The Impact of Antitrust on M&A

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Merger Guidelines

U.S. Department of Justice and the Federal Trade Commission

Issued: December 18, 2023

1. Overview

These Merger Guidelines identify the procedures and enforcement practices the Department of Justice and the Federal Trade Commission (the "Agencies") most often use to investigate whether mergers violate the antitrust laws. The Agencies enforce the federal antitrust laws, specifically Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1, 2; Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45; and Sections 3, 7, and 8 of the Clayton Act,[1] 15 U.S.C. §§ 14, 18, 19.[2] Congress has charged the Agencies with administering these statutes as part of a national policy to promote open and fair competition, including by preventing mergers and acquisitions that would violate these laws. "Federal antitrust law is a central safeguard for the Nation's free market structures" that ensures "the preservation of economic freedom and our free-enterprise system."[3] It rests on the premise that "[t]he unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress, while at the same time providing an environment conducive to the preservation of our democratic political and social institutions."[4]

Section 7 of the Clayton Act ("Section 7") prohibits mergers and acquisitions where "in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." Competition is a process of rivalry that incentivizes businesses to offer lower prices, improve wages and working conditions, enhance quality and resiliency, innovate, and expand choice, among many other benefits. Mergers that substantially lessen competition or tend to create a monopoly increase, extend, or entrench market power and deprive the public of these benefits. Mergers can lessen competition when they diminish competitive constraints, reduce the number or attractiveness of alternatives available to trading partners, or reduce the intensity with which market participants compete.

Section 7 was designed to arrest anticompetitive tendencies in their incipiency.[5] The Clayton Act therefore requires the Agencies to assess whether mergers present risk to competition. The Supreme Court has explained that "Section 7 itself creates a relatively expansive definition of antitrust liability: To show that a merger is unlawful, a plaintiff need only prove that its effect '*may be* substantially to lessen competition'" or to tend to create a monopoly.[6] Accordingly, the Agencies do not attempt to

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[1] As amended under the Celler-Kefauver Antimerger Act of 1950, Pub. L. No. 81-899, 64 Stat. 1125 (1950), and the Hart-Scott-Rodino Antitrust Improvements Act of 1976, 15 U.S.C. § 18a.

[2] Although these Guidelines focus primarily on Section 7 of the Clayton Act, the Agencies consider whether any of these statutes may be violated by a merger. The various provisions of the Sherman, Clayton, and FTC Acts each have separate standards, and one may be violated when the others are not.

[3] *North Carolina State Bd. of Dental Examiners v. FTC*, 574 U.S. 494, 502 (2015).

[4] *NCAA v. Board of Regents*, 468 U.S. 85, 104 n.27 (1984) (quoting *Northern Pac. R. Co. v. United States*, 356 U.S. 1, 4-5 (1958)); *see also NCAA v. Alston*, 141 S. Ct. 2141, 2147 (2021) (quoting *Board of Regents*, 468 U.S. at 104 n.27).

[5] *See, e.g.*, *Brown Shoe Co. v. United States*, 370 U.S. 294, 318 nn.32-33 (1962); *see also United States v. AT&T, Inc.*, 916 F.3d 1029, 1032 (D.C. Cir. 2019) (Section 7 "halt[s] incipient monopolies and trade restraints outside the scope of the Sherman Act." (quoting *Brown Shoe*, 370 U.S. at 318 n.32)); *Saint Alphonsus Medical Center-Nampa v. St. Luke's*, 778 F.3d 775, 783 (9th Cir. 2015) (Section 7 "intended to arrest anticompetitive tendencies in their incipiency." (quoting *Brown Shoe*, 370 U.S. at 322)); *Polypore Intern., Inc. v. FTC*, 686 F.3d 1208, 1213-14 (11th Cir. 2012) (same). Some other aspects of *Brown Shoe* have been subsequently revisited.

[6] *California v. Am. Stores Co.*, 495 U.S. 271, 284 (1990) (quoting 15 U.S.C. § 18 with emphasis) (citing *Brown Shoe*, 370 U.S. at 323).

predict the future or calculate precise effects of a merger with certainty. Rather, the Agencies examine the totality of the evidence available to assess the risk the merger presents.

Competition presents itself in myriad ways. To assess the risk of harm to competition in a dynamic and complex economy, the Agencies begin the analysis of a proposed merger by asking: how do firms in this industry compete, and does the merger threaten to substantially lessen competition or to tend to create a monopoly?

The Merger Guidelines set forth several different analytical frameworks (referred to herein as "Guidelines") to assist the Agencies in assessing whether a merger presents sufficient risk to warrant an enforcement action. These frameworks account for industry-specific market realities and use a variety of indicators and tools, ranging from market structure to direct evidence of the effect on competition, to examine whether the proposed merger may harm competition.

How to Use These Guidelines: When companies propose a merger that raises concerns under one or more Guidelines, the Agencies closely examine the evidence to determine if the facts are sufficient to infer that the effect of the merger may be to substantially lessen competition or to tend to create a monopoly (sometimes referred to as a "prima facie case").[7] **Section 2** describes how the Agencies apply these Guidelines. Specifically, Guidelines 1-6 describe distinct frameworks the Agencies use to identify that a merger raises prima facie concerns, and Guidelines 7-11 explain how to apply those frameworks in several specific settings. In all of these situations, the Agencies will also examine relevant evidence to determine if it disproves or rebuts the prima facie case and shows that the merger does not in fact threaten to substantially lessen competition or tend to create a monopoly. **Section 3** identifies rebuttal evidence that the Agencies consider, and that merging parties can present, to rebut an inference of potential harm under these frameworks.[8] **Section 4** sets forth a non-exhaustive discussion of analytical, economic, and evidentiary tools the Agencies use to evaluate facts, understand the risk of harm to competition, and define relevant markets.

These Guidelines are not mutually exclusive, as a single transaction can have multiple effects or raise concerns in multiple ways. To promote efficient review, for any given transaction the Agencies may limit their analysis to any one Guideline or subset of Guidelines that most readily demonstrates the risks to competition from the transaction.

Guideline 1: Mergers Raise a Presumption of Illegality When They Significantly Increase Concentration in a Highly Concentrated Market. Market concentration is often a useful indicator of a merger's likely effects on competition. The Agencies therefore presume, unless sufficiently disproved or rebutted, that a merger between competitors that significantly increases concentration and creates or further consolidates a highly concentrated market may substantially lessen competition.

Guideline 2: Mergers Can Violate the Law When They Eliminate Substantial Competition Between Firms. The Agencies examine whether competition between the merging parties is substantial since their merger will necessarily eliminate any competition between them.

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[7] *See, e.g.*, *United States v. AT&T, Inc.*, 916 F.3d at 1032 (explaining that a *prima facie* case can demonstrate a "reasonable probability" of harm to competition either through "statistics about the change in market concentration" or a "fact-specific" showing (quoting *Brown Shoe*, 370 U.S. at 323 n.39)); *United States v. Baker Hughes*, 908 F.2d 981, 982-83 (D.C. Cir. 1990).
[8] These Guidelines pertain only to the Agencies' consideration of whether a merger or acquisition may substantially lessen competition or tend to create a monopoly. The consideration of remedies appropriate for mergers that pose that risk is beyond the Merger Guidelines' scope. The Agencies review proposals to revise a merger in order to alleviate competitive concerns consistent with applicable law regarding remedies.

Guideline 3: Mergers Can Violate the Law When They Increase the Risk of Coordination. The Agencies examine whether a merger increases the risk of anticompetitive coordination. A market that is highly concentrated or has seen prior anticompetitive coordination is inherently vulnerable and the Agencies will infer, subject to rebuttal evidence, that the merger may substantially lessen competition. In a market that is not highly concentrated, the Agencies investigate whether facts suggest a greater risk of coordination than market structure alone would suggest.

Guideline 4: Mergers Can Violate the Law When They Eliminate a Potential Entrant in a Concentrated Market. The Agencies examine whether, in a concentrated market, a merger would (a) eliminate a potential entrant or (b) eliminate current competitive pressure from a perceived potential entrant.

Guideline 5: Mergers Can Violate the Law When They Create a Firm That May Limit Access to Products or Services That Its Rivals Use to Compete. When a merger creates a firm that can limit access to products or services that its rivals use to compete, the Agencies examine the extent to which the merger creates a risk that the merged firm will limit rivals' access, gain or increase access to competitively sensitive information, or deter rivals from investing in the market.

