% so as to be powerful evidence of consumer reaction, given the extent of switching predicted.

(2) The Class Representative also argued that the exercise was distorted by the lack of information about the specification of the next generation console. However, the SSNIP requires all other things to be equal, so this absence of information on specification differences tends if anything to make the research more relevant to the assessment of the impact that prices might have on switching.

(3) The Class Representative said that Sony's decision in September 2020 to increase the price of AAA first-party games by £10, with executives overruling the recommendations that flowed from the Leprechaun Report, showed that Sony did not accept the Leprechaun Report outcomes and also that in practice they were right not to do so, as Sony lost no material market share. However, the 2020 price increase affected only 7% of games (being first-party games), which were only available on the PlayStation, whilst Sony maintained a pricing policy for the other 93% of its game sales that was in line with that of Xbox. It was not therefore a proxy for a SSNIP. The price rise on first-party games also coincided with the launch of the PS5 at a time when Sony explicitly took account of its assessment that its console had attractions over the Xbox console that might provide some headroom for a price premium, and so it was not neutral as to console specification.

(4) Finally, the Class Representative argued that there were switching costs where a user had already purchased a console (as well as associated game libraries, add-on content, subscriptions and peripherals). However, the Leprechaun Report is evidence of a consumer willingness to switch, despite frictions, in response to game pricing. Furthermore, the generational nature of console releases, the prevalence of multi-homing by customers (together with the fact that such multi-homing is disproportionately prevalent in customers with a high spend on game content) and the evident competition between PlayStation and Xbox (along with Nintendo Switch and PC), means that switching does occur, as can be seen from the changes in market share between Xbox and PlayStation at the shift from the 8th to the 9th generations. Mr Harman's sixth report demonstrated the size of the shift in his Figure 4-1.

[✂]

291. We therefore conclude that the third limb of the *EFIM* Criteria is satisfied.

(d) Switching takes place within a reasonable period of time

292. Although there is usually a considerable period of time between generational console releases, and the point at which a new generation is launched is considered particularly critical to the console suppliers, the profile of purchases seems to be fairly consistent during each generational cycle. This was illustrated by Exhibit 6 to Mr Colley's second report, which shows [✂].

[✂]

293. The constraint (or switching activity) does not therefore only happen once in a generation but can be effective throughout the generational period. It is, of course, correct that, once a consumer has purchased a console, they may be less likely to purchase another for a long period (putting aside multi-homing for the moment). However, the potential for other consumers considering a PlayStation console purchase (whether to replace an earlier generation PlayStation or other console, or a first-time buyer) is what acts as the effective constraint. It is this potential that provides an opportunity for a consumer to make an informed decision not to buy a PlayStation console as a consequence of increased game prices.

294. We are therefore satisfied that the potential for switching operates within a reasonable period of time so as to constrain Sony or (looking at the matter through a SSNIP lens) to make a unilateral aftermarket price increase unprofitable by reason of adverse consumer choices. That satisfies the fourth limb of the *EFIM* Criteria.

(e) Conclusion on systems market

295. We therefore conclude that competition and rivalry at the system level do provide an effective means to regulate pricing and competitive conduct in the aftermarket. The *EFIM* Criteria are met, and it is appropriate to view the question of Sony's market power through the lens of a systems market. That is consistent with the way in which Sony operates, by cross subsidising the cost of console production with the revenue earned from game sales. It is also

consistent with the way the market appears to operate, with Xbox and, to some extent, Nintendo operating the same model, ensuring that their respective games prices are generally competitive with one another. They are therefore apparently competing on a system level, rather than separately competing in relation to one or more components of that system.

296. On that basis also, the Class Representative fails in the argument that we should consider the abuse allegations by reference to a digital distribution market.

(4) The console market

297. We can deal with this subject fairly shortly, given the conclusions we have reached so far about market definition and the relative lack of importance of the issue in this case.

298. The Class Representative submitted that there is a separate console market, which is the primary market for transactions between Sony and users, and to which game and add-on content distribution activities are aftermarkets. The Class Representative said that this market comprises Sony's PlayStation and Microsoft's Xbox consoles, based on a SSNIP analysis conducted with reference to actual PlayStation and Xbox console prices.

299. Sony accepted that there is a console market (it challenged the idea that there might be a separate market for operating software, but as noted earlier the Class Representative has effectively abandoned this point). Sony submitted that the console market also includes significant constraints from Nintendo Switch devices and also high specification gaming PCs.

300. As far as we can identify, the only significant issue in the case (aside from background context) to which console market definition is important is the Class Representative's tying case, where the console is said to be the tying product and a finding of dominance in that market is a necessary foundation for the abuse.

301. We will consider the question of dominance separately, but, for present purposes, it is sufficient to say that the Class Representative has not satisfied us that the console market is limited to PlayStation and Xbox consoles. That is primarily because Mr Harman's analysis has not dealt with the reverse Cellophane fallacy problem. The effect of which is that, because there is a cross-subsidy between PlayStation game sales and console sales, the competitive price for a hypothesis of stand-alone PlayStation consoles is obscured. This, in turn, removes the necessary starting point for a SSNIP analysis. While we have no evidence on the point, it seems possible, if not likely, that the same issue arises in relation to Xbox console prices.

302. The Class Representative argued that no adjustment is required to the PlayStation console price to reflect the cross-subsidy. That is because the HMT should assume that Sony continues to receive a cross-subsidy by way of some form of royalty from the aftermarkets, which is what actually happens with physical game distribution. This point seemed to be developed by the Class Representative's legal team, rather than being supported by analysis from Mr Harman.

303. We do not consider that to be a satisfactory answer to the problem. We would expect the starting point for the HMT to assume the hypothetical monopolist to control the console, not the aftermarket, in which case there would have to be an adjustment to the console price (for all consoles which were said to be within the market). That approach of treating the elements of the gaming system as separate elements underpins the Class Representative's case, and it seems inconsistent for it to adopt the position that there should be some allowance for system benefits to be factored into the commercial calculations of the hypothetical console monopolist.

304. We also understood the Class Representative to accept that its argument could only work if consumers focused solely on the price of consoles, and not the system. However, we have found that is not the case, and that consumers do whole life cost for the console and the games/add-on content.

305. The significance of the reverse Cellophane fallacy issue is apparent from a simple example. It is said by Sony that gaming PCs are a substitute for PlayStation and Xbox consoles. The Class Representative argued that is not the case, given the price disparity between consoles and PCs which are capable of executing games at the required level. However, that price disparity is likely to be very different if the console prices need to be adjusted to take account of the cross-subsidy from the aftermarkets. Mr Harman has given us no information on which to consider this question.

306. While we do not discount the possibility of constructing an HMT that contemplated some degree of continued cross-subsidisation, Mr Harman has made no attempt to model that counterfactual. He has made no attempt to identify the level of the cross-subsidy, the effect of that on prices, the position of Xbox and what approach should be taken to other potential substitutes, such as Nintendo Switch. Crucially, he has not addressed the question of how the cross-subsidy should be treated in the SSNIP (where, arguably, it ought to be treated as part of the price received by the hypothetical monopolist).

307. In short, we have no developed argument and no evidence upon which to assess an HMT on such a basis. Further, even if Mr Harman had embarked on that exercise, it seems highly likely he would, contrary to the Class Representative's position, have effectively ended up advocating for a systems market, which is of course what we have determined to be the correct focal market in this case.

308. We should add that, after the trial, the Class Representative wrote to the Tribunal to highlight an increase in console prices by Sony in March 2026, as confirmed in an investor meeting in June 2026. In the absence of any information about the costs and the reasons for any increase (for example, as a result of higher chip prices), this development seems to add little to the analysis.

309. In those circumstances, we do not think the Class Representative's case is anywhere near being made out on this argument and we have no proper basis on which we could find that there is a market for consoles which is limited to PlayStation and Xbox consoles. In any event, the points made by Sony about

constraints from Nintendo Switch and PCs also arise when considering dominance in any console market, which we will consider in the next section.

(5) Conclusions on market definition

310. On the evidence before us, we have determined that physical PlayStation games sales are likely to be a substitute for digital PlayStation game sales, and that we cannot exclude the potential for material switching by way of multi-homing and cross-commerce as substitutes in response to a SSNIP for digital PlayStation games and add-on content. It follows from that conclusion that a hypothesis of market definition of digital PlayStation games only is not a safe one, and the Class Representative's assertion of this focal market should be rejected.

311. We are also not satisfied that there is a console market which is limited to the PlayStation and the Xbox. In any event, we have found that the *EFIM* Criteria for assessing a systems market have been met in this case and it would therefore be appropriate to define the market at that level in order to address any question of anticompetitive infringement by Sony.

312. During oral closings, Mr Palmer for the Class Representative accepted that the claim fails in these circumstances, as it has not advanced a case of infringement based on a wider product market than digital PlayStation game and add-on content distribution, and has advanced no case on the basis of a systems market.

D. DOMINANCE

313. In the next two sections of this Judgment we will, for completeness, address the main issues arising in the case in the areas of dominance and the two heads of exclusionary abuse, all of which necessarily cease to arise as live issues given our findings on market definition. We think this is helpful in case our findings on market definition should be overturned on appeal, and also in recognition of the effort the parties have put into these other issues. However, for reasons of brevity, we will do this at a higher level – focussing only on key issues – than we would in circumstances where the Class Representative had been successful on market definition.

314. As a starting point, it requires some intellectual gymnastics to address dominance on the basis that our approach to market definition is wrong, and the Class Representative's approach is the correct one. That is largely because there is a considerable overlap between the application of the HMT (which assesses substitution options in response to a SSNIP) and the assessment of constraints on the market power of an alleged dominant entity. For example, PC gaming might or might not be a close substitute for games consoles, but it is, in any event, likely to provide some form of constraint on the market power of the console sellers.

315. In relation to digital PlayStation games distribution, the Class Representative's case is that this is a relevant market in which Sony is dominant and effectively a monopolist (there might be some variations depending on what assumptions are made about multi-homing and cross-commerce switching, but we will ignore those for simplicity's sake).

316. If that were to be the case, then it would still be necessary to ask whether any of the matters we have already discussed as potential substitutes in the market definition section might act as a constraint on Sony's market power. We have obviously concluded that they do (to the extent they are considered to be reasonably close substitutes) but even if we are wrong about that then it would still be important to consider the extent of constraint they are likely to impose on Sony.

317. This is a difficult task to undertake when we have already concluded that these matters <u>are</u> material constraints (to the extent that we consider physical PlayStation games sales at least to be substitutes and multi-homing and cross-commerce to be potential substitutes).

318. There are also other factors which would need to be considered in this context, such as the constraints which publishers are able to exert (and for example the significance of the [✂]) and the network effects which might arise in the two-sided market.

319. Given these factors, and our conclusions elsewhere, we do not consider it necessary or informative to attempt to reach any conclusions about Sony's dominance in any digital PlayStation games or add-on content markets.

320. In relation to the console market, even if we were to accept the Class Representative's argument that the relevant market includes only Xbox and PlayStation (which does not seem obvious), we would not easily be persuaded that Sony is dominant in that market. That is because:

(1) Although Sony would account for a share over 50% in that market for the period, and a persistently higher market share than Xbox, it does not necessarily follow that there is not vigorous competition between the two.

(2) There has been historic volatility in market leadership (as is apparent from Figure 4-1 of Mr Harman's sixth report) and the market is characterised by generational battles between PlayStation and Xbox. Sony does seem to have "won" the 9th generation, but that position was not always assured. Each generational event offers at least the potential for change in the relative positions of the two platforms.

(3) Even if Nintendo and gaming PCs are not within the relevant market, we think it very likely that they impose a constraint on the behaviour of both Sony and Microsoft. There is abundant evidence that Sony sees both as a competitive threat. Moreover, the potential for the relative capabilities and offerings of the PlayStation and PC platforms to fluctuate as the technologies for creating, distributing and playing games develop means that PlayStation's position is not assured vis-à-vis PCs.

(4) This is an area where the two-sided nature of the platforms and the network effects might have some significance. For example, the ability to attract (or lose) an installed base of users is closely linked to the ability to secure content from publishers, possibly on differentiated terms such as limited exclusivity. We are not convinced that the Class Representative's case has properly addressed this.

321. In summary, this is a difficult exercise to carry out, as it requires us to assume that many of the factors we have identified as constraints on Sony's behaviour in the context of market definition are less effective or not effective at all. However, we think that the question of dominance was not clearly established, even on the Class Representative's own case, and, in particular, in respect of the console market.

E. THE EXCLUSIONARY ABUSES

(1) Introduction to the exclusionary abuse claims

322. The Class Representative advanced three forms of exclusionary abuse:

(1) Exclusive dealing, through the contractual restrictions by which publishers are required to distribute digital games and add-on content exclusively via the PS Network and users are denied any alternative means of accessing digital games and add-on content.

(2) Tying, where users have no choice but to use the PS Store when buying games for the console.

(3) Refusal to supply, where Sony has refused to supply third parties with access to the PS Store which is indispensable for competition in games and add-on content sales, leading to elimination of competition for those activities.

323. There is a natural linkage between the exclusive dealing and refusal to supply allegations. That is because it is not unusual (as we will develop later) for there to be a debate about whether an allegation about exclusive dealing is in fact a request for opening up proprietary infrastructure or IP. The courts have historically sought to differentiate between the two concepts, with different tests applying depending on the nature of the abuse, although that has not always been straightforward.

324. As a reflection of that, the refusal to supply allegation was added to the Class Representative's claim in response to a pleading by Sony which sought to characterise the Class Representative's claim as a claim for refusal to supply. The Class Representative's position is that it can succeed however the claim is characterised, but its primary case is that this is an exclusive dealing abuse and there is no need to consider the refusal to supply authorities.

325. Putting aside the way the pleadings have evolved, there is not a great deal of significance in the different ways in which the exclusionary abuse is pleaded. The Class Representative says the overarching question is whether Sony's conduct amounted to anti-competitive foreclosure of the PS Network to third-party retailers of PlayStation digital games and add-on content.

326. The tying allegation requires Sony to be dominant in the console market. The exclusive dealing and refusal to supply allegations require Sony to be dominant in the PlayStation digital game distribution and add-on content markets. We have found that the Class Representative has failed to establish that, for the purposes of these proceedings, either market, so defined, can appropriately be used to prove Sony's dominance and, therefore that claim fails. The analysis below therefore necessarily proceeds on the assumption that we are wrong in those earlier findings and that the Class Representative's proposed market definitions are appropriate ones on which to base the analysis of abuse.

327. However, given our market definition findings and the fatal impact of those on the Class Representative's claims, we will only address in this section the key issues which arise in the exclusionary abuse allegations. These are:

(1) Whether the Class Representative has established any likely exclusionary effect arising from the alleged abuse.