Guideline 6: Mergers Can Violate the Law When They Entrench or Extend a Dominant Position. The Agencies examine whether one of the merging firms already has a dominant position that the merger may reinforce, thereby tending to create a monopoly. They also examine whether the merger may extend that dominant position to substantially lessen competition or tend to create a monopoly in another market.

Guideline 7: When an Industry Undergoes a Trend Toward Consolidation, the Agencies Consider Whether It Increases the Risk a Merger May Substantially Lessen Competition or Tend to Create a Monopoly. A trend toward consolidation can be an important factor in understanding the risks to competition presented by a merger. The Agencies consider this evidence carefully when applying the frameworks in Guidelines 1-6.

Guideline 8: When a Merger is Part of a Series of Multiple Acquisitions, the Agencies May Examine the Whole Series. If an individual transaction is part of a firm's pattern or strategy of multiple acquisitions, the Agencies consider the cumulative effect of the pattern or strategy when applying the frameworks in Guidelines 1-6.

Guideline 9: When a Merger Involves a Multi-Sided Platform, the Agencies Examine Competition Between Platforms, on a Platform, or to Displace a Platform. Multi-sided platforms have characteristics that can exacerbate or accelerate competition problems. The Agencies consider the distinctive characteristics of multi-sided platforms when applying the frameworks in Guidelines 1-6.

Guideline 10: When a Merger Involves Competing Buyers, the Agencies Examine Whether It May Substantially Lessen Competition for Workers, Creators, Suppliers, or Other Providers. The Agencies apply the frameworks in Guidelines 1-6 to assess whether a merger between buyers, including employers, may substantially lessen competition or tend to create a monopoly.

Guideline 11: When an Acquisition Involves Partial Ownership or Minority Interests, the Agencies Examine Its Impact on Competition. The Agencies apply the frameworks in Guidelines 1-6 to assess if an acquisition of partial control or common ownership may substantially lessen competition.

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This edition of the Merger Guidelines consolidates, revises, and replaces the various versions of Merger Guidelines previously issued by the Agencies. The revision builds on the learning and experience reflected in those prior Guidelines and successive revisions. These Guidelines reflect the collected experience of the Agencies over many years of merger review in a changing economy and have been refined through an extensive public consultation process.

As a statement of the Agencies' law enforcement procedures and practices, the Merger Guidelines create no independent rights or obligations, do not affect the rights or obligations of private parties, and do not limit the discretion of the Agencies, including their staff, in any way. Although the Merger Guidelines identify the factors and frameworks the Agencies consider when investigating mergers, the Agencies' enforcement decisions will necessarily continue to require prosecutorial discretion and judgment. Because the specific standards set forth in these Merger Guidelines will be applied to a broad range of factual circumstances, the Agencies will apply them reasonably and flexibly to the specific facts and circumstances of each merger.

Similarly, the factors contemplated in these Merger Guidelines neither dictate nor exhaust the range of theories or evidence that the Agencies may introduce in merger litigation. Instead, they set forth various methods of analysis that may be applicable depending on the availability and/or reliability of information related to a given market or transaction. Given the variety of industries, market participants, and acquisitions that the Agencies encounter, merger analysis does not consist of uniform application of a single methodology. The Agencies assess any relevant and meaningful evidence to evaluate whether the effect of a merger may be substantially to lessen competition or to tend to create a monopoly. Merger review is ultimately a fact-specific exercise. The Agencies follow the facts and the law in analyzing mergers as they do in other areas of law enforcement.

These Merger Guidelines include references to applicable legal precedent. References to court decisions do not necessarily suggest that the Agencies would analyze the facts in those cases identically today. While the Agencies adapt their analytical tools as they evolve and advance, legal holdings reflecting the Supreme Court's interpretation of a statute apply unless subsequently modified. These Merger Guidelines therefore reference applicable propositions of law to explain core principles that the Agencies apply in a manner consistent with modern analytical tools and market realities. References herein do not constrain the Agencies' interpretation of the law in particular cases, as the Agencies will apply their discretion with respect to the applicable law in each case in light of the full range of precedent pertinent to the issues raised by each enforcement action.

2. Applying the Merger Guidelines

This section discusses the frameworks the Agencies use to assess whether a merger may substantially lessen competition or tend to create a monopoly.

2.1. Guideline 1: Mergers Raise a Presumption of Illegality When They Significantly Increase Concentration in a Highly Concentrated Market.

Market concentration and the change in concentration due to the merger are often useful indicators of a merger's risk of substantially lessening competition. In highly concentrated markets, a merger that eliminates a significant competitor creates significant risk that the merger may substantially lessen competition or tend to create a monopoly. As a result, a significant increase in concentration in a highly concentrated market can indicate that a merger may substantially lessen competition, depriving the public of the benefits of competition.

The Supreme Court has endorsed this view and held that "a merger which produces a firm controlling an undue percentage share of the relevant market, and results in a significant increase in the concentration of firms in that market[,] is so inherently likely to lessen competition substantially that it must be enjoined in the absence of [rebuttal] evidence."[9] In the Agencies' experience, this legal presumption provides a highly administrable and useful tool for identifying mergers that may substantially lessen competition.

An analysis of concentration involves calculating pre-merger market shares of products[10] within a relevant market (see Section 4.3 for a discussion of market definition and Section 4.4 for more details on computing market shares). The Agencies assess whether the merger creates or further consolidates a highly concentrated market and whether the increase in concentration is sufficient to indicate that the merger may substantially lessen competition or tend to create a monopoly.[11]

The Agencies generally measure concentration levels using the Herfindahl-Hirschman Index ("HHI").[12] The HHI is defined as the sum of the squares of the market shares; it is small when there are many small firms and grows larger as the market becomes more concentrated, reaching 10,000 in a market with a single firm. Markets with an HHI greater than 1,800 are highly concentrated, and a change of more than 100 points is a significant increase.[13] A merger that creates or further consolidates a highly

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[9] *United States v. Phila. Nat'l Bank*, 374 U.S. 321, 363 (1963); *see, e.g.*, *FTC v. v. Hackensack Meridian Health, Inc.*, 30 F.4th 160, 172-73 (3d Cir. 2022); *United States v. AT&T, Inc.*, 916 F.3d at 1032.

[10] These Guidelines use the term "products" to encompass anything that is traded between firms and their suppliers, customers, or business partners, including physical goods, services, or access to assets. Products can be as narrow as an individual brand, a specific version of a product, or a product that includes specific ancillary services such as the right to return it without cause or delivery to the customer's location.

[11] Typically, a merger eliminates a competitor by bringing two market participants under common control. Similar concerns arise if the merger threatens to cause the exit of a current market participant, such as a leveraged buyout that puts the target firm at significant risk of failure.

[12] The Agencies may instead measure market concentration using the number of significant competitors in the market. This measure is most useful when there is a gap in market share between significant competitors and smaller rivals or when it is difficult to measure shares in the relevant market.

[13] For illustration, the HHI for a market of five equal firms is 2,000 ($5 \times 20^2 = 2{,}000$) and for six equal firms is 1,667 ($6 \times 16.67^2 = 1667$).

concentrated market that involves an increase in the HHI of more than 100 points[14] is presumed to substantially lessen competition or tend to create a monopoly.[15] The Agencies also may examine the market share of the merged firm: a merger that creates a firm with a share over thirty percent is also presumed to substantially lessen competition or tend to create a monopoly if it also involves an increase in HHI of more than 100 points.[16]

Indicator	Threshold for Structural Presumption
Post-merger HHI	Market HHI greater than 1,800 AND Change in HHI greater than 100
Merged Firm's Market Share	Share greater than 30% AND Change in HHI greater than 100

When exceeded, these concentration metrics indicate that a merger's effect may be to eliminate substantial competition between the merging parties and may be to increase coordination among the remaining competitors after the merger. This presumption of illegality can be rebutted or disproved. The higher the concentration metrics over these thresholds, the greater the risk to competition suggested by this market structure analysis and the stronger the evidence needed to rebut or disprove it.

2.2. Guideline 2: Mergers Can Violate the Law When They Eliminate Substantial Competition Between Firms.

A merger eliminates competition between the merging firms by bringing them under joint control.[17] If evidence demonstrates substantial competition between the merging parties prior to the

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[14] The change in HHI from a merger of firms with shares *a* and *b* is equal to 2*ab*. For example, in a merger between a firm with 20% market share and a firm with 5% market share, the change in HHI is 2 x 20 x 5 = 200.