(2) Whether Sony's behaviour reflects competition on the merits rather than any market foreclosure.

(3) Whether the Class Representative's allegations should be categorised as a refusal to supply claim and, if so, whether the Class Representative has met the conditions necessary for that to succeed.

(2) Legal framework relating to exclusionary abuses

328. There was, for the most part, agreement between the parties on the legal framework for considering the exclusionary abuse allegations.

329. The key principles which are particularly relevant for the discussion of the exclusionary abuse allegations are as follows:

(1) The Class Representative bears the burden of proof in establishing an abuse.[3]

(2) Abuse is an objective concept. Behaviour of a dominant undertaking can be abusive even where it had no intention of infringing competition law. The Tribunal may take subjective intent into account if it considers it relevant, but it is not required to do so.[4]

(3) A dominant undertaking bears a special responsibility not to allow its conduct to impair genuine, undistorted competition on the market. This means that conduct which would otherwise be lawful may be abusive if implemented by a dominant undertaking.[5]

(4) Exclusive dealing prevents customers accessing alternative sources of supply and thus forecloses actual or potential competition.[6]

(5) An exclusionary practice is abusive if it entails means other than those which come within the scope of competition on the merits. This concept

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[3] See Case C-680/20 *Unilever Italia Mkt. Operations Srl v AGCM* EU:C:2023:33; [2023] Bus LR 286 at §40.
[4] See Case T-65/89 *BPB Industries and British Gypsum v Commission* EU:T:1993:31; [1993] 5 CMLR 32 at 70; Case C-377/20 *Servizio Elettrico Nazionale & Others v AGCM*, EU:C:2022:379; [2023] 4 CMLR 1 at §633 (***Servizio Elettrico***).
[5] See *Servizio Elettrico* at §74.
[6] Case 85/76 *Hoffmann-La Roche v Commission* EU:C:1979:36; [1979] 3 CMLR 211 at §90.

covers, in principle, a competitive situation in which consumers benefit from lower prices, better quality and a wider choice of new or improved goods and services.[7] Conduct which does not constitute competition on the merits includes conduct which excludes all actual or potential competition from a market.[8]

(6) Relevant factors in the assessment include (i) the structure of the market; (ii) the extent of the dominant position; (iii) the nature of the conduct; (iv) evidence as to the dominant undertaking's intent; (v) the extent of the likely impact on the market, assessed at the time of the conduct; and (vi) the evidence as to any actual effects which eventuated.[9]

(7) The characterisation of an exclusionary practice as abusive depends on the exclusionary effects that that practice is or was capable of producing.[10]

(8) It is sufficient for the person alleging an exclusionary abuse to prove that the practice is capable of producing exclusionary effects, in particular by impairing an effective competition structure on a relevant market.[11] The exclusionary effects alleged do not therefore have to be actual or concrete, but they must also not be purely hypothetical.[12]

(9) A counterfactual may be used to assess the effect of the conduct in issue. Where it is used, it must be likely and realistic.[13]

(10) There is no rigid approach to constructing a counterfactual. As Richards LJ put it in *National Grid v GEMA* [2010] EWCA Civ 114; [2010] UKCLR 386 at §57:

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[7] See *Servizio Elettrico* at §§61, 76 and 85.
[8] See *Kent* at §499.
[9] *Royal Mail v Ofcom* [2021] EWCA Civ 669; [2021] Bus LR 1045.
[10] See *Servizio Elettrico* at §61.
[11] See *Servizio Elettrico* at §§[48] and [68].
[12] See Case 23/14 *Post Danmark v Konkurrenceradet* EU:C:2015:651; [2015] Bus LR 1304 at §§64 and 66.
[13] See *Churchill Gowns v Ede & Ravenscroft* [2022] CAT 34 at §76.

> "The use of counterfactuals as a tool of appraisal is plainly permissible and of potential value. What is appropriate by way of counterfactual, however, is a matter of judgment for the decision-maker. There is no rule of law that the counterfactual has to take a particular form. The Commission's guidance document refers to a range from "the simple absence of the conduct in question" to "another realistic alternative scenario, having regard to established business practices". It does not say that the alternative scenario must be based on alternative arrangements that the parties to the contracts in issue would or might realistically have made instead, and there is no principle requiring the adoption of such a restrictive approach. The purpose of the counterfactual is simply to cast light on the effect of the conduct in issue. It is for the decision-maker to determine whether a counterfactual is sufficiently realistic to be useful, and to decide how much weight to place on it. This is an area of appreciation, not of legal rules."

330. As already noted, refusal to supply is a particular species of exclusionary abuse, with its own requirements. We will explain the legal framework relating to that in the section below dealing with refusal to supply.

(3) Exclusionary effects

331. In order to establish exclusionary effects, the Class Representative has put forward a counterfactual which essentially involves a third-party distributor having access to the user interface of the PlayStation System, so as to be able to offer an alternative distribution service to users who wish to have an alternative means of purchasing digital PlayStation games and add-on content. This inevitably gives rise to questions about the technical and economic basis on which the third-party retailer would interact with the PlayStation system, with implications for the consumer outcome. The Class Representative recognised these points when dividing its counterfactual into two aspects:

(1) A technical counterfactual, representing the changes that would need to be made to the PlayStation system in order to introduce third-party store competition.

(2) An economic counterfactual, which looks at the economic consequences of the removal of the restrictions which are said to be abusive and the likelihood and extent of market entry, consequently illustrating likely consumer welfare benefits in that scenario.

(a) The technical counterfactual

332. The Class Representative's technical counterfactual is set out in a 14-page note. This provides for third-party distributors to be able to licence and distribute PlayStation digital games and add-on content to PlayStation users, independent of Sony's control. In essence, the technical counterfactual involves:

(1) A third-party store user interface on the PlayStation console.

(2) Back-end services operated by the third party on its own servers.

333. In the technical counterfactual, Sony continues to certify and package content, which the publisher can then make available to any third-party store. In order to ensure that the content is secure and that the purchaser can access it, the packaged content needs to be accompanied by [✂].

334. The third-party store operates a [✂] (equivalent to what Sony does in the actual to allow users to download content in the background while continuing to play a game and then to use it).

335. When a user purchases content, an entitlement is created. This is stored by a [✂] as the authoritative source of truth and is shared by the distributor with other distributors (including Sony), for interoperability reasons.

336. The user's PlayStation console checks entitlements with the [✂] of the relevant store(s). Before the user can use the content, there has to be a process to [✂].

337. Broadly speaking, Sony accepted that the technical counterfactual is feasible in principle. However, it said that the technical counterfactual requires the following changes of substance to the actual position:

(1) The creation of a [✂] which can be used securely to facilitate a third-party service (as opposed to operating exclusively <u>within</u> the Sony system in the actual).

(2) The establishment of a [✂] and entitlement management processes, some of which will need to interact with the console/the PlayStation system.

(3) Other configuration changes to the PlayStation system to allow for all of the above to work properly, including the development of aspects of the SDK library to allow for a third-party store application on the PS Network and to ensure compatibility of game content with third party operations.

338. There are disputes about the significance of each of these changes, in terms of the effort required, the costs of that and the security and operational implications.

339. There are also various other technical, operational and commercial points in dispute between the parties, including Sony's claims about:

(1) Increased attack surfaces arising from the introduction of a [✂] into the PlayStation system.

(2) Greater risk of piracy by allowing third parties to control entitlements.

(3) The need for more intense certification processes and the risk that this might not prevent malware.

(4) The risk of "Man-in-the middle" attacks from sharing payment processing data with third parties.

(5) Greater risk of fraud and a reduction in Sony's visibility of data.

(6) A decrease in the effectiveness of parental controls and child safety features.

(7) A degradation of the user experience.

340. At a high level, the Class Representative says that the required changes to the counterfactual are all part of a balancing exercise which Sony itself undertakes whenever it makes significant adjustments to the system and which needs to reflect the competitive benefits compared with (the Class Representative says) a small reduction in security and operating performance.

341. Sony says that the changes materially alter the security and operating arrangements in a way that involves the Tribunal recalibrating significant parameters of competition.

342. For present purposes we will focus on what seemed to be the three main contested issues of:

(1) Security and the adequacy of cryptography measures proposed in the counterfactual.

(2) The consumption of processing resources on the console and risk of performance degradation as a result of that.

(3) The estimates of effort and cost put forward by Sony for the work required to effect the changes.

343. Most of the evidence relevant to these issues came from:

(1) Sony's factual witnesses, Mr Norton and Mr Smith.

(2) The technical experts, Professor Pietzuch for the Class Representative and Mr Coyne for Sony.

344. While Professor Pietzuch and Mr Coyne are, in different ways, very experienced in IT matters and qualified to give expert evidence on the basis of that experience, it was clear that the Sony factual witnesses had significantly greater knowledge of the specific architecture and operation of the technology involved in the PS Network.

345. In some respects, the evidence of the Sony factual witnesses was used in the conventional way to provide a factual basis on which the experts could opine. Sony also produced, in response to requests for information from the Class Representative, a helpful Information Statement concerning the security architecture of the PlayStation system.

346. However, in other respects, the greater knowledge of the Sony factual witnesses, and especially Mr Norton, created something of a distortion in the way the evidence came out. That was because the Class Representative's technical counterfactual developed during the trial, including in the evidence of the expert witnesses, in response to points made by the Sony factual witnesses during their oral evidence. So, for example, there were new issues that arose during Professor Pietzuch's evidence as a result of observations made by Mr Norton, which meant those issues had not been put, or put as clearly as they might have been, to Mr Norton.

347. Conversely, it became apparent that Mr Norton, in particular, was likely to be the best informed and, therefore, the most reliable witness where matters of detail about the architecture and the operating capacity of the PS Network was concerned. That is not to criticise either Professor Pietzuch or Mr Coyne. It simply reflects our view that, where there were material differences in view about how the PS Network was set up or how it operated, we generally (though not invariably) found Mr Norton's evidence to be the most compelling. This created a practical difficulty for the Class Representative, in particular, as there were areas which might have been considered to be within Professor Pietzuch's expertise where we considered Mr Norton, by virtue of his experience and inside knowledge of the workings of the PlayStation system, to have a more reliable grasp of the detail than Professor Pietzuch.

348. Against that background, we turn now to the three main contested issues.

Security and the adequacy of cryptography measures

349. Mr Norton told us that there are two important concepts in cryptography:

(1) Confidentiality, which involves hiding things.

(2) Integrity, which involves proving things are valid.

350. For best practice, security keys need to achieve both. [✂]

351. Mr Norton accepted that it would be technically possible to design an enhancement of the PlayStation along the lines of the Class Representative's counterfactual, which would accord with standard cryptographic principles. However, in order to comply with those principles, Mr Norton said he would design the necessary changes in a different way from that proposed in the Class Representative's counterfactual, where, for example, [✂].

352. In the counterfactual advanced in Professor Pietzuch's expert reports, a [✂]. In Mr Norton's view, Professor Pietzuch's proposed approach would provide integrity but not confidentiality.

353. Professor Pietzuch accepted in his oral evidence that, in the Class Representative's proposed counterfactual, [✂]. This revision to the technical counterfactual came too late in the trial to be put to Mr Norton, who (as a factual witness) had concluded his evidence by that time.

354. Mr Coyne explained to us that a hash is a mathematical calculation relating to bytes of information stored in, say, a console, which produces a unique set of numbers as a reference point for that material. It is a way of masking something (in this case the [✂]) but it does serve the purpose of identifying that thing. It provides a one-way cryptographic function, but it is not immune from risks of becoming known. Mr Coyne explained that hashes are used for password cracking and that it was possible to obtain hash tables from hackers or to run computer programmes to generate hashes which can then be reverse engineered to obtain the underlying password or key.

355. The Class Representative's technical counterfactual note (referencing the Sony Information Statement), which was generated after the conclusion of the evidence, suggested that the [✂], but this point was not put to any Sony witness.

356. Mr Coyne did accept that, from a technical perspective, the revised counterfactual would work in theory, with the proviso that he was reluctant to "do design on the hoof" without considering potential implications.

357. However, Mr Coyne also said that the [✂]. He said that was significantly different from Sony delivering content on the PS Network. Mr Coyne's evidence was that he would not advise any client to rely solely on cryptography to protect themselves, as the cryptography could fail. Mr Coyne was challenged on this but maintained his position in a credible way.

358. As a separate point, the Class Representative's counterfactual proposed the use of an Advanced Encryption Standard (**AES**) key in order to protect [✂].

359. It was put to Mr Norton in cross examination that this problem could be avoided by using Advanced Encryption with Authenticated Data (**AEAD**), [✂]. Mr Norton accepted this solution would provide [✂] but observed that he had been unaware that [✂] formed part of the Class Representative's case.

360. Professor Pietzuch was criticised for not raising the [✂] in his reports or the Joint Expert Statement. His response was that he had not seen the need to get into such technical detail. He had assumed that anyone familiar with the technology would have understood [✂].

<u>The consumption of processing resources on the console and risk of performance degradation</u>

361. This issue concerns the available capacity of the graphics processing unit (**GPU**) and the additional random access memory (**RAM**) load in the Class Representative's counterfactual world.

362. In relation to the first of those, Mr Norton told us that Sony's promise to developers is that the PlayStation system will not use more than [✂]% of the GPU, thereby affording developers as much computational power as possible. It is not feasible to have a hard apportionment of that capacity, so if the PlayStation uses more than [✂]% then game performance can be affected. A

particular risk might be the processing of in-game commerce, where GPU capacity is required to decompress images.

363. In relation to the RAM, there are only [✂]. The Class Representative responded to this with what became a further revision of the technical counterfactual:

(1) It was put to Mr Norton in cross examination that the solution to this problem was that only one store would need to be active at any time. Mr Norton did not accept that this would work, as he said that it takes around [✂] seconds to start a store, which would either mean creating an unacceptable delay for users or leaving all stores running. While there are ways to alleviate the load on the RAM by using a technique called "paging", Mr Norton's view was that this would still introduce latency and degrade the user experience.

(2) Mr Smith's evidence in relation to this point was that the need to "fetch" information from multiple stores for the purposes of updating the files on the PlayStation could increase latency and affect user experience. Mr Smith was invited in cross examination to agree that the extent and amount of fetching of data in the counterfactual would not affect performance. [✂]

(3) Professor Pietzuch's response to these points was that much of the processes involved in running a third-party store would have marginal impacts. The use of PlayStation resources could be managed through limitations on use imposed in the SDK for the store and the ability of the system to mediate memory usage. However, to address the capacity points fully, he identified as a solution that a user would select a single, default store while using the console for a particular game, which would release all the capacity demands from the other stores which might otherwise be in use. For example, if the user chose a third-party store as the default store, the PS Store would cease to operate and to use capacity on that console.