[15] The first merger guidelines to reference an HHI threshold were the merger guidelines issued in 1982. These guidelines referred to mergers with HHI above 1,000 as concentrated markets, with HHI between 1,000 and 1,800 as "moderately concentrated" and above 1,800 as "highly concentrated," while they referred to an increase in HHI of 100 as a "significant increase." Each subsequent iteration until 2010 maintained those thresholds. *See* Fed. Trade Comm'n & U.S. Dep't of Justice, Horizontal Merger Guidelines § 1.51 (1997); Fed. Trade Comm'n & U.S. Dep't of Justice, Horizontal Merger Guidelines § 1.51 (1992); U.S. Dep't of Justice, Merger Guidelines § 3(A) (1982). During this time, courts routinely cited to the guidelines and these HHI thresholds in decisions. *See, e.g.*, *Chicago Bridge & Iron Co. N.V. v. FTC*, 534 F.3d 410, 431 (5th Cir. 2008); *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 716 (D.C. Cir. 2001); *FTC v. Univ. Health, Inc.*, 938 F.2d 1206, 1211 (11th Cir. 1991). Although the Agencies raised the thresholds for the 2010 guidelines, based on experience and evidence developed since, the Agencies consider the original HHI thresholds to better reflect both the law and the risks of competitive harm suggested by market structure and have therefore returned to those thresholds.

[16] *Phila. Nat'l Bank*, 374 U.S. at 364-65 ("Without attempting to specify the smallest market share which would still be considered to threaten undue concentration, we are clear that 30% presents that threat.").

[17] The competitive harm from the elimination of competition between the merging firms, without considering the risk of coordination, is sometimes referred to as unilateral effects. The elimination of competition between the merging firms can also lessen competition with and among other competitors. When the elimination of competition between the merging firms

merger, that ordinarily suggests that the merger may substantially lessen competition.[18]Although a change in market structure can also indicate risk of competitive harm (see Guideline 1), an analysis of the existing competition between the merging firms can demonstrate that a merger threatens competitive harm independent from an analysis of market shares.

Competition often involves firms trying to win business by offering lower prices, new or better products and services, more attractive features, higher wages, improved benefits, or better terms relating to various additional dimensions of competition. This can include competition to research and develop products or services, and the elimination of such competition may result in harm even if such products or services are not yet commercially available. The more the merging parties have shaped one another's behavior, or have affected one another's sales, profits, valuation, or other drivers of behavior, the more significant the competition between them.

The Agencies examine a variety of indicators to identify substantial competition. For example:

Strategic Deliberations or Decisions. The Agencies may analyze the extent of competition between the merging firms by examining evidence relating to strategic deliberations or decisions in the regular course of business. For example, in some markets, the firms may monitor each other's pricing, marketing campaigns, facility locations, improvements, products, capacity, output, input costs, and/or innovation plans. This can provide evidence of competition between the merging firms, especially when they react by taking steps to preserve or enhance the competitiveness or profitability of their own products or services.

Prior Merger, Entry, and Exit Events. The Agencies may look to historical events to assess the presence and substantiality of direct competition between the merging firms. For example, the Agencies may examine the competitive impact of recent relevant mergers, entry, expansion, or exit events.

Customer Substitution. Customers' willingness to switch between different firms' products is an important part of the competitive process. Firms are closer competitors the more that customers are willing to switch between their products. The Agencies use a variety of tools, detailed in Section 4.2, to assess customer substitution.

Impact of Competitive Actions on Rivals. When one firm takes competitive actions to attract customers, this can benefit the firm at the expense of its rivals. The Agencies may gauge the extent of competition between the merging firms by considering the impact that competitive actions by one of the merging firms has on the other merging firm. The impact of a firm's competitive actions on a rival is generally greater when customers consider the firm's products and the rival's products to be closer substitutes, so that a firm's competitive action results in greater lost sales for the rival, and when the profitability of the rival's lost sales is greater.

Impact of Eliminating Competition Between the Firms. In some instances, evidence may be available to assess the impact of competition from one firm on the other's actions, such as firm choices

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leads them to compete less aggressively with one another, other firms in the market can in turn compete less aggressively, decreasing the overall intensity of competition.

[18] *See also United States v. First Nat'l Bank & Trust Co. of Lexington*, 376 U.S. 665, 669-70 (1964) (per curiam) ("[I]t [is] clear that the elimination of significant competition between [merging parties] constitutes an unreasonable restraint of trade in violation of § 1 of the Sherman Act. . . . It [can be] enough that the two . . . compete[], that their competition [is] not insubstantial and that the combination [would] put an end to it."); *ProMedica Health Sys., Inc. v. FTC*, 749 F.3d 559, 568-70 (6th Cir. 2014), *cert. denied*, 575 U.S. 996 (2015).

about price, quality, wages, or another dimension of competition. Section 4.2 describes a variety of approaches to measuring such impacts.

Additional Evidence, Tools, and Metrics. The Agencies may use additional evidence, tools, and metrics to assess the loss of competition between the firms. Depending on the realities of the market, different evidence, tools, or metrics may be appropriate.

Section 4.2 provides additional detail about the approaches that the Agencies use to assess competition between or among firms.

2.3. Guideline 3: Mergers Can Violate the Law When They Increase the Risk of Coordination.

The Agencies determine that a merger may substantially lessen competition when it meaningfully increases the risk of coordination among the remaining firms in a relevant market or makes existing coordination more stable or effective.[19] Firms can coordinate across any or all dimensions of competition, such as price, product features, customers, wages, benefits, or geography. Coordination among rivals lessens competition whether it occurs explicitly—through collusive agreements between competitors not to compete or to compete less—or tacitly, through observation and response to rivals. Because tacit coordination often cannot be addressed under Section 1 of the Sherman Act, the Agencies vigorously enforce Section 7 of the Clayton Act to prevent market structures conducive to such coordination.

Tacit coordination can lessen competition even when it does not rise to the level of an agreement and would not itself violate the law. For example, in a concentrated market a firm may forego or soften an aggressive competitive action because it anticipates rivals responding in kind. This harmful behavior is more common the more concentrated markets become, as it is easier to predict the reactions of rivals when there are fewer of them.

To assess the extent to which a merger may increase the likelihood, stability, or effectiveness of coordination, the Agencies often consider three primary factors and several secondary factors. The Agencies may consider additional factors depending on the market.

2.3.A. Primary Factors

The Agencies may conclude that post-merger market conditions are susceptible to coordinated interaction and that the merger materially increases the risk of coordination if any of the three primary factors are present.

Highly Concentrated Market. By reducing the number of firms in a market, a merger increases the risk of coordination. The fewer the number of competitively meaningful rivals prior to the merger, the greater the likelihood that merging two competitors will facilitate coordination. Markets that are highly concentrated after a merger that significantly increases concentration (see Guideline 1) are presumptively susceptible to coordination. If merging parties assert that a highly concentrated market is not susceptible to coordination, the Agencies will assess this rebuttal evidence using the framework

[19] *See Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.,* 509 U.S. 209, 229-30 (1993) ("In the § 7 context, it has long been settled that excessive concentration, and the oligopolistic price coordination it portends, may be the injury to competition the Act prohibits.").

described below. Where a market is not highly concentrated, the Agencies may still consider other risk factors.

Prior Actual or Attempted Attempts to Coordinate. Evidence that firms representing a substantial share in the relevant market appear to have previously engaged in express or tacit coordination to lessen competition is highly informative as to the market's susceptibility to coordination. Evidence of failed attempts at coordination in the relevant market suggest that successful coordination was not so difficult as to deter attempts, and a merger reducing the number of rivals may tend to make success more likely.

Elimination of a Maverick. A maverick is a firm with a disruptive presence in a market. The presence of a maverick, however, only reduces the risk of coordination so long as the maverick retains the disruptive incentives that drive its behavior. A merger that eliminates a maverick or significantly changes its incentives increases the susceptibility to coordination.

2.3.B. Secondary Factors

The Agencies also examine whether secondary factors demonstrate that a merger may meaningfully increase the risk of coordination, even absent the primary risk factors. Not all secondary factors must be present for a market to be susceptible to coordination.

Market Concentration. Even in markets that are not highly concentrated, coordination becomes more likely as concentration increases. The more concentrated a market, the more likely the Agencies are to conclude that the market structure suggests susceptibility to coordination.