364. While issues in relation to the impact on the RAM of the third-party store were canvassed in cross examination with Mr Norton and Mr Smith, the solution developed by Professor Pietzuch of a default store, with other stores being switched off, was not raised until Professor Pietzuch gave oral evidence. Consequently, it was not fully aired with Mr Norton or Mr Smith. As a result, we do not know what their response would have been to Professor Pietzuch's proposed solution.

Effort and cost

365. Mr Norton and Mr Smith provided estimates of their expectations of the upfront and ongoing costs of the changes that would be required by the technical counterfactual. Mr Norton, in an annex to his second statement, estimated upfront costs in excess of US$[✂] million and annual ongoing costs of over US$[✂] million. Mr Smith estimated an additional upfront cost of between US$[✂] and US$[✂] million.

366. The significance of these costs in the proceedings is twofold:

(1) The costs feed into the economic counterfactual.

(2) They are an indication of the level of change which the technical counterfactual involves.

367. The estimates of Mr Norton and Mr Smith were contested by Professor Pietzuch, who said they were no more than assertions and that the work required was comparatively minor, with reference to major engineering projects Sony has previously carried out. There were challenges by the Class Representative about whether there had been any proper estimation by Mr Norton and Mr Smith, what the relative costs of other similar projects would have been, and whether the costs would be the same if the changes had been implemented at the time of the development of the PS4.

368. As it happens, given our conclusions below, we do not consider it necessary to reach a settled view on what the level of costs would be and what their

significance is in terms of the level of change which the technical counterfactual would require Sony to undertake.

369. We do observe that:

(1) Mr Norton and Mr Smith appear to have produced their figures without any real detailed estimation work. It also seems likely that they would be inclined to produce higher rather than lower estimates in those circumstances. However, equally, we consider that they were unlikely to provide wholly unreasonable estimates.

(2) The estimates did not necessarily include all of the required work, as the Class Representative's counterfactual was altered on a number of occasions to add apparently new elements of work.

(3) It seems likely that doing the work in the evolution of the PS4 rather than retrofitting it to the current system would have been less complex (although not necessarily materially cheaper). It may also, however, have delayed the production and launch date of the PS4 with potentially adverse commercial consequences for Sony, although that would have depended on how and when it became part of the project.

(4) The Class Representative advanced little positive evidence as to the effort and cost that would be required to effect the technical counterfactual. What little there was came from Professor Pietzuch, who acknowledged that he had little experience of project cost estimation and had made no independent effort to estimate the costs.

370. While we can see the challenge for the Class Representative in putting forward evidence of the reasonable level of costs associated with the technical counterfactual, we do not consider that the Class Representative has done enough to convince us that the estimates from Mr Norton and Mr Smith are completely unreasonable. Although it is difficult to form a firm view, we think those estimates are probably on the high side, but probably not significantly so. Even if we were to reduce the estimated costs put forward by Mr Norton and

Mr Smith by a third, the upfront costs would still exceed US$[✂] million and the ongoing costs would exceed US$[✂] million per annum.

Our findings about the technical counterfactual

371. It is difficult to accept Professor Pietzuch's assertion that the changes required in the technical counterfactual were comparatively minor. It may be that Sony has carried out other major engineering projects, but that is not really the issue. The question is an assessment of the absolute extent of the necessary change. This involves considering how the change impacts on operational and security issues, the extent of intervention which the Class Representative is effectively asking us to make, and the economic consequences of the changes.

372. In our view, the security issues relating to [✂] are significant and give rise to unresolved security concerns which are materially different in kind and extent from those which Sony manages in reality. The performance issues also give rise to complex solutions, which would require adaptation to Sony's processes in the actual. Furthermore, the last-minute adjustment in Professor Pietzuch's evidence to provide for a default store is a material change to the competitive offering in the counterfactual because the stores will not compete in real time on the PlayStation system.

373. There will on any reasonable view be significant costs and effort involved on Sony's part. As it happens, the economic counterfactual is relatively insensitive to the size of these costs which is one reason why we do not consider it necessary to reach a final view on the likely level of Sony's costs in the counterfactual. However, the level of costs does indicate a material interference with the way in which Sony currently runs its system.

374. Finally, we are compelled to observe that the manner and degree of the evolution in the technical counterfactual during the course of the trial was unsatisfactory. Some degree of evolution in a counterfactual can be expected during the course of a case, but in these proceedings that happened to such an extent that it created problems. Important points were not put properly, if at all, to the appropriate

witnesses. The responsibility for that falls mainly on the Class Representative, who bears the onus of proof. Also, Professor Pietzuch had not properly dealt with some issues which emerged from Mr Norton's written evidence. It was however partly a structural problem, given the lack of process to explore issues between the factual technical expert evidence and the technical experts (as the factual witnesses did not participate in the joint expert process). As it happens, given our other conclusions, it has no prejudicial effect on either party.

(b) The economic counterfactual

375. The economic counterfactual performs the significant task of exploring the effects of the restrictions, and, in particular, testing whether there would be appreciably more competition and consequent consumer welfare benefits if the restrictions were not present. That requires consideration of whether there would be market entry by third party PlayStation digital game retailers, whether that market entry would be at a material level, and what impact the appearance of such competition might have on the prices paid by consumers for PlayStation digital games and add-on content.

376. As the Class Representative put it: "is entry viable and is there an appetite for such entry"? If the answer to both of those questions is yes, and as long as the rivalry introduced is of appreciable significance, then we can conclude that the restrictions do have an adverse effect on the structure of the market, preventing the emergence of more competitive conditions with the associated benefits that brings to consumers.

377. As we have observed in the discussion of the technical counterfactual, the Class Representative's case on whether entry would be viable depended critically on the terms on which any third-party digital distributor would be able to connect to the PlayStation system. The Class Representative accepted that it would be legitimate for Sony to charge a royalty to third party retailers to reflect the investments that Sony had made in the PS system. The Class Representative's arguments on viability had two main strands:

(1) A comparison of PlayStation digital game prices with PlayStation physical game prices, to provide a benchmark for competitive retail prices in a world without the restrictions. As noted in the Market Definition section, Mr Harman assessed the difference between the digital and physical game prices to be in the order of [✂].

(2) The "top down" assessment of counterfactual revenues for Sony. This essentially assumes that Sony does not need all of the [✂]% margin which it currently recovers from digital game sales and explores the extent to which this could be reduced to a level which is sufficient to remunerate and sustain the provision of the PlayStation system, including Sony's investment in the console. The outcome is then converted into an equivalent royalty rate that Sony could charge to third-party retailers on digital game sales to arrive at Mr Harman's Effective Counterfactual Commission Rate (**ECCR**).

378. In contrast, Sony's valuation expert, Mr Bezant employed a "bottom up" approach, in which he identified three activities which would need to be remunerated in the counterfactual:

(1) A Digital Platform Royalty (**DPR**) that third party retailers would need to pay to reflect the investment by Sony in the platform. In assessing the appropriate level of the DPR Mr Bezant adjusted the royalty received by Sony for physical discs and also had reference to Sony's indirect revenue royalty to come up with a figure of 11% to 13% of the third-party retailer's retail price.

(2) A Third-Party Store Facilitation Fee (**TPSFF**), which Sony could charge new entrants to reflect Sony's investment in adapting its platform to accommodate them and the ongoing costs of third-party access. Mr Bezant used the estimates of Mr Norton and Mr Smith for upfront and ongoing costs of enabling a third-party store as the basis for this, also assuming that the costs would be shared on worldwide revenue and adjusting the figure to reflect different levels of market entry. This

produced a range of between 1.2% of the third-party operator's retail price (for 40% market entry) and 9.6% (for 5% market entry).

(3) A Digital Distribution Margin (**DDM**), which is the fee that a third-party store would need to charge in order to recover the cost of providing its distribution services. Mr Bezant looked at a range of comparables and identified a range of between 12% (based on the Epic Games and Microsoft PC stores) and 25% (based on the rates charged by Steam and GOG).

379. The Class Representative's valuation expert, Mr Dasgupta, made a number of criticisms of Mr Bezant's approach, some of which seem justified and some not. However, the Class Representative broadly accepted that the fees and charges identified by Mr Bezant needed to be recovered somewhere in the counterfactual, even if the Class Representative disagreed with their extent as identified by Mr Bezant.

Mr Harman's approach

380. As already explained, we do not consider Harman's estimate of a [✂] premium of physical over digital game prices to be reliable. If there is any difference then it is likely to be much smaller. As a consequence, the Class Representative has no benchmark for a competitive price and Mr Harman has no evidential basis on which he can predict the competitive price in the counterfactual.

381. Turning to the ECCR, this is based on an estimate of the total remuneration that Sony would require to reward and sustain the PlayStation system if Sony were to maintain 100% of the retail distribution activity in the counterfactual. This revenue requirement is then translated into an equivalent commission rate which Sony would need to charge on PlayStation digital game sales in order to generate this sum. Mr Harman's ECCR is therefore expressed as a commission rate on digital sales.

382. Mr Harman identified two versions of the ECCR:

(1) A Cost-recovery ECCR: Mr Harman estimated the digital distribution costs that would be incurred by Sony in the counterfactual, by: assuming an increase in the number of digital games sold (due to the lower prices in the counterfactual); assuming that the incremental costs incurred in adjusting the PlayStation system would be spread across all EU sales; and including a reasonable return on the assets. This comes out at [✂]% of digital sales, depending on whether the incremental costs of the technical counterfactual which are used in the ECCR are Professor Pietzuch's estimates or Mr Norton and Mr Smith's estimates.

(2) A Value-added ECCR: this includes everything in the cost-recovery ECCR plus an uplift of 5-10 percentage points to cover (a) a reward for either distinctive value, or a return on IP/intangibles (which Mr Harman assumed to be equivalent); and (b) an allowance to recoup losses made by Sony on console sales. The range is due to the fact that Mr Harman used royalty rates [✂] as a proxy for this uplift, and these royalty rates range from [✂]% of the wholesale prices of the licensed peripherals. There is therefore a range of [✂]% to [✂]% for the Value-added ECCR, depending on the level of mark-up and the reference point for the level of Sony's costs.

383. Mr Harman carried out a cross-check of these figures:

(1) By way of a return on capital employed (**ROCE**) calculation,[14] which identifies ROCE for the combined PS4/5 system of [✂]% if Sony actually received remuneration equivalent to the Cost-recovery ECCR, and between [✂]% and [✂]% for the Value-added ECCR. This compares with Mr Harman's calculation of ROCE for the PlayStation system in the actual world of [✂]% (the difference effectively represents Mr Harman's estimate of the excess profits, as does the [✂]-percentage point difference in retail margin between the upper end of Mr Harman's Value-added ECCR and Sony's actual margin).

[14] The concept of a ROCE calculation will be explored in detail in the Exploitative Abuse section below.

(2) Against Sony's [✂]% physical platform royalty as an available benchmark, although he said this may not reflect a competitive margin because it is also effectively set by Sony in monopoly conditions (unlike the retail activity in the physical games sales market, the manufacturing of physical discs, to which the royalty applies, can only be done by Sony).

384. Mr Harman then used his ECCR analysis to consider the commercial attractiveness of competitive entry into the market by third-party digital retailers. Initially, this involved the simple calculation that there would be a total sum equivalent to between 11% and 16% of total PlayStation game revenue available to a third-party entrant (100% less 70% for publishers, less (14 % to 19%) for Sony = (11% to 16%)).

385. Sony criticised Mr Harman's ECCR in a number of ways, including the following:

(1) The entire ECCR exercise was an exercise of regulatory profit control, in which the calculations were based on a presumption that, as a monopoly business, Sony's remuneration from operating the PlayStation system should be set on the basis of a revenue requirement that would be sufficient to cover its cost of capital. Sony argued that this was a wholly inappropriate approach for capping the profits of a PlayStation business that operated in a highly dynamic competitive environment.

(2) Mr Harman had not taken any account of intra-group royalties for the Sony brand.

(3) Mr Harman had failed to make allowance for intangibles such as the PlayStation trademark, goodwill and the value of the installed customer base.

(4) There were various points about the appropriate way to recover the costs associated with enabling a third-party storefront on the PlayStation system. At a high level, these involved:

(i) The size of these costs.

(ii) Whether the costs would have been smaller had the PlayStation system been designed with third-party storefronts in mind.

(5) Who should pay these costs – all digital retailers or just the third-party stores:

(i) How the storefront costs should be spread across different jurisdictions.

(ii) How any fixed cost of converting the PlayStation system for third-party storefronts should be recovered across the sales by individual third-party stores.

386. Some of these points fall for consideration in the next section, on Exploitative Abuse. For present purposes, it is sufficient to note that, even if it does identify an appropriate basis for regulatory intervention in this industry, there were some real questions raised about whether Mr Harman's ECCR properly captured all of the necessary costs for the exercise he embarked on. In particular, we think it likely (as will be developed in the Exploitative Abuse section) that the intragroup royalties should be taken into account and that it might be possible to make some adjustment to the intangibles in order to deal with Mr Harman's concerns that the alleged abusive behaviour may have inflated these numbers.

387. Mr Harman claimed that his top-down ECCR approach has the attractive property of being agnostic as to the extent of third-party store competition in the counterfactual. This is because the ECCR is a "revenue requirement" that ensures Sony receives sufficient remuneration to continue to operate and invest in the PlayStation system, and it does not matter how that revenue breaks down between third-party store sales (where Sony receives an appropriate royalty to

cover the system costs whilst the third-party store receives its retail margin) and Sony's PS Store sales (where both of these rewards are bundled up in a single margin earned by Sony).

388. We do not consider that this agnosticism claim stands up to proper scrutiny. For any given royalty rate on third-party store sales, Sony is clearly not indifferent as to the level of market penetration achieved by the third-party store(s). Mr Harman has glossed over this in his calculations because, in estimating the ECCR, he adopts the conservative (but logically wrong) assumption that Sony would not save any operating costs as digital game distribution activity switches from the PS Store to third-party stores. However, the more substantive objection is that Mr Harman has used the agnosticism claim as an attempt to avoid scrutiny of the individual components that make up the counterfactual, and specifically about how he arrives at a 20% price benefit for consumers along with viable third-party store entry.

389. That position became clear when the Tribunal, at an early stage of the trial, asked for illustrations of how the ECCR would work in practice. Mr Harman produced two illustrative scenarios, which brought out clearly a number of features in Mr Harman's approach. These illustrations were built around a simplified model in which Sony currently sells 1,000 games at a price of £100 each, yielding an actual market value of £100,000. He assumed that the introduction of competition into digital PlayStation game distribution would result simultaneously in:

(1) a 20% reduction in retail price from £100 to £80, to reflect his conclusion about the extent to which current digital PlayStation game prices exceeded the competitive price.

(2) A reasonable return to Sony (which under the Value-added ECCR would require Sony to collect 20% of all retail spend on games). This would be partly driven by Sony's own retail sales and partly by a fee from third-party stores, recognising that there would be a price for them to pay to Sony for access to the PlayStation platform.

(3) A viable retail margin to sustain the entry and on-going viability of the third-party stores, whose entry would need to gain sufficient impetus to achieve the 20% gain to consumers (in the form of lower prices) from price competition.

390. Mr Harman's illustrations show two counterfactual scenarios, one (**Illustration A**) in which third-party stores gain a 40% market share (with the PS Store retaining a 60% share) and the other (**Illustration B**) in which third-party stores gain a 60% market share (with the PS Store retaining a 40% share).

391. In both Illustrations A and B, the following key results hold:

(1) Game prices fall 20% (from £100 to £80 in the purely illustrative case he analyses).

(2) The number of games sold increases by 25% from 100 to 125 as a result of the price reduction, so that total games revenue across the industry stays constant at £100,000.

(3) For sales that go through the PS Store, Sony suffers a small reduction in commission from [✂]% to 25% in both scenarios.

(4) Total publisher remuneration actually increases slightly in both Illustrations, from £72,000 to £75,000. This result comes about through a combination of a cut in the wholesale price for each game (from £80 to £60) that is more than compensated by the 25% increase in game volumes.

(5) Sony's total remuneration falls from [✂]% of game revenue in the actual world to 20% in each of the Illustrations. The 20% counterfactual level is consistent with Mr Harman's Value-added ECCR, being the upper end of the reward to Sony that Mr Harman believes is consistent with a return that will sustain investment in the PlayStation system. The loss to Sony of 8 percentage points of revenue (£8,000 in the context of Mr Harman's Illustrations) is consistent with Mr Harman's view on the

actual returns being excessive and represents the monopoly rent whose confiscation will not (according to Mr Harman) adversely affect viability or dynamic incentives.

392. The following aspects differ markedly between Illustrations A and B:

(1) The access fee charged by Sony to third-party store(s) increases from 12.5% in Illustration A to 16.7% in Illustration B. This increase is driven by the need for Sony to earn its 20% ECCR return, and by the fact that its ability to reach that threshold is squeezed in Illustration B by the loss of retail market share to the third-party store(s).

(2) The gross remuneration available to cover the operating costs and profits of the third-party store(s) (after paying an access fee to Sony's access) is 12.5% in Illustration A, but falls to 8.3% in Illustration B.

393. A number of questions emerge from the Illustrations, which were canvassed with Mr Harman in the concurrent evidence session and in cross examination:

(1) Is Mr Harman's unitary elasticity assumption, by which the 20% price reduction would result in a 25% increase in overall sales volumes, valid?

(2) Would publishers agree to lower their wholesale prices from £80 to £60, as the Illustrations show, in return for the promise of higher volumes of sales?

(3) Is Mr Harman's assumption of a 20% consumer price reduction credible?

(4) How would third-party store competition develop in the counterfactual market?

(5) Does Sony obtain a reasonable reward for the PlayStation system from the aggregate of its own game sales and the access fee from third-party stores?

(6) Would third-party stores earn viable margins so as to encourage market entry and maintain or grow market share?

394. We did not think that the Illustrations or Mr Harman's commentary on them provided satisfactory answers to these questions. We will deal with them in the same order.

Is Mr Harman's unitary elasticity estimate valid?

395. Mr Harman's assumption that demand for digital games has unitary elasticity means that total digital games revenue is invariant to the price of a digital game. In his fifth report, Mr Harman cited two academic articles in support of the claim that demand elasticity for computer games lies between 1.1 and 1.3, showing that demand for games is very slightly elastic. That is in line with what economic theory would predict for a profit-seeking firm with very low marginal costs. If true for digital PlayStation games, and if it remained true even for large price changes, that would mean that a price reduction would marginally increase total revenue. However, the validity of the academic studies (both of which focus on the analysis of subscription models for selling games) is untested.

396. In the same report, Mr Harman also cited evidence from Sony that game demand is elastic. However, this relates specifically to the price promotions on individual game titles implemented by the PS Store in the period after a game launch. We heard from Mr Cox and other witnesses that short term price promotions are believed to generate a very elastic demand response for an individual game, and that Sony is often successful in persuading publishers to agree to wholesale price reductions to fund such promotions. However, the ability to exploit elastic demand for an individual game in the period after the launch period should not be confused with the general proposition that overall game revenues would increase if all game prices were lower.

397. Mr Harman then described the standard result that demand elasticity increases as price increases and that suppliers of a zero-cost product will stop increasing price at the point of unitary elasticity. However, the logic of this position would be that, even if demand elasticity is unitary at the current market price, a substantial 20% price reduction from this level would push demand into the inelastic section, so that it would tend to reduce revenue.

398. If we believe that console games are set at prices that maximise profits, the most natural conclusion to reach is that reducing prices is most likely to cause a reduction in total game revenue. In that case, Mr Harman's assumption that total market revenue will be the same irrespective of price will not hold true, and it will be harder to persuade publishers to cut their wholesale price in the way envisaged by the Illustrations. This outcome would in turn exert additional pressure on a number of the other predictions in Mr Harman's Illustrations and the economic counterfactual.

Would publishers agree to lower wholesale prices?

399. Mr Harman's Illustrations show publishers being prepared to reduce the wholesale price from £80 to £60 on the basis that this would contribute to a significant sales uplift that will more than compensate for the lower unit price and will generate slightly increased publisher revenues overall.

400. The questions about demand elasticity discussed above provide one reason for developers to be wary about this prediction (though it is credible that some publishers might be prepared to trade-off lower wholesale prices against higher game sales volumes).

401. The other concern in relation to publisher incentives is the absence of any recognition in the Illustrations of the link between digital PlayStation games and the other sales channels used by publishers. In the Illustrations, digital PlayStation games are sold in isolation from all other competitive factors. This is of course artificial, and we need to consider the interaction of the events predicted by the counterfactual in relation to digital PlayStation games with physical PlayStation games, games sold through other console systems and PC

games. We heard very clear evidence (including from both of the publisher witnesses who gave evidence before us) that publishers prefer to maintain parity of retail prices for their games across all sales channels (even if they do not always succeed in that aim).

402. The most problematic (for Mr Harman and the Class Representative) example of this is the way in which Epic's willingness to reduce its commission for the digital retailing of PC games to 12% has led to publishers setting a higher wholesale price, rather than allowing the benefit of the commission reduction to flow through to lower consumer prices. Mr Kingsley told us that Epic's commission reduction had no effect on retail pricing in the Epic Games Store. Mr Early gave similar evidence about the effect (or lack thereof) of commission reductions on Steam's PC games storefront. That seems to call into serious question any assumption that a reduced margin for digital PlayStation games (whether sold through the PS Store or by a third-party store) would lead to lower consumer prices, as opposed to higher publisher margins.

Is Mr Harman's 20% consumer price reduction credible?

403. This is a critical question in the counterfactual analysis. As we have outlined earlier in this Judgment, there are multiple reasons to doubt the credibility of Harman's 20% price reduction.

404. First, Mr Harman's reliance on physical PlayStation game prices as a competitive benchmark for the 20% price reduction is not sound, for reasons we have explained in the Market Definition section of this Judgment. We do not know what the real price difference between the two channels is, but it is clear that Mr Harman's estimate based on unweighted average prices is wholly unreliable.

405. Secondly, the narrative of a transition from monopoly to competitive rivalry behind Mr Harman's 20% price reduction is not sustained by the basic arithmetic of the Illustrations. The Class Representative's counterfactual is intended to differ from what happens in the actual world, through the introduction of competition between PlayStation digital games retailers

(Sony and the third-party store(s)). As a very general proposition, it is plausible to envisage that a transition from a single monopoly supplier to multiple suppliers might lead to reductions in the margins charged for the activity in question, and a corresponding reduction in consumer prices.

406. However, the arithmetic in the Illustrations does not support this phenomenon at all:

(1) Sony's PS Store margin in the real world is [✂]%.

(2) The gross margin charged by the PS Store and by third-party store(s) in the Illustrations (which in turn is comprised of two elements: the margin to remunerate retail activity plus the access fee charged by Sony) is 25%.

(3) This [✂]-percentage point reduction in the gap between the wholesale and retail price between the real-world margin and the counterfactual clearly cannot justify a 20% consumer price benefit.

407. The reason for this basic arithmetic failure stems from the Class Representative's concession that third-party store(s) should pay Sony a reasonable fee for access to the benefits of the PlayStation system. Even in Illustration A, a 12.5% access fee eliminates almost all of the competitive advantage that is open to third-party store(s). In Illustration B, the fact that the access fee rises to 16.7% makes viable third-party store activity more or less untenable, with only 8.3% of the retail margin left to remunerate the third-party store's operating costs.

408. Mr Harman suggested that 9% was a sufficient operating margin for new entrants. However, this seemed unrealistic, given that:

(1) It appears uncontentious that the variable costs of a storefront are likely to be in the region of 4% to 6%.

(2) That range is consistent with public statements by Epic's CEO, who has said that the variable costs of running the Epic Games store were around 5% to 6% of revenue.

(3) A new entrant would also have to cover entry costs. Mr Harman estimated these at US$66m per third-party retailer based on Sony's actual costs of setting up the PS Store, but he did not include any PS4 costs after launch, or any PS5 costs. He also did not consider costs peculiar to a new entrant (such as security related costs), so the real number might well be higher.

(4) It appears that Epic's retail operation is struggling to achieve a positive overall return at a 12% commission rate. There was argument between the parties about the exact level of profitability of the Epic Games Store over time, but it seems unlikely that it has been profitable in any meaningful way over a prolonged period and the Class Representative seemed to accept that at best it was "marginally profitable".

(5) Any new entrant would expect to make a return on its investment that reflected the risk of the venture.

409. Based on this evidence, it seems to us that a third-party store would find it very hard to be viable on an 8.3% commission rate.

410. Further, it should be stressed that this failure of the numbers to work viably is apparent when calculated by reference to the level of access fee which Mr Harman is putting forward. Sony's case was that Mr Harman's access fees are too low and that more realistic levels would make third-party store entry even less plausible.

411. There is also an important link between this question and the point above about the weight placed on Mr Harman's unitary elasticity assumption. The majority of Mr Harman's 20% consumer price reduction arises from the assumption that publishers will willingly accept a £12 per game reduction in their wholesale price (based on the illustrative starting point of a £100 game). However, as we

have concluded above, that rests on a highly implausible elasticity assumption that Mr Harman has not justified. Even if there was evidence that publishers would willingly concede a large wholesale price reduction on the promise of extra sales volumes, the associated consumer benefit has no necessary connection with the introduction of competition in retail distribution – this same phenomenon could work just as well in the real world in which the PS Store retains its monopoly over digital distribution.

How would third-party store competition develop?

412. The Illustrations yield an identical £20/20% per game consumer price reduction irrespective of whether third-party stores achieve 40% or 60% market penetration. This comes about because Mr Harman assumes that the price charged by the PS Store would also fall by £20.

413. A more realistic scenario from the introduction of competition into a previously monopolised activity would involve two factors: first, the new entrants deciding how far to undercut the monopoly price as a way to gain market share; and secondly, the incumbent monopolist deciding how far to cut its price in order to respond to new entry.

414. Many scenarios can be accommodated within this framework, depending on the nature of the activity, the stickiness of the incumbent's market share, and the levels of quality differentiation in the activity in question. However, Mr Harman has not embarked on any meaningful analysis in relation to this question, either in the Illustrations or more generally in his economic counterfactual.

415. The Illustrations also demonstrate a fundamental inconsistency: for third-party store entry to be successful, it will normally be the case that the incumbent price stays high so that entrants can offer consumers an attractive price-related reason to switch. In that respect, it is not plausible to project a market-wide reduction in price that applies as much to the PS Store as to the third-party store(s).

416. Mr Harman does not provide any analysis that satisfactorily resolves this problem. The Class Representative's case was that competition would primarily

have been on price, but the Class Representative failed altogether to deal with the question of how Sony competing on price would affect the market share a new entrant could gain.

417. In addition to the question of Sony's reaction to competition in the counterfactual, there is also the question of what reaction Xbox, Nintendo or the PC games channel might have to price competition between the PS Store and a third-party store. It seems unlikely that there would be no reaction at all, given the competitive position at the console/platform level, but this has not been addressed by Mr Harman.

418. We recognise that it can sometimes be difficult to model market entry scenarios. However, the approach taken by Mr Harman has essentially been to ignore this important issue altogether, save for an assumption (which is fundamentally flawed) of a material price reduction and material changes in market shares based on that.

419. Turning to whether there would be an appetite for entry, the Class Representative has provided no direct evidence of appetite for entry from any potential third-party entrant. [✂]

420. The Class Representative relied on various requests made of Sony by publishers (including Ubisoft) to vary distribution arrangements through the PS Store. It is not clear that any of these actually amounted to a request to be able to carry out distribution services separately from Sony. The closest to this seem to have been the EA request in 2012 and the Ubisoft requests in 2012 and 2018. However, we do not consider these to be sufficient to demonstrate an appetite for entry as a third-party independent distribution service during the claim period [✂]. The Class Representative may well be right in attributing Sony's reaction to these requests as demonstrating a desire to maintain control over distribution, but that does not mean that the requests provide evidence of appetite for market entry.

421. In summary on this point, the Class Representative has fallen well short of satisfying us about the likelihood and extent of any third-party competition in the counterfactual.

Does Sony obtain a reasonable reward for the PlayStation system?

422. The "system access fee" in the Illustrations is designed to achieve a reward to Sony that, when added to the remuneration Sony obtains from sales through the PS Store, generates a sum that equates to the upper end of the value-added ECCR. In Mr Harman's Illustrations, this aggregate sum is £20,000.

423. As noted above, the rate of this access fee increases as third-party store(s) increase their share of game sales, so it is 12.5% in Illustration A but 16.7% in Illustration B. The higher rate compensates Sony for losing out on sales and hence margins through the PS Store. This shows that Mr Harman's ECCR approach is clearly not agnostic to the way third-party store competition develops.

424. In any event, Sony's system access fee in the Illustrations is only as good as Mr Harman's contested claims about the appropriate level of the value-added ECCR remuneration. Sony argues that 20% of digital revenues is insufficient to provide it with a proper incentive to invest, given Mr Harman's failure to account for a reasonable return on intangibles and the failure of the Illustrations to take any explicit account of the need for third-party stores to meet Sony's upfront and continuing costs of new storefront(s) on the PS Network. We consider there to be some merit in Sony's position, and this is a further reason why we are sceptical of the Class Representative's economic counterfactual.