Market Observability. A market is more susceptible to coordination if a firm's behavior can be promptly and easily observed by its rivals. Rivals' behavior is more easily observed when the terms offered to customers are readily discernible and relatively observable (that is, known to rivals). Observability can refer to the ability to observe prices, terms, the identities of the firms serving particular customers, or any other competitive actions of other firms. Information exchange arrangements among market participants, such as public exchange of information through announcements or private exchanges through trade associations or publications, increase market observability. Regular monitoring of one another's prices or customers can indicate that the terms offered to customers are relatively observable. Pricing algorithms, programmatic pricing software or services, and other analytical or surveillance tools that track or predict competitor prices or actions likewise can increase the observability of the market.

Competitive Responses. A market is more susceptible to coordination if a firm's prospective competitive reward from attracting customers away from its rivals will be significantly diminished by its rivals' likely responses. This is more likely to be the case the stronger and faster the responses from its rivals because such responses reduce the benefits of competing more aggressively. Some factors that increase the likelihood of strong or rapid responses by rivals include: (1) the market has few significant competitors, (2) products in the relevant market are relatively homogeneous, (3) customers find it relatively easy to switch between suppliers, (4) suppliers use algorithmic pricing, or (5) suppliers use meeting-competition clauses. The more predictable are rivals' responses to strategic actions or changing competitive conditions, and the more interactions firms have across multiple markets, the greater the susceptibility to coordination.

Aligned Incentives. Removing a firm that has different incentives from most other firms in a market can increase the risk of coordination. For example, a firm with a small market share may have

less incentive to coordinate because it has more to gain from winning new business than other firms. The same issue can arise when a merger more closely aligns one or both merging firms' incentives with the other firms in the market. In some cases, incentives might be aligned or strengthened when firms compete with one another in multiple markets ("multi-market contact"). For example, firms might compete less aggressively in some markets in anticipation of reciprocity by rivals in other markets. The Agencies examine these and any other market realities that suggest aligned incentives increase susceptibility to coordination.

Profitability or Other Advantages of Coordination for Rivals. The Agencies regard coordinated interaction as more likely to occur when participants in the market stand to gain more from successful coordination. Coordination generally is more profitable or otherwise advantageous for the coordinating firms the less often customers substitute outside the market when firms offer worse terms.

Rebuttal Based on Structural Barriers to Coordination Unique to the Industry. When market structure evidence suggests that a merger may substantially lessen competition through coordination, the merging parties sometimes argue that anticompetitive coordination is nonetheless impossible due to structural market barriers to coordinating. The Agencies consider this rebuttal evidence using the framework in Section 3. In so doing, the Agencies consider whether structural market barriers to coordination are "so much greater in the [relevant] industry than in other industries that they rebut the normal presumption" of coordinated effects.[20] In the Agencies' experience, structural conditions that prevent coordination are exceedingly rare in the modern economy. For example, coordination is more difficult when firms are unable to observe rivals' competitive offerings, but technological change has made this situation less common than in the past and reduced many traditional barriers or obstacles to observing the behavior of rivals in a market. The greater the level of concentration in the relevant market, the greater must be the structural barriers to coordination in order to show that no substantial lessening of competition is threatened.

2.4. Guideline 4: Mergers Can Violate the Law When They Eliminate a Potential Entrant in a Concentrated Market.

Mergers can substantially lessen competition by eliminating a potential entrant. For instance, a merger can eliminate the possibility that entry or expansion by one or both firms would have resulted in new or increased competition in the market in the future. A merger can also eliminate current competitive pressure exerted on other market participants by the mere perception that one of the firms might enter. Both of these risks can be present simultaneously.

A merger that eliminates a potential entrant into a concentrated market can substantially lessen competition or tend to create a monopoly.[21] The more concentrated the market, the greater the magnitude of harm to competition from any lost potential entry and the greater the tendency to create a monopoly. Accordingly, for mergers involving one or more potential entrants, the higher the market concentration, the lower the probability of entry that gives rise to concern.

[20] *See H.J. Heinz Co.*, 246 F.3d at 724.

[21] *United States v. Marine Bancorp.*, 418 U.S. 602, 630 (1974). A concentrated market is one with an HHI greater than 1,000 (See Guideline 1, n.15).

2.4.A. Actual Potential Competition: Eliminating Reasonably Probable Future Entry

In general, expansion into a concentrated market via internal growth rather than via acquisition benefits competition.[22] Merging a current and a potential market participant eliminates the possibility that the potential entrant would have entered on its own—entry that, had it occurred, would have provided a new source of competition in a concentrated market.

To determine whether an acquisition that eliminates a potential entrant into a concentrated market may substantially lessen competition,[23] the Agencies examine (1) whether one or both[24] of the merging firms had a reasonable probability of entering the relevant market other than through an anticompetitive merger, and (2) whether such entry offered a substantial likelihood of ultimately producing deconcentration of the market or other significant procompetitive effects.[25]

Reasonable Probability of Entry. The Agencies' starting point for assessment of a reasonable probability of entry is objective evidence regarding the firm's available feasible means of entry, including its capabilities and incentives. Relevant objective evidence can include, for example, evidence that the firm has sufficient size and resources to enter; evidence of any advantages that would make the firm well-situated to enter; evidence that the firm has successfully expanded into similarly situated markets in the past or already participates in adjacent or related markets; evidence that the firm has an incentive to enter; or evidence that industry participants recognize the company as a potential entrant. This analysis is not limited to whether the company could enter with its pre-merger production facilities, but also considers overall capability, which can include the ability to expand or add to its capabilities on its own or in collaboration with someone other than the acquisition target.

Subjective evidence that the company considered entering absent the merger can also indicate a reasonable probability that the company would have entered without the merger. Subjective evidence that the company considered organic entry as an alternative to merging generally suggests that, absent the merger, entry would be reasonably probable.

Likelihood of Deconcentration or Other Significant Procompetitive Effects. New entry can yield a variety of procompetitive effects, including increased output or investment, higher wages or improved working conditions, greater innovation, higher quality, and lower prices. If the merging firm had a reasonable probability of entering a highly concentrated relevant market, this suggests benefits that would have resulted from its entry would be competitively significant, unless there is substantial direct evidence that the competitive effect would be *de minimis*. To supplement the suggestion that new entry yields procompetitive effects, the Agencies will consider projections of the potential entrant's

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[22] *See Ford Motor Co. v. United States*, 405 U.S. 562, 587 (1972) (referring to the "typical[]" competitive concern when "a potential entrant enters an oligopolistic market by acquisition rather than internal expansion" as being "that such a move has deprived the market of the pro-competitive effect of an increase in the number of competitors").

[23] Harm from the elimination of a potential entrant can occur in markets that do not yet consist of commercial products, even if the market concentration of the future market cannot be measured using traditional means. Where there are few equivalent potential entrants, including one or both of the merging firms, that indicates that the future market, once commercialized, will be concentrated. The Agencies will consider other potential entrants' capabilities and incentives in comparison to the merging potential entrant to assess equivalence.

[24] *United States v. Penn-Olin Chemical Co.*, 378 U.S. 158 (1964) (holding that a merger between two firms, each or both of which might have entered the relevant market, could violate Section 7).

[25] *See id.* at 175-76; *Marine Bancorp.*, 418 U.S. at 622, 633 ("[T]he proscription expressed in § 7 against mergers 'when a "tendency" toward monopoly or [a] "reasonable likelihood" of a substantial lessening of competition in the relevant market is shown' applies alike to actual- and potential-competition cases." (quoting *Penn-Olin*, 378 U.S. at 171)); *see also Yamaha Motor Co. v. FTC*, 657 F.2d 971, 980-981 (8th Cir. 1981) (acquisition of potential entrant violated Section 7).

competitive significance, such as market share, its business strategy, the anticipated response of competitors, or customer preferences or interest.

A merger of two potential entrants can also result in a substantial lessening of competition. The merger need not involve a firm that has a commercialized product in the market or an existing presence in the same geographic market. The Agencies analyze similarly mergers between two potential entrants and those involving a current market participant and a potential entrant.

2.4.B. Perceived Potential Competition: Lessening of Current Competitive Pressure

A perceived potential entrant can stimulate competition among incumbents. That pressure can prompt current market participants to make investments, expand output, raise wages, increase product quality, lower product prices, or take other procompetitive actions. The acquisition of a firm that is perceived by market participants as a potential entrant can substantially lessen competition by eliminating or relieving competitive pressure.

To assess whether the acquisition of a perceived potential entrant may substantially lessen competition, the Agencies consider whether a current market participant could reasonably consider one of the merging companies to be a potential entrant and whether that potential entrant has a likely influence on existing competition.[26]

Market Participant Could Reasonably Consider a Firm to Be a Potential Entrant. The starting point for this analysis is evidence regarding the company's capability of entering or applying competitive pressure. Objective evidence is highly probative and includes evidence of feasible means of entry or communications by the company indicating plans to expand or reallocate resources in a way that could increase competition in the relevant market. Objective evidence can be sufficient to find that the firm is a potential entrant; it need not be accompanied by any subjective evidence of current market participants' internal perceptions or direct evidence of strategic reactions to the potential entrant. If such evidence is available, it can weigh in favor of finding that a current market participant could reasonably consider the firm to be a potential entrant.

Likely Influence on Existing Rivals. Direct evidence that the firm's presence or behavior has affected or is affecting current market participants' strategic decisions is not necessary but can establish a showing of a likely influence. Even without such direct evidence, circumstantial evidence that the firm's presence or behavior had an effect on the competitive reactions of firms in the market may also show likely influence. Objective evidence establishing that a current market participant could reasonably consider one of the merging firms to be a potential entrant can also establish that the firm has a likely influence on existing market participants. Subjective evidence indicating that current market participants—including, for example, customers, suppliers, or distributors—internally perceive the merging firm to be a potential entrant can also establish a likely influence.

2.4.C. Distinguishing Potential Entry from Entry as Rebuttal

When evaluating a potentially unlawful merger of current competitors, the Agencies will assess whether entry by other firms would be timely, likely, and sufficient to replace the lost competition using the standards discussed in Section 3.2. The existence of a perceived or actual potential entrant may not meet that standard when considering a merger between firms that already participate in the relevant market. The competitive impact of perceived and actual potential entrants is typically attenuated

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[26] *See United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 533-36 (1973); *Marine Bancorp.*, 418 U.S. at 624-25.

compared to competition between two current market participants. However, because concentrated markets often lack robust competition, the loss of even an attenuated source of competition such as a potential entrant may substantially lessen competition in such markets. Moreover, because the Agencies seek to prevent threats to competition in their incipiency, the likelihood of potential entry that could establish that a merger's effect "may be" to substantially lessen competition will generally not equal the likelihood of entry that would rebut a demonstrated risk that competition may be substantially lessened.

2.5. Guideline 5: Mergers Can Violate the Law When They Create a Firm that May Limit Access to Products or Services That Its Rivals Use to Compete.

The Agencies evaluate whether a merger may substantially lessen competition when the merged firm can limit access to a product, service, or route to market[27] that its rivals may use to compete. Mergers involving products or services rivals may use to compete can threaten competition in several ways, for example: (A) the merged firm could limit rivals' access to the products or services, thereby weakening or excluding them, lessening competition; (B) the merged firm may gain or increase access to rivals' competitively sensitive information, thereby facilitating coordination or undermining their incentives to compete; or (C) the threat of limited access can deter rivals and potential rivals from investing.

These problems can arise from mergers involving access to any products, services, or routes to market that rivals use to compete, and that are competitively significant to those rivals, whether or not they involve a traditional vertical relationship such as a supplier and distributor relationship. Many types of related products can implicate these concerns, including products rivals currently or may in the future use as inputs, products that provide distribution services for rivals or otherwise influence customers' purchase decisions, products that provide or increase the merged firm's access to competitively sensitive information about its rivals, or complements that increase the value of rivals' products. Even if the related product is not currently being used by rivals, it might be competitively significant because, for example, its availability enables rivals to obtain better terms from other providers in negotiations. The Agencies refer to any product, service, or route to market that rivals use to compete in that market as a "related product."

The Agencies analyze competitive effects in the relevant market in which the merged firm competes with rivals that use the related product. The Agencies do not always define a market around the related product, although they may do so (see Section 2.5.A.2).

2.5.A. The Risk that the Merged Firm May Limit Access

A merger involving products, services, or routes to market that rivals use to compete may substantially lessen competition when the merged firm has both the ability and incentive to limit access to the related product so as to weaken or exclude some of its rivals (the "dependent" rivals) in the relevant market.

The merged firm could limit access to the related product in different ways. It could deny rivals access altogether, deny access to some features, degrade its quality, worsen the terms on which rivals

[27] A "route to market" refers to any way a firm accesses its trading partners, such as distribution channels, marketplaces, or customers.

can access the related product, limit interoperability, degrade the quality of complements, provide less reliable access, tie up or obstruct routes to market, or delay access to product features, improvements, or information relevant to making efficient use of the product. All these ways of limiting access are sometimes referred to as "foreclosure."[28]

Dependent rivals can be weakened if limiting their access to the related product would make it harder or more costly for them to compete; for example, if it would lead them to charge higher prices or offer worse terms in the relevant market, reduce the quality of their products so that they were less attractive to trading partners, or interfere with distribution so that those products were less readily available. Competition can also be weakened if the merger facilitates coordination among the merged firm and its rivals, for example by giving the merged firm the ability to threaten to limit access to uncooperative rivals.

Rivals or potential rivals may be excluded from the relevant market if limiting their access to the related product could lead them to exit the market or could deter them from entering. For example, potential rivals may not enter if the merged firm ties up or obstructs so many routes to market that the remaining addressable market is too small. Exclusion can arise when a new entrant would need to invest not only in entering the relevant market, but also in supplying its own substitute for the related product, sometimes referred to as two-stage entry or multi-level entry.

Because the merged firm could use its ability to limit access to the related product in a range of ways, the Agencies focus on the overall risk that the merged firm will do so, and do not necessarily identify which precise actions the merged firm would take to lessen competition.

2.5.A.1. Ability and Incentive to Foreclose Rivals

The Agencies assess the merged firm's ability and incentive to substantially lessen competition by limiting access to the related product for a group of dependent rivals in the relevant market by examining four factors.

1. Availability of Substitutes. The Agencies assess the availability of substitutes for the related product. The merged firm is more able to limit access when there are few alternative options to the merged firm's related product, if these alternatives are differentiated in quality, price, or other characteristics, or if competition to supply them is limited.

2. Competitive Significance of the Related Product. The Agencies consider how important the related product is for the dependent firms and the extent to which they would be weakened or excluded from the relevant market if their access was limited.

3. Effect on Competition in the Relevant Market. The Agencies assess the importance of the dependent firms for competition in the relevant market. Competition can be particularly affected when the dependent firms would be excluded from the market altogether.

4. Competition Between the Merged Firm and the Dependent Firms. The merged firm's incentive to limit the dependent firms' access depends on how strongly it competes with them. If the dependent firms are close competitors, the merged firm may benefit from higher sales or prices in the relevant market when it limits their access. The Agencies may also assess the potential for the merged

[28] *See Illumina, Inc. v. FTC*, No. 23-60167, slip op. at 17 (5th Cir. Dec. 15, 2023) ("[T]here are myriad ways in which [the merged firm] could engage in foreclosing behavior . . . such as by making late deliveries or subtly reducing the level of support services.").

firm to benefit from facilitating coordination by threatening to limit dependent rivals' access to the related product. These benefits can make it profitable to limit access to the related product and thereby substantially lessen competition, even though it would not have been profitable for the firm that controlled the related product prior to the merger.

The Agencies assess the extent of competition with rivals and the risk of coordination using analogous methods to the ones described in Guidelines 2 and 3, and Section 4.2.

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In addition to the evidentiary, analytical, and economic tools in Section 4, the following additional considerations and evidence may be important to this assessment:

Barriers to Entry and Exclusion of Rivals. The merged firm may benefit more from limiting access to dependent rivals or potential rivals when doing so excludes them from the market, for example by creating a need for the firm to enter at multiple levels and to do so with sufficient scale and scope (multi-level entry).

Prior Transactions or Prior Actions. If firms used prior acquisitions or engaged in prior actions to limit rivals' access to the related product, or other products its rivals use to compete, that suggests that the merged firm has the ability and incentive to do so. However, lack of past action does not necessarily indicate a lack of incentive in the present transaction because the merger can increase the incentive to foreclose.

Internal Documents. Information from business planning and merger analysis documents prepared by the merging firms might identify instances where the firms believe they have the ability and incentive to limit rivals' access. Such documents, where available, are highly probative. The lack of such documents, however, is less informative.