Do third-party stores earn viable margins?

425. Third-party store(s) are left in Illustrations A and B respectively with 12.5% or 8.3% of game revenues to cover their operating costs and profits. As already discussed, even the higher end of this range seems to be at the bottom end of plausible viable retail margins, given questions already discussed about whether Epic can sustain a viable business in PC retailing at the 12% commission level.

426. In his fifth report, as summarised at Table 6-5, Mr Harman carried out a further exercise to determine whether a new entrant could expect to recover the costs of entry from the revenue available to it. This (he said) demonstrated the ability

of a new entrant to recover sunk costs between 23.8 and 52.4 times over a 10- or 15-year period, depending on which level of ECCR was used.

427. A simple illustration is unable to address all the issues concerning the conditions necessary for viable third-party store entry, but it is notable that Mr Harman's own assessment estimates that each retailer would incur fixed set-up costs of US$66m, which would need to be recovered (over time) from a surplus of third-party store margin over operating costs. In closing submissions, the Class Representative sought to downplay this challenge, arguing that third-party stores might be able to free ride on investment they had already made (such as an active PC retail business), and that they might be content to operate on a "marginal" basis (which presumably means not taking any fixed cost recovery concerns into account). However, these arguments seem highly speculative, and do not truly address the questions raised above about third-party store viability.

Mr Bezant's approach

428. We think it is necessary to engage with a bottom-up analysis in order to assess the prospect of competitive entry. Even taking a relatively conservative approach to Mr Bezant's figures, it is apparent that there would be considerable pressure on any headroom which the Class Representative might be able to identify by reason of increased competition. For example:

(1) In relation to the DPR, Mr Harman seemed to accept (although his answers were not entirely clear) that the mark up in the value added ECCR was equivalent to a return to Sony on its platform investment and access to its installed base, allowing as much as 10% for that. The lower end of Mr Bezant's DPR was 11%, so there is actually little between them, even if they came at it in a different way and on a slightly different basis. That is putting to one side Mr Harman's use of peripherals licences as a benchmark for the mark-up of the ECCR, which Mr Bezant argued was questionable, given the commercial differences between the position of peripheral manufacturers and publishers *vis a vis* Sony, and the respective scope of the licences.

(2) Mr Bezant's TPSFF seems relatively conservative (given that it is spread worldwide, when a requirement to recover these costs across UK sales alone would be arguable) and it is relatively insensitive to changes in the underlying numbers. Whilst there are various arguments about how this fee should be calculated and passed on, we think market entrants might well face reasonable charges of several percentage points of revenue (say 3% to 4%), especially at early stages of market penetration.

(3) There was much argument about which comparables were reliable for the purpose of determining a fair figure for the DDM. For present purposes we note that it is difficult for the Class Representative to argue against the use of 12%, which represents the lower end of commission rates in the PC games market.

429. Assuming for present purposes a 10% DPR, a 3% TPSFF and a 12% DDM, that immediately consumes some 25% of revenue, which is not very different from Sony's effective rate for the services it provides in the actual world. That implies that there is little room to cut the retail price without the outcome becoming uneconomic for Sony, the new entrant, or both. It also reinforces the point already discussed that Sony's commission rate in the actual world may not be that far from the competitive price that would prevail in a reasonable counterfactual. None of this sits well with the Class Representative's claim that competition in digital retailing would secure a 20% price reduction.

(c) Our findings on exclusionary effects

430. In summary, the Class Representative's economic counterfactual is not a credible one. It is based almost entirely on theoretical assumptions, which do not hold good in important respects in the real world. The one key factual point relied on by Mr Harman, that the competitive price is 20% lower than the actual retail price, is not made out. There is no real analysis to support the Class Representative's contention that market entry at any level would result in appreciably greater competition that would be economically viable, and the evidence before us suggests that such an outcome is unlikely.

431. Instead, it seems likely, based on Mr Harman's own analysis, that the only viable market entry for a third-party store would lead to a set of charges against the retail margin which are not significantly different from the level of Sony's commission in the real world. The consumer benefit which Mr Harman sought to portray as part of the economic counterfactual is in fact the result of him manipulating the sales volumes to reduce publisher margin so as to allow a retail price reduction. That is not an outcome which is plausible based on the evidence we have received from publishers, and nor is it causally connected to the removal of the alleged exclusive dealing abuse.

432. We therefore agree with Sony that the Class Representative has failed to establish that there is any likely effect on competition as a result of the restrictions. Therefore, the Class Representative's allegation of exclusive dealing arising from the restrictions also fails.

(4) Competition on the merits

433. We can deal with this shortly, as it only arises on the basis that there is a separate market for digital distribution of PlayStation games and add-on content, which is the premise on which we are considering exclusionary conduct (despite having decided that we should be looking at this matter in the context of a systems market).

434. On that hypothesis, we would not have accepted Sony's argument that competition between platforms, through an integrated system which prices the console low to attract customers and recovers that and various other investments through game sales, could amount to competition on the merits. That is because that competition would be taking place in a separate (upstream) market from the digital distribution market in which the abuse was alleged. It does not seem right that otherwise abusive conduct in a separately defined aftermarket can be excused by competition in a separately defined primary market.

435. As it happens, that outcome does seem inconsistent with the reality of what happens in this market, which is why we think looking at the matter as a systems market is the correct approach.

(5) Refusal to supply

(a) Introduction to refusal to supply abuse

436. We have left this subject to the end of this section on exclusionary abuse, but it should be noted that Sony advances it as a complete answer to allegations of exclusionary conduct. Sony relies on a line of cases which say that requiring a dominant party to provide access to its own infrastructure and/or IP, in certain circumstances, is an exceptional step. Sony says that withholding the supply of such access can only be an abuse if certain conditions are met.

437. The Class Representative says that the circumstances of this case are not such that this line of cases is engaged. This is broadly on the basis that the Class Representative argues that the refusal to supply cases have exceptional facts which are not present here. Sony has developed its system to allow third party access and, in those circumstances, the usual rules relating to abuse of dominance and abuse should be applied. Alternatively, the Class Representative contends that the conditions for an abuse of refusal to supply are met in any event.

438. We were also assisted on this subject by the observations of the CMA, which focused on the philosophy behind the refusal to supply cases and the question of whether IP or infrastructure is developed for the needs of the dominant firm only.

(b) Legal framework for refusal to supply

439. There was broad agreement between the parties (and the CMA) about the relevant legal principles, with the dispute between the parties largely turning on the application of those principles to the facts of this case. It is therefore unnecessary to review the authorities in any detail. The following summary from the judgment of the CJEU in *Google v Commission (Google Shopping)* EU:C:2024:726; [2024] 5 CMLR 20 (***Google Shopping***) conveniently summarises the basic principle:

> "89. As regards practices consisting in a refusal to grant access to infrastructure developed by a dominant undertaking for the purposes of its own business and owned by it, it is apparent from the case-law of the Court of Justice that such a refusal may constitute an abuse of a dominant position provided not only that that refusal is likely to eliminate all competition in the market in question on the part of the entity applying for access and that such a refusal is incapable of being objectively justified, but also that the infrastructure, in itself, is indispensable to carrying on that undertaking's business, inasmuch as there is no actual or potential substitute in existence for that infrastructure (see, to that effect, judgments of 26 November 1998, *Oscar Bronner* (C-7/97) EU (C:1998:569 at [41] and of 12 January 2023, *Lietuvos gelezinkeliai AB* (C-42/21 P) BULC:2023:12 at [79] and the case-law cited)."

440. There is therefore a threshold question of whether infrastructure has been developed for the purposes of the undertaking's own business. That will not be the case if it has already been made available to, or has been developed with a view to being used by, third parties. See *Google Shopping* at §§91 and 113 and *Alphabet v AGCM*, C-233/23, EU:C:2025:110 [2025] 4 CMLR 22 (***Android Auto***) at §46. That distinction reflects the balancing of policy considerations of encouraging investment and innovation, on the one hand, and the importance of competitive markets, on the other.

441. Both *Google Shopping* and *Android Auto* consider the application of the refusal to supply doctrine to digital platforms. *Android Auto,* in particular, explores the questions arising when a platform owner has granted access to third parties, as opposed to retaining the platform infrastructure and IP for its own sole use.

442. Both *Google Shopping* and *Android Auto* post-date the UK's departure from the EU. In *Kent* at §400 the Tribunal proceeded on the basis that these cases explain pre-Brexit case law, rather than materially altering the law in relation to refusal to supply and also provide useful indications of the application of that law to digital platforms. We agree and note that neither party suggested that we should not be taking these decisions into account for that purpose.

443. *Android Auto* involved a preliminary ruling relating to an infringement decision of the Italian Competition Authority concerning Google's refusal to allow a third-party app developer, Enel, to access the digital operating system which

Google had developed for cars. Enel developed an app to allow users to search for electric vehicle charging stations.

444. The Enel app was a competitor to Google's own Google Maps service, which performed a similar function and was already established on the platform. It was necessary for Google to prepare a template to ensure that third party apps placed on the platform were compatible. Google had not prepared a template for maps and navigation services and declined Enel's request to provide such a template or otherwise allow Enel's app onto the platform. The Italian Competition Authority concluded that Google's refusal was an abuse of a dominant position under Art. 102 TFEU. Upon Google appealing that decision, the appeal court in Italy made a reference to the CJEU.

445. The opinion of Advocate General Medina in the case contains the following observation, which reflects the policy considerations described in *Google Shopping* as applied to digital markets:

> "AG3. As with the majority of cases concerning Article 102 TFEU, the present case will require the Court of Justice, sitting as the Grand Chamber, to trace the fine – and frequently controversial – line between legitimate and illegitimate means of competition by dominant undertakings. For that purpose, and since this case arises in the context of the current development of digital markets, the Court will have to provide careful consideration to the need to keep those markets open while, at the same time, safeguarding the appropriate incentives to promote innovation."

446. In its judgment between §§39 and 46, the Grand Chamber of the CJEU referred to the refusal to supply case law and the competing policy considerations of freedom of contract and the promotion of innovation, versus the competition benefits of open access. The Court identified the issue of sole ownership of the infrastructure as the guiding principle for determining which of those competing policy considerations should prevail in a given situation:

> "47. It follows that, in order to establish whether the conditions laid down by the Court in paragraph 41 of the judgment of 26 November 1998, *Bronner* (C-7/97) EUC:1998:569, apply to a case concerning a refusal of access to infrastructure, it is necessary to establish whether that infrastructure (i) was developed by the undertaking in a dominant position solely for the needs of its own business and (ii) is owned by that undertaking in a dominant position or whether, on the contrary, that infrastructure was developed in order to enable third-party undertakings to use it, which is evidenced by the fact that that

> undertaking in a dominant position has already granted such access to such third-party undertakings."

447. Turning to the particular facts of that case, the Court then said:

> "48. In the present case, it is apparent from the order for reference that Google granted access to Android Auto to third-party undertakings, and that Google made that digital platform compatible for categories of apps, and for specific apps which those third-party undertakings had developed. A digital platform intended to enable the use, on the motor vehicle infotainment system, of apps developed in particular by third parties and downloaded on users' mobile devices cannot be regarded as having been created solely for the needs of that undertaking in a dominant position."

448. It followed from that finding that the conditions set out in the refusal to supply cases did not need to be satisfied and the conduct could be assessed using ordinary abuse of dominance principles.

449. In applying these principles in *Kent*, the Tribunal noted (at §§412 and 413) that the distinction, between (a) the reservation of ownership in infrastructure or IP, and (b) the use of restrictions to impose terms incidental to exclusive reservation, was not necessarily an exercise of easily identifying a bright line between the two possibilities. In *Kent*, the Tribunal went on to examine the facts of the case in order to determine which category applied.

450. It decided (at §424) that restrictions relating to in-app payment services did not amount to an exclusive reservation of ownership, on the basis that they sought to prevent the use of other providers' infrastructure, rather than protecting the sole use of Apple's infrastructure. Other providers would not in fact need to use Apple's infrastructure in order to provide in-app payment services. That was not therefore a reservation of Apple's infrastructure for its own use, but a separate abuse which prevented effective competition.

451. The restrictions relating to distribution of apps through the Apple App Store did not amount to an exclusive reservation of ownership either. Apple had made its tools and technology widely available without charge, with a view to allowing any developer to publish apps to users on the App Store platform, more or less

without restriction.[15] In relation to whether the App Store was itself infrastructure which Apple reserved for its sole use, Apple allowed thousands of developers to distribute apps through the platform, which was its very purpose. While Apple sought to distinguish between marketplace apps through which users could buy other apps (which Apple prohibited) and other apps (which Apple permitted), there was no sensible basis on which that distinction could be made, as a marketplace app was, functionally, just another app.

452. It is therefore clear from these cases that the question of whether the PlayStation has been solely developed for Sony's own purposes, or whether the PS Store should alternatively be considered to be an open platform, is a factual one, to be determined by an examination of the platform functionality and the way in which third parties have, and could have, interacted with it.

453. Finally in relation to the legal framework, where the infrastructure has been developed for the purposes of the undertaking's own business, then the conditions described above in *Google Shopping* (by reference to cases such as Case C-7/97 *Oscar Bronner v Mediaprint* EU:C:1998:569; [1999] 4 CMLR 112 (***Bronner***)) must be met before there will be a finding of abuse. That means the Class Representative would need to establish that:

(1) The access request concerns a product or service which is indispensable to the exercise of an economic activity on a neighbouring market.

(2) The refusal is likely to eliminate effective competition in that market.

(3) The refusal is not capable of being objectively justified.

454. The Class Representative accepts that it is also necessary, in cases involving IP, to establish that the abusive conduct prevents the appearance of a new product or a limitation of "technical development".[16]

[15] See *Kent* at §437.
[16] See *Microsoft v Commission* EU:T:2007:289; [2007] 5 CMLR 11 at §§647 and 656.

455. It was also common ground that there needs to be some form of request for supply, which has then been refused.

(c) The arguments of the parties – refusal to supply

456. The first question is whether the refusal to supply authorities apply at all in this case. That comes down to the question of whether Sony protects and reserves the IP rights or infrastructure in question for the needs of its own business.

457. The Class Representative argues that Sony's platform is open to others in the same way as the platforms in *Android Auto* and *Google Shopping*. We should not be distracted by subsets of rights or functionalities but should focus on whether the platform has elements which are open to third parties. This would include consideration of whether the platform is reliant on third parties to develop apps and whether data or services are shared with third parties to nourish the platform. The Class Representative says all of these are the case.

458. Alternatively, the Class Representative says that if this is a refusal to supply case then it has satisfied the conditions.