Market Structure. Evidence of market structure can be informative about the availability of substitutes for the related product and the competition in the market for the related product or the relevant market. (See Section 2.5.A.2)

2.5.A.2. Analysis of Industry Factors and Market Structure

The Agencies also sometimes determine, based on an analysis of factors related to market structure, that a merger may substantially lessen competition by allowing the merged firm to limit access to a related product.[29] The Agencies' assessment can include evidence about the structure, history, and probable future of the market.

Structure of the Related Market. In some cases, the market structure of the related product market can give an indication of the merged firm's ability to limit access to the related product. In these cases, the Agencies define a market (termed the "related market") around the related product (see Section 4.3). The Agencies then define the "foreclosure share" as the share of the related market to which the merged firm could limit access. If the share or other evidence show that the merged firm is

[29] *See Brown Shoe*, 370 U.S. at 328-34; *Illumina*, slip op. at 20-22 ("There is no precise formula when it comes to applying these factors. Indeed, the Supreme Court has found a vertical merger unlawful by examining only three of the *Brown Shoe* factors." (cleaned up)); *Fruehauf Corp. v. FTC*, 603 F.2d 345, 353 (2d Cir. 1979); *U.S. Steel Corp. v. FTC*, 426 F.2d 592, 599 (6th Cir. 1970).

approaching or has monopoly power over the related product, and the related product is competitively significant, those factors alone are a sufficient basis to demonstrate that the dependent firms do not have adequate substitutes and the merged firm has the ability to weaken or exclude them by limiting their access to the related product. (See Considerations 1 and 2 in Section 2.5.A.1).[30]

Structure of the Relevant Market. Limiting rivals' access to the related product will generally have a greater effect on competition in the relevant market if the merged firm and the dependent rivals face less competition from other firms. In addition, the merged firm has a greater incentive to limit access to the dependent firms when it competes more closely with them. Market share and concentration measures for the merged firm, the dependent rivals, and the other firms, can sometimes provide evidence about both issues.

Nature and Purpose of the Merger. When the nature and purpose of the merger is to foreclose rivals, including by raising their costs, that suggests the merged firm is likely to foreclose rivals.

Trend Toward Vertical Integration. The Agencies will generally consider evidence about the degree of integration between firms in the relevant and related markets, as well as whether there is a trend toward further vertical integration and how that trend or the factors driving it may affect competition. A trend toward vertical integration may be shown through, for example: a pattern of vertical integration following mergers by one or both of the merging companies; or evidence that a merger was motivated by a desire to avoid having its access limited due to similar transactions among other companies that occurred or may occur in the future.

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If the parties offer rebuttal evidence, the Agencies will assess it under the approach laid out in Section 3.[31] When assessing rebuttal evidence focused on the reduced profits of the merged firm from limiting access from rivals, the Agencies examine whether the reduction in profits would prevent the full range of reasonably probable strategies to limit access. When evaluating whether this rebuttal evidence is sufficient to conclude that no substantial lessening of competition is threatened by the merger, the Agencies will give little weight to claims that are not supported by an objective analysis, including, for example, speculative claims about reputational harms. Moreover, the Agencies are unlikely to credit claims or commitments to protect or otherwise avoid weakening the merged firm's rivals that do not align with the firm's incentives. The Agencies' assessment will be consistent with the principle that firms act to maximize their overall profits and valuation rather than the profits of any particular business

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[30] *See Brown Shoe*, 370 U.S. at 328 ("If the share of the market foreclosed is so large that it approaches monopoly proportions, the Clayton Act will, of course, have been violated . . . ."). The Agencies will generally infer, in the absence of countervailing evidence, that the merging firm has or is approaching monopoly power in the related product if it has a share greater than 50% of the related product market. A merger involving a related product with share of less than 50% may still substantially lessen competition, particularly when that related product is important to its trading partners.

[31] A common rebuttal argument is that the merger would lead to vertical integration of complementary products and as a result, "eliminate double marginalization," since in specific circumstances such a merger can confer on the merged firm an incentive to decrease prices to purchasers. The Agencies examine whether elimination of double marginalization satisfies the approach to evaluating procompetitive efficiencies in Section 3.3, including examining: (a) whether the merged firm will be more vertically integrated as a result of the merger, for example because it increases the extent to which it uses internal production of an input when producing output for the relevant market; (b) whether contracts short of a merger have eliminated or could eliminate double marginalization such that it would not be merger-specific, and (c) whether the merged firm has the incentive to reduce price in the relevant market given that such a reduction would reduce sales by the merged firm's rivals in the relevant market, which would in turn lead to reduced revenue and margin on sales of the related product to the dependent rivals.

unit. A merger may substantially lessen competition or tend to create a monopoly regardless of the claimed intent of the merging companies or their executives. (See Section 4.1)

If the merged firm has the ability and incentive to limit access to the related product and lessen competition in the relevant market, there are many ways it could act on those incentives. The merging parties may put forward evidence that there are no reasonably probable ways in which they could profitably limit access to the related product and thereby make it harder for rivals to compete, or that the merged firm will be more competitive because of the merger.

2.5.B. Mergers Involving Visibility into Rivals' Competitively Sensitive Information

If rivals would continue to access or purchase a related product controlled by the merged firm post-merger, the merger can substantially lessen competition if the merged firm would gain or increase visibility into rivals' competitively sensitive information. This situation could arise in many settings, including, for example, if the merged firm learns about rivals' sales volumes or projections from supplying an input or a complementary product; if it learns about promotion plans and anticipated product improvements or innovations from its role as a distributor; or if it learns about entry plans from discussions with potential rivals about compatibility or interoperability with a complementary product it controls. A merger that gives the merged firm increased visibility into competitively sensitive information could undermine rivals' ability or incentive to compete aggressively or could facilitate coordination.

Undermining Competition. The merged firm might use visibility into a rival's competitively sensitive information to undermine competition from the rival. For example, the merged firm's ability to preempt, appropriate, or otherwise undermine the rival's procompetitive actions can discourage the rival from fully pursuing competitive opportunities. Relatedly, rivals might refrain from doing business with the merged firm rather than risk that the merged firm would use their competitively sensitive business information to undercut them. Those rivals might become less-effective competitors if they must rely on less-preferred trading partners or accept less favorable trading terms because their outside options have worsened or are more limited.

Facilitating Coordination. A merger that provides access to rivals' competitively sensitive information might facilitate coordinated interaction among firms in the relevant market by allowing the merged firm to observe its rivals' competitive strategies faster and more confidently. (See Guideline 3.)

2.5.C. Mergers that Threaten to Limit Rivals' Access and Thereby Create Barriers to Entry and Competition

When a merger gives a firm the ability and incentive to limit rivals' access, or where it gives the merged firm increased visibility into its rivals' competitively sensitive information, the merger may create entry barriers as described above. In addition, the merged firm's rivals might change their behavior because of the risk that the merged firm could limit their access. That is, the risk that the merger will give a firm the ability and incentive to limit rivals' access or will give the merged firm increased visibility into sensitive information can dissuade rivals from entering the market or expanding their operations.

Rivals or potential rivals that face the threat of foreclosure, or the risk of sharing sensitive information with rivals, may reduce investment or adjust their business strategies in ways that lessen competition. Firms may be reluctant to invest in a market if their success is dependent on continued supply from a rival, particularly because the merged firm may become more likely to foreclose its

competitor as that competitor becomes more successful. Firms may use expensive strategies to try to reduce their dependence on the merged firm, weakening the competitiveness of their products and services. Even if the merged firm does not deliberately seek to weaken rivals, rivals or potential rivals may fear that their access will be limited if the merged firm decides to use its own products exclusively. These effects may occur irrespective of the merged firm's incentive to limit access and are greater as the merged firm gains greater control over more important inputs that those rivals use to compete.

2.6. Guideline 6: Mergers Can Violate the Law When They Entrench or Extend a Dominant Position.

The Agencies consider whether a merger may entrench or extend an already dominant position. The effect of such mergers "may be substantially to lessen competition" or "may be . . . to tend to create a monopoly" in violation of Section 7 of the Clayton Act. Indeed, the Supreme Court has explained that a merger involving an "already dominant[] firm may substantially reduce the competitive structure of the industry by raising entry barriers."[32] The Agencies also evaluate whether the merger may extend that dominant position into new markets.[33] Mergers that entrench or extend a dominant position can also violate Section 2 of the Sherman Act.[34] At the same time, the Agencies distinguish anticompetitive entrenchment from growth or development as a consequence of increased competitive capabilities or incentives.[35] The Agencies therefore seek to prevent those mergers that would entrench or extend a dominant position through exclusionary conduct, weakening competitive constraints, or otherwise harming the competitive process.

To undertake this analysis, the Agencies first assess whether one of the merging firms has a dominant position based on direct evidence or market shares showing durable market power. For example, the persistence of market power can indicate that entry barriers exist, that further entrenchment may tend to create a monopoly, and that there would be substantial benefits from the emergence of new competitive constraints or disruptions. The Agencies consider mergers involving dominant firms in the context of evidence about the sources of that dominance, focusing on the extent to which the merger relates to, reinforces, or supplements these sources.

Creating or preserving dominance and the profits it brings can be an important motivation for a firm to undertake an acquisition as well as a driver of the merged firm's behavior after the acquisition. In particular, a firm may be willing to undertake costly short-term strategies in order to increase the chance that it can enjoy the longer-term benefits of dominance. A merger that creates or preserves dominance may also reduce the merged firm's longer-term incentives to improve its products and services.

A merger can result in durable market power and long-term harm to competition even when it initially provides short-term benefits to some market participants. Thus, the Agencies will consider not just the impact of the merger holding fixed factors like product quality and the behavior of other industry participants, but they may also consider the (often longer term) impact of the merger on market

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[32] *FTC v. Procter & Gamble Co.*, 386 U.S. 568, 577-578 (1967); *see, e.g.*, *Fruehauf*, 603 F.2d at 353 (the "entrenchment of a large supplier or purchaser" can be an "essential" showing of a Section 7 violation).
[33] *Ford*, 405 U.S. at 571 (condemning acquisition by dominant firm to obtain a foothold in another market when coupled with incentive to create and maintain barriers to entry into that market).
[34] *See, e.g.*, *United States v. Grinnell Corp.*, 384 U.S. 563 (1966) (acquisitions are among the types of conduct that may violate the Sherman Act).
[35] *See*, *e.g.*, *id.* at 570-71.

power and industry dynamics. Important dynamic competitive effects can arise through the entry, investment, innovation, and terms offered by the merged firm and other industry participants, even when the Agencies cannot predict specific reactions and responses with precision. If the ultimate result of the merger is to protect or preserve dominance by limiting opportunities for rivals, reducing competitive constraints, or preventing competitive disruption, then the Agencies will approach the merger with a heightened degree of scrutiny. The degree of scrutiny and concern will increase in proportion to the strength and durability of the dominant firm's market power.

2.6.A. Entrenching a Dominant Position

Raising Barriers to Entry or Competition. A merger may create or enhance barriers to entry or expansion by rivals that limit the capabilities or competitive incentives of other firms. Barriers to entry can entrench a dominant position even if the nature of future entry is uncertain, if the identities of future entrants are unknown, or if there is more than one mechanism through which the merged firm might create entry barriers. Some examples of ways in which a merger may raise barriers to entry or competition include:

- *Increasing Switching Costs.* The costs associated with changing suppliers (often referred to as switching costs) can be an important barrier to competition. A merger may increase switching costs if it makes it more difficult for customers to switch away from the dominant firm's product or service, or when it gives the dominant firm control of something customers use to switch providers or of something that lowers the overall cost to customers of switching providers. For example, if a dominant firm merges with a complementary product that interoperates with the dominant firm's competitors, it could reduce interoperability, harming competition for customers who value the complement.
- *Interfering With the Use of Competitive Alternatives.* A dominant position may be threatened by a service that customers use to work with multiple providers of similar or overlapping bundles of products and services. If a dominant firm acquires a service that supports the use of multiple providers, it could degrade its utility or availability or could modify the service to steer customers to its own products, entrenching its dominant position. For example, a closed messaging communication service might acquire a product that allowed users to send and receive messages over several competing services through a single user interface, which facilitates competition. The Agencies would examine whether the acquisition would entrench the messaging service's market power by leading the merged firm to degrade the product or otherwise reduce its effectiveness as a cross-service tool, thus reducing competition.
- *Depriving Rivals of Scale Economies or Network Effects.* Scale economies and network effects can serve as a barrier to entry and competition. Depriving rivals of access to scale economies and network effects can therefore entrench a dominant position. If a merger enables a dominant firm to reduce would-be rivals' access to additional scale or customers by acquiring a product that affects access such as a customer acquisition channel, the merged firm can limit the ability of rivals to improve their own products and compete more effectively.[36] Limiting access by rivals to customers in the short run can lead to long run entrenchment of a dominant position and tend to create monopoly power.

[36] The Agencies' focus here is on the artificial acquisition of network participants that occurs directly as a result of the merger, as opposed to future network growth that may occur through competition on the merits.

> For example, if two firms operate in a market in which network effects are significant but in which rivals voluntarily interconnect, their merger can create an entity with a large enough user base that it may have the incentive to end voluntary interconnection. Such a strategy can lessen competition and harm trading partners by creating or entrenching dominance in this market. This can be the case even if the merging firms did not appear to have a dominant position prior to the merger because their interoperability practices strengthened rivals.

Eliminating a Nascent Competitive Threat. A merger may involve a dominant firm acquiring a nascent competitive threat—namely, a firm that could grow into a significant rival, facilitate other rivals' growth, or otherwise lead to a reduction in its power.[37] In some cases, the nascent threat may be a firm that provides a product or service similar to the acquiring firm that does not substantially constrain the acquiring firm at the time of the merger but has the potential to grow into a more significant rival in the future. In other cases, factors such as network effects, scale economies, or switching costs may make it extremely difficult for a new entrant to offer all of the product features or services at comparable quality and terms that an incumbent offers. The most likely successful threats in these situations can be firms that initially avoid directly entering the dominant firm's market, instead specializing in (a) serving a narrow customer segment, (b) offering services that only partially overlap with those of the incumbent, or (c) serving an overlapping customer segment with distinct products or services.

Firms with niche or only partially overlapping products or customers can grow into longer-term threats to a dominant firm. Once established in its niche, a nascent threat may be able to add features or serve additional customer segments, growing into greater overlap of customer segments or features over time, thereby intensifying competition with the dominant firm. A nascent threat may also facilitate customers aggregating additional products and services from multiple providers that serve as a partial alternative to the incumbent's offering. Thus, the success and independence of the nascent threat may both provide for a direct threat of competition by the niche or nascent firm and may facilitate competition or encourage entry by other, potentially complementary providers that may provide a partial competitive constraint. In this way, the nascent threat supports what may be referred to as "ecosystem" competition. In this context, ecosystem competition refers to a situation where an incumbent firm that offers a wide array of products and services may be partially constrained by other combinations of products and services from one or more providers, even if the business model of those competing services is different.

Nascent threats may be particularly likely to emerge during technological transitions. Technological transitions can render existing entry barriers less relevant, temporarily making incumbents susceptible to competitive threats. For example, technological transitions can create temporary opportunities for entrants to differentiate or expand their offerings based on their alignment with new technologies, enabling them to capture network effects that otherwise insulate incumbents from competition. A merger in this context may lessen competition by preventing or delaying any such beneficial shift or by shaping it so that the incumbent retains its dominant position. For example, a dominant firm might seek to acquire firms to help it reinforce or recreate entry barriers so that its dominance endures past the technological transition. Or it might seek to acquire nascent threats that might otherwise gain sufficient customers to overcome entry barriers. In evaluating the potential for entrenching dominance, the Agencies take particular care to preserve opportunities for more competitive markets to emerge during such technological shifts.

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[37] The Agencies assess acquisitions of nascent competitive threats by non-dominant firms under the other Guidelines.

Separate from and in addition to its Section 7 analysis, the Agencies will consider whether the merger violates Section 2 of the Sherman Act. For example, under Section 2 of the Sherman Act, a firm that may challenge a monopolist may be characterized as a "nascent threat" even if the impending threat is uncertain and may take several years to materialize.[38] The Agencies assess whether the merger is reasonably capable of contributing significantly to the preservation of monopoly power in violation of Section 2, which turns on whether the acquired firm is a nascent competitive threat.[39]

2.6.B. Extending a Dominant Position into Another Market

The Agencies also examine the risk that a merger could enable the merged firm to extend a dominant position from one market into a related market, thereby substantially lessening competition or tending to create a monopoly in the related market. For example, the merger might lead the merged firm to leverage its position by tying, bundling, conditioning, or otherwise linking sales of two products. A merger may also raise barriers to entry or competition in the related market, or eliminate a nascent competitive threat, as described above. For example, prior to a merger, a related market may be characterized by scale economies but still experience moderate levels of competition. If the merged firm takes actions to induce customers of the dominant firm's product to also buy the related product from the merged firm, the merged firm may be able to gain dominance in the related market, which may be supported by increased barriers to entry or competition that result from the merger.