459. Sony argues that it does not make the technologies and systems which enable digital distribution available to anyone else. The technologies and property to provide a store are different from the gaming content itself, so while developers may develop compatible games, none of them can distribute those digitally.

460. Further, Sony submits that the Class Representative cannot satisfy the conditions for any refusal to supply to constitute an abuse. That is because:

(1) Access to the PS Network is not indispensable for downstream competition.

(2) There is no elimination of competition, as the Class Representative has failed to establish an effects case.

(3) The Class Representative has put forward no new product for which there is potential consumer demand.

(4) Sony's conduct is objectively justified.

(d) Our findings on the refusal to supply issue

461. Contrary to what the Class Representative has argued, we think it is necessary to grapple with the question of the specific activity as well as the infrastructure to which that relates. For example, the provision of SDKs to developers to assist in the development of games may answer the question as to whether Sony has allowed access to those SDKs for general use, but it does not help with the further (and more important) question of whether Sony has developed the functionality of the platform with a view to enabling the digital distribution by third parties of games to users.

462. That is not a straightforward question as there are arguments on both sides. Sony does, in effect, grant access to its installed user base to any publisher, through the PS Store, as long as the publisher meets certain basic requirements for certification. Sony has created tools and provided technology to facilitate the development of games for sale through the PlayStation infrastructure and makes those widely available.

463. It is therefore a platform that encourages and facilitates the distribution of third-party games to users. It could be said on that basis to be, by design and in practice, a digital platform which is open to third parties and therefore not reserved for Sony's own exclusive use, in the same way as the platforms in *Android Auto* and *Kent*.

464. On the other hand, there does seem considerable force in Sony's argument that, in the PlayStation system, publishing a game is very different from installing a retail store application. Sony has never allowed anyone else to carry out a distribution function, which is essentially what the PS Store does.

465. That argument failed in *Kent*, because there was no basis to distinguish an ordinary app from a marketplace app (following the reasoning in *Google Shopping*). However, that is not the case here, as the installation of a third-party retail operation on the PlayStation would represent a major change to how that system operates. It is not just the case of allowing another app onto the platform, as was the case in *Kent* or *Android Auto*.

466. Instead, the installation of a third-party store would require material reconfiguration of the PlayStation platform to allow even for the possibility of such a store. That much is clear from the technical counterfactual discussed above. We have found that the technical counterfactual gives rise to unresolved security concerns in the architecture of the platform, which are materially different in kind and extent from those which Sony manages in the actual. The performance issues also require complex solutions, which would require adaptation to Sony's processes in the actual. Significant effort and cost (both up front and ongoing) would be needed to implement the changes involved in the technical counterfactual.

467. This is therefore not a situation like *Android Auto* where a relatively simple template required to be constructed by Google in order to allow access to Enel's app (and where a similar template had already been provided to others). Nor is it like *Kent*, where a marketplace app was more or less the same as any other app and could be placed on the App Store with very little adaptation on the part of Apple.

468. Instead, the technical counterfactual involves, in effect, breaking open the PlayStation platform so it can be used in a way which is not consistent with how it has been designed. The most obvious example of this is the introduction of third-party participation in the security arrangements which currently exist in the PlayStation architecture. As Mr Coyne observed, the placing of content outside the Sony "trust boundary" significantly changes the nature of the security arrangements in the system.

469. All of this suggests that the infrastructure has indeed been reserved for Sony's exclusive use and that it is wrong to view it as an open platform, notwithstanding

the degree of support Sony provides to developers to allow them access to PlayStation users. The PlayStation platform has been configured for the exclusive use of a single digital retail and distribution operation (the PS Store), rather than with any expectation of, or allowance for, third-party use as an open platform. Changing that position requires a great deal more than simply allowing another app onto the platform.

470. We do not view the form of the arrangements between Sony and publishers as determinative in this analysis, but it is material that Sony does, as a matter of substance, exert complete control over the digital retailing function, making it more akin to a vertical relationship than an open digital platform. That also supports the view that Sony has reserved the platform for its own use.

471. We do not think there is any merit in the Class Representative's argument that Sony has set out to construct a platform which it controls, so that it is a natural consequence that no-one else has had access to the digital retailing function. The factual material on which this contention was based shows no more in our view than Sony seeking to recover its investment in circumstances where it depends on game sales revenue to cross subsidise its console production costs. In other words, it is protecting its business model, which is not an inherently anti-competitive one (as the economic experts agreed at the beginning of the concurrent evidence session).

472. In summary, we think that Sony's platform has been established with a view to encouraging developers and publishers to produce content and offer it to Sony for sale to users, but that is not sufficient to make the platform an open one. Sony has not in any way relinquished its control of the PS Store so as to allow others to do anything other than sell games or add-on content to Sony for on-sale to consumers. In order for a third party to undertake a distribution activity, significant adaptation of the platform and its operations would be required at significant cost and effort. In that event, some aspects of the PS Network would likely operate subsequently with materially reduced security in the platform architecture and with potentially reduced performance.

473. Given that conclusion, this case is therefore one where it is necessary for the Class Representative to meet the *Bronner* requirements for a refusal to supply. We consider that the Class Representative is unable to meet those requirements in at least two respects:

(1) It is not clear that there has ever been a relevant request to set up a distribution service on the PlayStation platform, as opposed to requests for more direct contact with users while Sony continued to manage distribution.

(2) In any event, we do not consider that there has been any material prevention of a new product or technical developments for which there is demand. The Class Representative put considerable emphasis on evidence that suggested that Sony was slow to develop functionality on the PS Store to allow greater discoverability of games in the extensive library of games found there. Conversely, the Class Representative pointed to other platforms (for example, Steam), where that functionality was more advanced at an earlier stage. Although it may be correct that the PlayStation lagged behind other platforms in this respect, it was apparently the only example of significance that the Class Representative could identify and there was considerable evidence before us of innovations which Sony had implemented, and which distinguished the PlayStation from other platforms. It therefore seems to us to be a fairly inconsequential point. In any event, we do not consider improved search functionality to amount to a new product and instead it seems that any new store would, at best, essentially do no more than duplicate the services currently offered by Sony. Given the potential performance issues highlighted by the Class Representative's technical counterfactual, even that possibility would seem questionable.

474. For these reasons, if it were necessary to resolve this issue, we would have concluded that this was a refusal to supply case which required the Class Representative to meet certain conditions identified in the caselaw, which the Class Representative has failed to do.

(6) Tying

475. For completeness, we should deal briefly with the Class Representative's tying case, as it was advanced as a separate abuse from the exclusive dealing abuse. We understood the Class Representative to accept that any failure to establish an anti-competitive effect as a consequence of the restrictions would lead to the failure of the tying case. That is, in our view, the correct position.

476. In any event, we have declined to adopt a hypothesis of a digital PlayStation game sale market and instead consider that any assessment of Sony's conduct ought to be made at a systems level. That is obviously fatal to the tying case, which requires the establishment of relevant primary and aftermarkets. Finally, we have our doubts about whether the Class Representative has properly established dominance by Sony in any console market (although we have not made any definitive finding about that, for reasons already explained).

477. In those circumstances, the Class Representative's tying case must fail as well.

(7) Our conclusions on the exclusionary conduct abuses

478. If we had identified a digital distribution market, as argued for by the Class Representative, we would still have concluded the Class Representative's case failed when it came to analysing the exclusionary abuses. This is because:

(1) The Class Representative has been unable to demonstrate that the restrictions or the tying have had a likely effect on competition.

(2) This is a refusal to supply case, and it is necessary for the Class Representative to meet certain conditions identified in the caselaw, which the Class Representative has failed to do.

F. THE EXPLOITATIVE PRICING ABUSE

(1) Introduction to the exploitative pricing abuse claims

479. Excessive and unfair pricing is an established head of exploitative abuse. It arises from the references in s.18 Competition Act 1998 and Art. 102(2) TFEU to the imposition of unfair selling prices as a specified category of abuse, and the development of that principle in case law.

480. The Class Representative contended that Sony has capitalised on its dominant position by setting retail prices and extracting an excessive and unfair target margin that it was able to impose on the sale of digital third-party PlayStation content on the PS Store. This, the Class Representative argued, in turn allowed Sony to charge more for its first- and second-party titles, given the softening of competition arising from Sony's control of retail prices. The Class Representative relied on Mr Harman's calculation of the apparent profitability of Sony's digital distribution activities to support this argument.

481. Sony's position was that, properly analysed, its margin on PlayStation digital content was neither excessive nor unfair. It argued that Mr Harman's analysis artificially isolated a single component (digital distribution) of an economically integrated system, excluded major inputs into the relevant calculation and applied the wrong benchmarks.

482. The dispute between the parties therefore largely focused on the appropriate way to identify and benchmark the relationship between the price charged by Sony for digital content and the costs incurred and economic value associated with that activity. There was little disagreement between the parties about the legal framework for that analysis. For context, however, we will briefly set out that framework.

(2) Legal framework

483. The basic approach to analysing an excessive and unfair pricing claim was identified in Case 27/76 *United Brands Company & Another v European Commission* EU:C:1978:22; [1978] 1 CMLR 429 (***United Brands***):

> "248. The imposition by an undertaking in a dominant position directly or indirectly of unfair purchase or selling prices is an abuse to which exception can be taken under Article 86 of the Treaty.
>
> 249. It is advisable therefore to ascertain whether the dominant undertaking has made use of the opportunities arising out of its dominant position in such a way as to reap trading benefits which it would not have reaped if there had been normal and sufficiently effective competition.
>
> 250. In this case charging a price which is excessive because it has no reasonable relation to the economic value of the product supplied is such an abuse.
>
> 251. This excess could, *inter alia*, be determined objectively if it were possible for it to be calculated by making a comparison between the selling price of the product in question and its cost of production, which would disclose the amount of the profit margin; however the Commission has not done this since it has not analysed UBC's costs structure.
>
> 252. The question therefore to be determined is whether the difference between the costs actually incurred and the price actually charged is excessive and, if the answer to this question is in the affirmative, to consider whether a price has been imposed which is either unfair in itself or when compared to competing products."

484. In *CMA v Flynn Pharma Ltd* [2020] 4 All ER 934; [2020] EWCA Civ 339 (***Phenytoin CA***), Green LJ analysed these paragraphs from *United Brands* as follows:

> "60. The Court starts (paragraph [248]) by setting out the basic test which of course derives from Article 102, which is fairness.
>
> 61. Then (in paragraphs [249] and [250]) the Court describes two central economic features of an abuse of unfairness. These are (i) that the undertaking has reaped "trading benefits" which could not have been obtained in "normal and sufficiently competitive" conditions; and (ii) that a selling price that is "excessive" in that it bears no reasonable relation to the "economic value" of the product or service in question is an example of an abuse. These paragraphs are connected: charging a price with no reasonable nexus to its economic value and which is therefore excessive (paragraph [250]) is "such an abuse" i.e. it is an example of the abuse described in paragraph [249] of a trading benefit reaped in conditions that are divorced from that realisable in conditions of normal, workable, competition […]

62. In paragraphs [251] and [252] the Court moves to consider how in evidential and methodological terms such an abuse can be "determined objectively". It gives an example of one way (but only one way - cf "inter alia" in paragraph [251]) to determine whether a price was unfair, namely the Cost- Plus method. The first stage or limb entails comparing the price charged with the costs of production (paragraph [251]), to see whether it is excessive, and the second stage or limb involves determining whether, if it is excessive, it is also unfair 'in itself" or by reference to "competing products" […]".

485. After reviewing other authorities on the subject, Green LJ summarised the exercise as follows:

"97. I would draw the following general conclusions from the case law about the test to be applied:

(i) The basic test for abuse, which is set out in the Chapter II prohibition and in Article 102, is whether the price is "unfair". In broad terms a price will be unfair when the dominant undertaking has reaped trading benefits which it could not have obtained in conditions of "normal and sufficiently effective competition", i.e. "workable" competition.

(ii) A price which is "excessive" because it bears no "reasonable" relation to the economic value of the good or service is an example of such an unfair price.

(iii) There is no single method or "way" in which abuse might be established and competition authorities have a margin of manoeuvre or appreciation in deciding which methodology to use and which evidence to rely upon.

(iv) Depending upon the facts and circumstances of the case a competition authority might therefore use one or more of the alternative economic tests which are available. There is however no rule of law requiring competition authorities to use more than one test or method in all cases.

(v) If a Cost-Plus test is applied the competition authority may compare the cost of production with the selling price in order to disclose the profit margin. Then the authority should determine whether the margin is "excessive". This can be done by comparing the price charged against a benchmark higher than cost such as a reasonable rate of return on sales (ROS) or to some other appropriate benchmark such as return on capital employed (ROCE). When that is performed, and *if* the price exceeds the selected benchmark, the authority should then compare the price charged against any other factors which might otherwise serve to justify the price charged as fair and not abusive.

(vi) In analysing whether the end price is unfair a competition authority may look at a range of relevant factors including, but not limited to, evidence and data relating to the defendant undertaking itself and/or evidence of comparables drawn from competing products and/or any other relevant comparable, or all

of these. There is no fixed list of categories of evidence relevant to unfairness.

(vii) If a competition authority chooses one method (e.g. Cost-Plus) and one body of evidence and the defendant undertaking does not adduce other methods or evidence, the competition authority may proceed to a conclusion upon the basis of that method and evidence alone.

(viii) If an undertaking relies, in its defence, upon other methods or types of evidence to that relied upon by the competition authority then the authority must fairly evaluate it."

486. The exercise before us is therefore to assess the relationship between Sony's margin and the economic value provided to consumers, to identify whether Sony has obtained trading benefits which are divorced from those realisable in conditions of normal and sufficiently effective, or workable, competition.

487. The conventional approach is to undertake a two-limb assessment, in which Limb 1 looks at the excessiveness of the price and Limb 2 considers the question of unfairness.

488. The purpose of the Limb 1 assessment is to test whether there has been a significant and persistently excessive price. It is conventional to use a Cost-Plus analysis in Limb 1, provided that it is a suitable methodology. It may not be suitable where the nature of the intangible assets means it is not feasible to identify the costs of production in a meaningful way. Whether or not Cost Plus is a suitable method is a matter to be determined in each case.

489. The choice of benchmark is a matter of judgement for us. There is no fixed approach, and we are able to look at and compare alternative approaches. ROCE, which is the Class Representative's preferred benchmark, is a recognised tool for these purposes. Where Sony puts forward an alternative approach to that advocated for by the Class Representative, we should examine that carefully.

490. Limb 2 encompasses two recognised steps: (a) whether the price is unfair in itself; and (b) whether it is unfair by reference to comparators.

491. There may be factors which could justifiably be dealt with in Limb 1 or Limb 2. An example of this is the question of the economic value of the product, with particular reference to demand side value (the distinctive value which consumers are willing to pay for).[17] Nothing turns in our view on whether this issue is dealt with in the Limb 1 or Limb 2 analysis, provided there is no risk of double counting.

492. Most of the discussion that follows concerns Limb 1 (excessiveness) rather than Limb 2 (unfairness). That is because Limb 1 was the main battleground between the parties, and also because the two limbs are cumulative conditions – there is no need to consider Limb 2 unless there has been a finding of excessiveness under Limb 1. We have found that the Class Representative has failed to establish excessiveness under Limb 1, so our discussion of Limb 2 is a short one.

493. In any event, we have already found that the Class Representative has failed to establish dominance by Sony in the alleged PlayStation digital games and add-on content markets and that we consider Sony's conduct ought to be analysed by reference to a systems market, in which dominance is far from clear. Dominance is a necessary ingredient of an excessive pricing claim. In addition, Mr Palmer accepted, in his closing submissions, that the Class Representative had not advanced any exploitative abuse case on the premise of a systems market.

494. Given all of that, we will deal with the excessive and unfair pricing arguments more shortly than we otherwise would, against the possibility that our market definition and dominance findings turn out to be incorrect and in recognition of the effort put into this issue by the parties.

(3) Limb 1 – is Sony's margin excessive?

495. As already noted, there is no real argument between the parties about the general approach we should take to Limb 1, which is to assess Sony's profitability

[17] See *Phenytoin CA* at §§154–155 and 171–172.

against a suitable benchmark. The disputed questions are how profitability should be calculated and what the appropriate benchmark might be.

496. There are four key issues for consideration arising from these differences of view:

(1) Should we look at excessiveness by reference to the profitability of the system as a whole (as Sony advocates), or by reference to the digital distribution business (the Class Representative's position)?

(2) What is the most appropriate measure of Sony's profitability? The Class Representative uses a well-established metric of ROCE as compared with Sony's weighted average cost of capital (**WACC**), while Sony argues that a comparison of Sony's operating margin with other similar enterprises would be more meaningful.

(3) Depending on our conclusions on this issue, what is the appropriate treatment of the inputs into the profitability analysis (for example, the inclusion and/or allocation of costs within the Sony business and the appropriate treatment of intangible items)?

(4) Depending on all of the above, what conclusions can we draw about whether the returns to Sony are excessive?

497. We deal with each of these in turn below.

(a) System as a whole or just digital distribution?

498. We have already discussed the cross-subsidy which occurs between the revenue delivered by digital PlayStation games and add-on content sales and the costs of production of PlayStation consoles. We have also noted the Class Representative's explicit acceptance that such a cross-subsidy is in principle legitimate and an inherent part of the way the product is formed and sold.

499. An indication of the extent of cross-subsidy can be seen in some analysis which Mr Harman set out, in his fifth report at Table 7-21, of the earnings before interest and tax of each of the units in the combined PS4/5 business, as reproduced below:

[✂]

500. This analysis is based on Mr Harman's approach to cost assignment, which is hotly disputed (see further below). It does however show, on the Class Representative's case, a very significant cross subsidy from digital distribution activities to cover losses on console production activities. For example, Mr Harman assessed the combined losses of the PS4 and PS5 consoles over the claim period to be approximately US$[✂], while the EBIT from digital distribution was US$[✂] for the same period.

501. Putting aside the question of the exact amounts involved, it is clear that there is a very significant element of cross-subsidy. Along with the EBIT of the PS Network (essentially, the subscription business), the console losses and digital distribution EBIT seem likely by some margin to be the largest drivers of the overall EBIT outcome for the overall business.

502. Given the high level of cross-subsidy within the PlayStation system, we think it is necessary to consider any excess profit in digital PlayStation distribution against any losses in other parts of the PlayStation system (notably console supply) in order to reach a conclusion about Limb 1 excessiveness. Otherwise, we would not be taking into account the net position for consumers, who benefit from the investment by Sony in the PlayStation console and the pricing of that equipment, while paying for that benefit by way of the margin that Sony extracts from digital sales.

503. That does not insulate Sony from scrutiny in relation to its margin. It remained open to the Class Representative to argue that the recoupment by way of the margin goes beyond what is reasonable for the investment in the production and sale of the console. However, once one accepts that it is necessary to take the cross-subsidy into account, it is more or less inevitable that the Limb 1 analysis

needs to take place at a system level (which is after all substantially a combination of the console related activities and the digital distribution related activities). Having abandoned any excessive pricing claim at a systems level, there seemed to be no coherent argument from the Class Representative addressing the level of the margin.

504. The Class Representative sought to deal with this cross-subsidisation problem by arguing that a proper allocation of common costs allows a sufficient examination of the profitability of digital distribution. This does not however deal fully with the issue of cross-subsidisation, which is not just about cost allocation. It is necessary to deal with losses in console production as well.

505. The Class Representative also advanced, by way of a sensitivity analysis by Mr Harman, an argument that the allocation of losses generated by PS4 and PS5 consoles to profitable Sony products still shows an excess profit. Apart from the fact that the profitability of the digital distribution business fell dramatically in this analysis (with the mark-up on economic costs of [✂]% reducing to [✂]%), rather proving the point about cross-subsidisation, this seems to us to be, in substance, an analysis undertaken at the systems level, albeit only a partial one.

506. For these reasons, it seems obvious to us that the most appropriate way to assess Sony's profitability for the purposes of the Limb 1 analysis is at a systems level, taking account of both the returns in the digital distribution activities and the cross-subsidy to the console activities, before reaching any conclusion about excessiveness.

507. We would, in any event, have been uncomfortable about assessing the profitability of Sony's digital distribution activities alone, because neither expert has presented us with a satisfactory approach to the treatment of common costs.

508. A common cost is one that is necessary for the supply of product A and also for the supply of product B, but that would not be avoided if a firm supplying A and B decided to stop one or other activity. A classic illustration is a kiosk selling hot drinks, cold drinks and refrigerated snacks. The rent on the kiosk is

a common cost shared by all three categories, whereas the fridge is a common cost shared by the cold drinks and the snacks. In the case of the PlayStation, an example might be the costs of establishing the PlayStation brand, which is utilised by both the console and the games distribution activities.

509. Common costs are often identified by removing from the pool of total costs, those costs which are directly caused by a particular activity (that is, costs which are not common costs). Mr Harman and Mr Colley took different approaches to the cost causality exercise, and there was a considerable difference between them as to the size of the residual common cost element. On any view, however, there are significant common costs in Sony's PlayStation business. Mr Harman acknowledged these could be as much as 43% of total operating costs and Mr Colley said they were a lot higher. A decision therefore has to be made about how to treat those common costs for the purposes of the Limb 1 analysis.

510. Mr Harman sought to assign common costs to the digital distribution business using the equi-proportional mark-up (**EPMU**) method, which uses the proportion of costs allocated by the cost causality exercise to assign common costs. So, for example, if x% of the costs allocated using a causality test end up being allocated to the digital distribution business then x% of the common costs should be assigned to the digital distribution business as well. This approach tends to load common costs onto activities which have higher rather than lower costs.

511. Mr Colley sought to assign common costs using a revenue weighted rule, whereby common costs are assigned in proportion to the revenues earned by the different activities. This approach tends to load common costs more onto activities where revenues are much higher than costs.

512. In various regulatory accounting contexts, it has been necessary for regulatory bodies to decide how common costs should best be recovered across the different activities that share them, and sometimes to set rules on pricing flexibility that set limits on the flexibility that a firm with significant market power can exercise in how such costs are recovered. However, the very definition of a common cost, being a cost that does not "belong" to any one

activity, suggests that it is not simple to find a definitive conclusion to such problems. In these proceedings, the different common cost allocation rules proposed by the experts led to results that (predictably) increased or reduced the estimated profitability of the PS digital distribution activity. We identified problems with both approaches and were not persuaded that either expert had resolved all the common cost issues in a convincing fashion.

513. Mr Harman's EPMU approach tends to load costs onto the console business (which has high costs and low revenue) and away from distribution (which is revenue-heavy but cost light). Mr Harman's own analysis showed that 80% of the PlayStation system capital is employed in the console and first party games activities.

514. One notable feature of the EPMU approach is Mr Harman's finding that it leads Sony's physical distribution business to have a ROCE of [✂]%, a level that was more than [✂] times higher than his estimate (of [✂]%) for digital distribution. This sits uncomfortably with Mr Harman's adoption of physical distribution as the basis for his competitive benchmark. Mr Harman accepted, in the concurrent evidence session, that this was an "oddity", which was explained by the very low level of capital employed in that activity. However, this extreme example illustrates the problem that applies more generally as a result of the EPMU approach.

515. Mr Colley's revenue weighted method of cost has a circularity problem, which is that the revenues used to weight the common cost treatment will (on the Class Representative's case) include digital distribution revenue derived from anti-competitive abuse. This means that an inappropriate level of costs will be assigned to that business, artificially reducing its apparent profitability. Mr Colley tried to address this issue by reducing the revenue weight used for digital distribution by the amount of alleged excess profitability. This is a constructive approach to addressing the circularity criticism, although it cannot fully resolve the essential indeterminacy created by the absence of a unique costs driver for common costs in this case.

516. Mr Lowe was cross-examined about three internal Sony documents which appeared on their face to record analysis aimed at identifying profitability at a business unit level. Mr Lowe was not able to say much about these documents, mainly through lack of familiarity as he had not been involved in their preparation. It was clear that some form of common cost assignment was involved, most likely on a revenue weighted basis. However, we were not left with any real explanation of how that had been done, for what purpose or with what expectation of reliability.

517. The revenue weighted approach was not the basis on which the Class Representative's case was advanced. However, Mr Harman's own sensitivity analysis on his fifth report showed that, using revenue weighted apportionment, the average ROCE for digital distribution on his common cost figures would be almost [✂] of the average ROCE using EPMU based apportionment, reducing to [✂]% from [✂]%. That divergence (in relation to a large common cost pool) itself illustrates the difficulties associated with any common cost assignment process in this case.

518. As we have noted above, even had there been no common costs to address in this case, the fact that the Class Representative accepted that it was legitimate for Sony to use digital distribution margins to cross-subsidise console losses makes it inevitable that the profitability analysis must focus on some combination of profits across the parts of the PlayStation system. The fact that there are also very substantial common costs, and the difficulties we have identified with both experts' proposals in these proceedings about how to allocate them across the activities that they share, serve to reinforce our view that the best approach in this case is to consider profitability at a system level for Limb 1 purposes. We understood Mr Harman more or less to accept that by the end of the discussion of this issue in the concurrent evidence session.

(b) ROCE or operating margin?

519. ROCE is plainly a superior way to measure PlayStation system profits. It provides an objective benchmark that can be reliably applied across firms and industries (provided they do have some material capital employed), and it can

be compared with a WACC benchmark in a way that has intellectual foundations in finance theory. Since there is substantial capital employed in the PlayStation system as a whole, this is unquestionably the best approach to take.

520. In contrast, operating margins do not provide any consistency between one industry and another, and as a result they are unreliable unless being used to compare one very similar firm to another (or one business over time). They have been deployed in Limb 1 assessments in asset-light industries such as telecoms retailing,[18] and generic pharmaceutical supply and distribution,[19] but only in the absence of anything more systematic.

521. Mr Colley's arguments to the contrary were wholly unconvincing. He sought to rely on published operating margin data for other technology companies (in aggregate and by reference to specific companies such as Apple and Nintendo), but there are reasons why these might not be useful benchmarks. For example, Nintendo operates a large first party game portfolio, so is arguably a very different type of business. Apple accounts for commission on a net, not gross, basis. Mr Colley's own analysis of the difference in Sony's operating margin when calculated on a net and gross basis shows how problematic it is to use operating margin for the assessment of Limb 1 profitability.

522. We therefore prefer to employ ROCE as the basis for assessing Sony's system level profitability.

(c) Treatment of inputs

523. Given our decisions to look at profitability at a systems level and to use ROCE for that purpose, a lot of the disagreements between the parties (for example, about the assignment of common costs) fall away. The main remaining point of substance is the treatment of intangibles.

524. The Class Representative argued that there is a circularity problem if intangible assets such as goodwill are used in the ROCE calculation, as this could amount

[18] See *Le Patourel v BT* [2024] CAT 76; [2025] Bus LR 808.
[19] See *Pfizer/Flynn v CMA* [2024] CAT 65.

to capitalising monopoly profits into an item used in measuring profitability. However, having identified this problem, Mr Harman did not seek to identify the extent of the problem or to adjust for it. Instead, he excluded goodwill and the asset representing a licence for the PlayStation trademark in their entirety.

525. Sony submitted that (even on the basis that a monopoly problem existed) the goodwill is only partly susceptible to the circularity problem and can and should be adjusted to remove elements of anti-competitive profits and then used in the ROCE calculation. Mr Colley made an adjustment, which he said had the effect of stripping out the full overcharge asserted by the Class Representative in the claim.

526. Sony said that the PlayStation trademark was recognised as an asset in Sony's accounts before Sony could possibly have had market power, and was largely unchanged since that time, suggesting it would not include any value attributed to anti-competitive behaviour. Sony also argued that a cash item on its balance sheet representing a short-term loan should be included in the ROCE calculation.

527. In our view, there is force in the argument that some allowance should be made for goodwill, if it can be sensibly adjusted to address the circularity problem. Mr Harman seemed to accept this under cross-examination and there seemed to be no serious disagreement with the way Mr Colley had approached his adjustment exercise.

528. The value of the trademark is also something which we think ought to be included in the ROCE analysis. Ultimately, Mr Harman seemed to be resisting that simply on the basis that he did not understand how it was calculated.

529. We do not agree with Sony that the cash from the short-term loan should be included. The Sony argument seemed to be that this should not be treated as cash, which would ordinarily be excluded, as it was a line of credit for near term acquisition purposes. We do not consider that to be a good reason to treat it differently from any other financing item, given that it is not apparently generating any operational returns.

530. We now turn to a consideration of the ROCE arrived at in accordance with our decisions above, and a comparison of that with WACC.

(d) Are Sony's returns excessive?

531. According to Mr Harman the actual ROCE for the system level PlayStation business over the claim period was [✂]%.

532. According to Mr Colley's calculations, which we did not understand to be challenged beyond the issues of principle discussed above, including the PlayStation trademark in the ROCE calculation reduces the PlayStation system ROCE from Mr Harman's [✂]% (8-year average) to [✂]%. Including the adjusted goodwill reduces the ROCE to [✂]%.

533. We should add that Mr Colley also suggested that losses associated with the PS3 version of the console should also be included in the costs for the purposes of assessing profitability. This would reduce ROCE by a further [✂] percentage points. We are sceptical about this proposition, but it is not necessary to reach a concluded view on it given our findings below.

534. Mr Harman's [✂]% ROCE calculation is plainly overstated as a consequence of the omission of important items from the costs denominator, namely the suitably adjusted value of the intangible assets discussed above. It seems likely that the correct ROCE figure to use for the Limb 1 assessment is substantially lower, and probably in the [✂] – [✂]% [✂]. We will, in the absence of anything better, adopt [✂]% as a working figure for the 8-year average ROCE.

535. Mr Harman calculates Sony's WACC as [✂]% on average over the period. Mr Colley calculates the average WACC for that period to be [✂]%, although he argues that WACC is not a suitable benchmark for comparison with ROCE in this case, as it ignores the business risks that a firm like Sony faces.

536. To deal with this issue raised by Mr Colley, we need to say a little more about WACC and the concept of *ex ante* risk.

537. WACC represents the blended cost of a firm's capital across all sources, including equity and debt funding. It can be thought of as the required rate of return for an investor to invest in the business. That makes it useful as a benchmark for the purposes of a Limb 1 profitability assessment, which is informed by the difference between an actual measure of profitability and the level of profitability which investors would accept.

538. However, investors are able to deal with risk by diversifying their investment portfolio. This can be thought of as being analogous to backing numerous horses in a race. It also means that the WACC – the expected return that will attract investors to a particular venture – at an individual level is best assessed *ex ante* (when there remains uncertainty about outcomes), not *ex post* (when the outcomes are known).

539. To pick up the horse race analogy, the investor who can bet on both horses in a two-horse race is indifferent to the risk of failure, as they can win on either horse. The upside from the winning horse compensates for the downside on the losing horse. Once the race is run, the outcome for the winning horse is likely to exceed the hurdle rate at which investors would have bet on it, while the losing horse will not meet that hurdle rate. As a result, comparing the returns associated with the horse that won with the hurdle rate for the investor backing both horses will show a material difference, but will not necessarily reflect the risk inherent in betting on the winning horse alone at the start of the race.

540. If we apply that reasoning to the console games industry, investors can make themselves indifferent to whether Sony's PlayStation, Microsoft's Xbox or Nintendo's Switch wins the console system race (or to the potentially high individual risk that each contender might face in that competition) by placing investments in all three. That investor approach will be reflected in the WACC of all three firms. However, this also means that, looked at from the present, the winning firm will yield a return that exceeds WACC, whilst the losing firms will likely fail to meet the WACC hurdle.

541. In the course of the discussion in the concurrent evidence session, we understood both experts to agree with this analysis. It is unsatisfactory,

however, that Mr Harman (who has considerable expertise in this area) failed to acknowledge this point at all in his written evidence to the Tribunal.

542. One way to deal with this issue is to seek to assess whether returns in the overall console sector are in excess of WACC. That would involve looking at a blended WACC and ROCE across all the contenders, rather than just assessing the PlayStation system's profit alone. However, we do not have sufficient evidence about the returns of the other console manufacturers to carry out this exercise. In particular, we have no evidence on the returns achieved by Xbox, though we do know that it recently replaced its senior managers, presumably to reflect recent performance.

543. Approaching the matter in an alternative way, it is possible to seek to evaluate the level of risk for one firm (the winner) before the race has started. In this case, that might mean considering whether Sony has enjoyed a number of incumbency advantages that have insulated it from some of the risk inherent in the competition to win the console race.

544. However, if we consider the claim period as a whole and evaluate the position from the start of that period, Sony's success was much less assured than it looks now. Even on a forward-looking assessment undertaken as at the start of the claim period, there were sufficiently large uncertainties to support the view that Sony might lose out to rivals and other technological shifts in the next console generation. In short, this is a difficult exercise to carry out and the evidence we have by no means suggests that Sony was immune from serious risk in relation to significant investment, before and during the claim period.

545. Mr Colley attempted to address this point by illustrating the impact that a defined probability of failure would have on the difference between *ex ante* and *ex post* returns. This was not entirely convincing, because his notion of "*failure*" involved a zero return to the investor, which might be more pessimistic than the outcomes that would be achieved by a games console system that did not emerge as a winner.

546. It is therefore hard to know what adjustment to WACC as a benchmark is required to deal with this point. This is an area in which the existence of rivalry between the games systems introduces a circumstance which is different from the assessment of rates of return in the regulation of a natural monopoly utility business (where a WACC benchmark is widely applied). That does not mean that WACC loses all value as a potential benchmark but, given the facts of the current case, it is possible that an adjusted WACC would be reasonably closely aligned with Sony's ROCE.

547. Overall, our view is that a ROCE as low as [✂]% would not, adjusting the WACC to take account of the *ex-ante* risk point discussed above, necessarily be excessive. Indeed, even if the appropriate benchmark was the WACC of [✂]%, we would have taken some persuading that a ROCE of [✂]% was clearly excessive. In this context, it should be noted that Mr Harman has calculated that his value added ECCR at 10% (which implies conditions of workable competition) would deliver to Sony a [✂]% ROCE.

548. Given that the adjusted level of ROCE is likely to be around [✂]% and the point that the appropriate benchmark is probably not the [✂]% WACC, but something larger to reflect the *ex-ante* risk faced by Sony at the beginning of the claim period, we do not think that the Class Representative has done enough to convince us that Sony's margin is excessive under the Limb 1 assessment, and we would not have been willing to make that finding.

(4) Limb 2 – is Sony's margin unfair?

549. Having decided that Sony's returns have not been shown to be excessive, there is no need to consider the question of unfairness under Limb 2 in any detail.

550. We do however think it appropriate to indicate our views on two issues in relation to Limb 2:

(1) The Class Representative's arguments about economic value and the lack of distinctiveness of the PlayStation offering.

(2) The comparators put forward by the Class Representative to demonstrate unfairness by comparison.

(a) Distinctive value

551. The Class Representative submitted that there was no evidence that Sony's PlayStation products or services demonstrated distinctive value capable of justifying an observed price premium under conditions of workable competition. The Class Representative pointed to the factors such as the similarity of offering between the PlayStation and Xbox consoles; the reliance by Sony on standard industry tools, making the PlayStation and PS Store readily replicable; the relatively low level of R&D spend by Sony, compared with other technology companies; the neutrality of publishers; and the relative unimportance of brand to consumer choice. The Class Representative also noted that consumer willingness to pay is not necessarily evidence of distinctive value, especially where the consumers are captive purchasers.

552. Unsurprisingly, Sony pushed back vigorously on all these points, and we think justifiably so. Broadly speaking, the evidence from Sony painted a picture of a business that has won the last two generational battles with rival console systems through sustained competitive effort. There is ample evidence that consumers recognise the quality of the Sony offering, both through the higher market share they have delivered to Sony and through the various attitude surveys which Sony has conducted over the years. While the Class Representative was able to identify some areas where Sony had been slow to respond to consumer feedback (such as the ability to search for game titles on the PS Store), they were limited exceptions and generally not consistent with the very customer focused attitude that was apparent from both the Sony witnesses and the documentary evidence.

553. As a consequence, the Class Representative would (if we had found excessiveness under Limb 1) have had considerable difficulty in persuading us that distinctive value could not account for all or at least a significant part of any difference between actual ROCE (which we think likely to be in the [✂]%-[✂]% range, as discussed above) and the Class Representative's assertions as

to the likely ROCE in conditions of workable competition (which on Mr Harman's ECCR analysis could be as high as [✂]%, and might reasonably be in a range [✂]% to [✂]%).

(b) Comparables

554. Turning to the Class Representative's comparables analysis, it was, in any event, far from clear that there was any difference between the actual price charged by Sony for digital PlayStation games and add-on content and the price charged by the comparators selected by Mr Harman.

555. The two main comparables relied on by Mr Harman were (1) PC Stores and (2) the platform charge levied by Sony on the distribution of physical PlayStation games.

556. In relation to PC stores, Mr Harman's analysis is undermined by his acceptance of Sony's entitlement to a royalty for access to the PS Store and the investment by Sony in the PlayStation system, which we have discussed in detail in relation to the exclusionary conduct abuses. The PC stores do not, for the most part, charge such a royalty, reflecting the fact that in the PC channel the consumer is not offered the benefits and assurance of the seamless plug and play gaming experience that has been created by the investments and efforts of the systems suppliers in the console games channel. As a consequence, the margins charged by PC stores are clearly not directly comparable to those in retailing of console system games and so are not satisfactory comparators for the margin which would arise in conditions of workable competition.

557. In relation to the platform charge for physical game distribution, this suffers from the opposite problem, which is that it compensates Sony for its investment in the PlayStation system (from which retailers are benefiting) but does not include any element of return for the distribution function. That essentially makes it a meaningless comparison.

558. The Class Representative's case on unfairness by reference to comparables was, as a result, extremely weak.

(5) Our conclusions on the exploitative pricing abuse

559. If we had identified digital PlayStation games and add-on content distribution markets, as argued for by the Class Representative, we would still have concluded that the Class Representative's case failed when it came to analysing the exploitative pricing abuse. This is because:

(1) The Class Representative has not established that the margin charged by Sony is excessive.

(2) Even if it were, it is not apparent that the margin is unfair.

G. DISPOSITION

560. We make the following findings and orders.

561. The Class Representative's proposed market definition of markets for the sale of digital PlayStation games and add-on content is not a safe basis on which to assess Sony's conduct and is rejected. The more appropriate market definition for analysis of any anticompetitive infringement by Sony in these collective proceedings is a systems market.

562. The Class Representative has not satisfied us that Sony is dominant in any relevant market for the purposes of assessing any anti-competitive infringement by Sony.

563. Even if the Class Representative's proposed market definition were correct (which it is not), the Class Representative has failed to satisfy us that Sony has engaged in the exclusionary or exploitative abuses pleaded by the Class Representative. It would also be necessary, in respect of the exclusionary abuses, for the Class Representative to meet the conditions set by the refusal to supply cases, which it has failed to do.

564. The Class Representative's claim is dismissed in its entirety.

565. The Tribunal will convene a hearing in the week of 14 December 2026 to hear submissions on all consequential matters, including costs and any applications for permission to appeal.

566. The parties are to seek to agree a draft order reflecting the outcome of this Judgment and this should be available either in an agreed form or for determination of any differences at the consequential matters hearing.

567. This Judgment is unanimous.

Ben Tidswell
Chair

Lord Richardson

Derek Ridyard

Charles Dhanowa C.B.E., K.C. (*Hon*)
Registrar

Date: 17 November 2026

ANNEX: GLOSSARY OF DEFINED TERMS

Defined term	Para where defined	Definition
add-on content	54	Transactions for delivering game related digital content which happen after the download of a game.
AEAD	359	Advanced Encryption with Authenticated Data.
AES	358	Advanced Encryption Standard.
Android Auto	440	*Alphabet v AGCM*, C-233/23, EU:C:2025:110 [2025] 4 CMLR 22.
Bronner	453	Case C-7/97 *Oscar Bronner v Mediaprint* [1999] 4 CMLR 112.
CEAHR	269	*CEAHR v European Commission* [2011] 4 CMLR 14.
CMA	12	The Competition and Markets Authority.
Commission Notice	129	European Commission's Notice on the Definition of the Relevant Market for the Purposes of Union Competition Law (C/2024/1645).
Connoisseurs	102	Sony's categorisation of a subset of gamers said to be the earliest adopters, loudest promoters or detractors, most passionate and demanding players who tend to be the biggest spenders and Sony's most valuable customers.
CPPS	79	Cross-Platform Policy Schedule.
DDM	378(3)	Digital Distribution Margin.
Dev Kits	65(3)	Custom developer hardware which are used to build and develop games.
DGS	21(12)	Digital Games Sales.
DGS Promotions	82	A Sony team which manages promotional activity on the PS Store.

DPR	378(1)	Digital Platform Royalty.
ECCR	377(2)	Effective Counterfactual Commission Rate.
EFIM	130	*EFIM v Commission* C-56/12 P, EUT:2010:517.
***EFIM* Criteria**	130	The analytical framework considered in *EFIM* when assessing the constraint arising from consumer purchasing decisions in a primary market.
EPMU	510	Equi-proportional mark-up.
exclusionary abuses	8	The Class Representative's exclusive dealing, tying and refusal to supply allegations.
exploitative abuse	8	The Class Representative's excessive and unfair pricing allegation.
GDPA	65(1)	Global Developer & Publisher Agreement.
Google Shopping	439	*Google v Commission (Google Shopping)* EU:C:2024:726; [2024] 5 CMLR 20.
GPU	361	Graphics processing unit.
Illustration A	390	Mr Harman's first illustration in relation to his ECCR economic counterfactual and how it would work in practice. Mr Harman considered a scenario in which third-party stores would gain a 40% market share (with the PS Store retaining a 60% market share).
Illustration B	390	Mr Harman's second illustration in relation to his ECCR economic counterfactual and how it would work in practice. Mr Harman considered a scenario in which third-party stores would gain a 60% market share (with the PS Store retaining a 40% market share).
Kent	14	*Kent v Apple* [2025] CAT 67.

HMT	120	Hypothetical Monopolist Test.
IP	21(8)	Intellectual property.
Leprechaun Report	263(2)	The Project Leprechaun Report of April 2019.
[✂]	[✂]	[✂]
PCs	35	Personal computers.
Pelikan	269	*Pelikan/Kyocera* (Case no. IV/34.330).
Phenytoin CA	484	*CMA v Flynn Pharma Ltd [2020] 4 All ER 934; [2020] EWCA Civ 339.*
PS4/PS5 **PS2** **PS3**	6(1) 41(2) 41(3)	PlayStation 4/PlayStation 5. PlayStation 2. PlayStation 3.
PS Network	21(1)	The PlayStation Network.
PS Plus	47	Sony's subscription service.
PS Store	8(2)	The PlayStation Store.
RAM	361	Random access memory
[✂]	[✂]	[✂]
ROCE	383(1)	Return on capital employed.
SDK	65(2)	Software development kit.
Servizio Elettrico	Footnote 4	Case C-377/20 *Servizio Elettrico Nazionale & Others v AGCM*, EU:C:2022:379.
Sony	2	The Defendants.
SSNIP	120	A small, but significant, non-transitory increase in price of 5-10%.
Test Kits	65(3)	Custom developer hardware which are used to test games in conditions resembling the PlayStation consoles.
[✂]	[✂]	[✂]
TPSFF	378(2)	Third-Party Store Facilitation Fee.
United Brands	483	Case 27/76 *United Brands Company & Another v European Commission* EU:C:1978:22; [1978] 1 CMLR 429

WACC	496(2)	Weighted average cost of capital.