These concerns can arise notwithstanding that the acquiring firm already enjoys the benefits associated with its dominant position. The prospect of market power in the related market may strongly affect the merged firm's incentives in a way that does not align with the interests of its trading partners, both in terms of strategies that create dominance for the related product and in the form of reduced incentives to invest in its products or provide attractive terms for them after dominance is attained. In some cases, the merger may also further entrench the firm's original dominant position, for example if future competition requires the provision of both products.

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If the merger raises concerns that its effect may be to entrench or extend a dominant position, then any claim that the merger also provides competitive benefits will be evaluated under the rebuttal framework in Section 3. For example, the framework of Section 3 would be used to evaluate claims that a merger would generate cost savings or quality improvements that would be passed through to make their products more competitive or would otherwise create incentives for the merged firm to offer better terms. The Agencies' analysis will consider the fact that the incentives to pass through benefits to customers or offer attractive terms are affected by competition and the extent to which entry barriers insulate the merged firm from effective competition. It will also consider whether any claimed benefits are specific to the merger, or whether they could be instead achieved through contracting or other means.

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[38] *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) (en banc) (per curiam).

[39] *See id*. at 79 ("[I]t would be inimical to the purpose of the Sherman Act to allow monopolists free reign to squash nascent, albeit unproven, competitors at will. . . .").

2.7. Guideline 7: When an Industry Undergoes a Trend Toward Consolidation, the Agencies Consider Whether It Increases the Risk a Merger May Substantially Lessen Competition or Tend to Create a Monopoly.

The recent history and likely trajectory of an industry can be an important consideration when assessing whether a merger presents a threat to competition. The Supreme Court has explained that "a trend toward concentration in an industry, whatever its causes, is a highly relevant factor in deciding how substantial the anticompetitive effect of a merger may be."[40] It has also underscored that "Congress intended Section 7 to arrest anticompetitive tendencies in their incipiency.[41] The Agencies therefore examine whether a trend toward consolidation in an industry would heighten the competition concerns identified in Guidelines 1-6.

The Agencies therefore closely examine industry consolidation trends in applying the frameworks above. For example:

Trend Toward Concentration. If an industry has gone from having many competitors to becoming concentrated, it may suggest greater risk of harm, for example, because new entry may be less likely to replace or offset the lessening of competition the merger may cause. Among other implications, in the context of a trend toward concentration, the Agencies identify a stronger presumption of harm from undue concentration (see Guideline 1), and a greater risk of substantially lessening competition when a merger eliminates competition between the merging parties (see Guideline 2) or increases the risk of coordination (see Guideline 3).

Trend Toward Vertical Integration. The Agencies will generally consider evidence about the degree of integration between firms in the relevant and related markets and whether there is a trend toward further vertical integration. If a merger occurs amidst or furthers a trend toward vertical integration, the Agencies consider the implications for the competitive dynamics of the industry moving forward. For example, a trend toward vertical integration could magnify the concerns discussed in Guideline 5 by making entry at a single level more difficult and thereby preventing the emergence of new competitive threats over time.

Arms Race for Bargaining Leverage. The Agencies sometimes encounter mergers through which the merging parties would, by consolidating, gain bargaining leverage over other firms that they transact with. This can encourage those other firms to consolidate to obtain countervailing leverage, encouraging a cascade of further consolidation. This can ultimately lead to an industry where a few powerful firms have leverage against one another and market power over would-be entrants or over trading partners in various parts of the value chain. For example, distributors might merge to gain leverage against suppliers, who then merge to gain leverage against distributors, spurring a wave of mergers that lessen competition by increasing the market power of both. This can exacerbate the problems discussed in Guidelines 1-6, including by increasing barriers to single-level entry, encouraging coordination, and discouraging disruptive innovation.

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[40] *United States v. Pabst Brewing*, 384 U.S. 546, 552-53 (1966).
[41] *Phila. Nat'l Bank*, 374 U.S. at 362 (quoting *Brown Shoe*, 370 U.S. at 317).

***Multiple Mergers*.** The Agencies sometimes see multiple mergers at once or in succession by different players in the same industry. In such cases, the Agencies may examine multiple deals in light of the combined trend toward concentration.

2.8. Guideline 8: When a Merger is Part of a Series of Multiple Acquisitions, the Agencies May Examine the Whole Series.

A firm that engages in an anticompetitive pattern or strategy of multiple acquisitions in the same or related business lines may violate Section 7.[42] In these situations, the Agencies may evaluate the series of acquisitions as part of an industry trend (see Guideline 7) or evaluate the overall pattern or strategy of serial acquisitions by the acquiring firm collectively under Guidelines 1-6.

In expanding antitrust law beyond the Sherman Act through passage of the Clayton Act, Congress intended "to permit intervention in a cumulative process when the effect of an acquisition may be a significant reduction in the vigor of competition, even though this effect may not be so far-reaching as to amount to a combination in restraint of trade, create a monopoly, or constitute an attempt to monopolize."[43] As the Supreme Court has recognized, a cumulative series of mergers can "convert an industry from one of intense competition among many enterprises to one in which three or four large [companies] produce the entire supply."[44] Accordingly, the Agencies will consider individual acquisitions in light of the cumulative effect of related patterns or business strategies.

The Agencies may examine a pattern or strategy of growth through acquisition by examining both the firm's history and current or future strategic incentives. Historical evidence focuses on the strategic approach taken by the firm to acquisitions (consummated or not), both in the markets at issue and in other markets, to reveal any overall strategic approach to serial acquisitions. Evidence of the firm's current incentives includes documents and testimony reflecting its plans and strategic incentives both for the individual acquisition and for its position in the industry more broadly. Where one or both of the merging parties has engaged in a pattern or strategy of pursuing consolidation through acquisition, the Agencies will examine the impact of the cumulative strategy under any of the other Guidelines to determine if that strategy may substantially lessen competition or tend to create a monopoly.

2.9. Guideline 9: When a Merger Involves a Multi-Sided Platform, the Agencies Examine Competition Between Platforms, on a Platform, or to Displace a Platform.

Platforms provide different products or services to two or more different groups or "sides" who may benefit from each other's participation. Mergers involving platforms can threaten competition, even when a platform merges with a firm that is neither a direct competitor nor in a traditional vertical relationship with the platform. When evaluating a merger involving a platform, the Agencies apply Guidelines 1-6 while accounting for market realities associated with platform competition. Specifically,

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[42] Such strategies may also violate Section 2 of the Sherman Act and Section 5 of the FTC Act. Fed. Trade Comm'n, *Policy Statement Regarding the Scope of Unfair Methods of Competition Under Section 5 of the Federal Trade Commission Act*, at 12-14 & nn.73 & 82 (Nov. 10, 2022) (noting that "a series of . . . acquisitions . . . that tend to bring about the harms that the antitrust laws were designed to prevent" has been subject to liability under Section 5).
[43] H.R. Rep. No. 81-1191, at 8 (1949).
[44] *See Brown Shoe*, 370 U.S. at 334 (citing S. Rep. No. 81-1775, at 5 (1950); H.R. Rep. No. 81-1191, at 8 (1949)).

the Agencies consider competition *between* platforms, competition *on* a platform, and competition to *displace* the platform.

Multi-sided platforms generally have several attributes in common, though they can also vary in important ways. Some of these attributes include:

- Platforms have multiple sides. On each side of a platform, platform participants provide or use distinct products and services.[45] Participants can provide or use different types of products or services on each side.

- A platform operator provides the core services that enable the platform to connect participant groups across multiple sides. The platform operator controls other participants' access to the platform and can influence how interactions among platform participants play out.

- Each side of a platform includes platform participants. Their participation might be as simple as using the platform to find other participants, or as involved as building platform services that enable other participants to connect in new ways and allow new participants to join the platform.

- Network effects occur when platform participants contribute to the value of the platform for other participants and the operator. The value for groups of participants on one side may depend on the number of participants either on the same side (direct network effects) or on the other side(s) (indirect network effects).[46] Network effects can create a tendency toward concentration in platform industries. Indirect network effects can be asymmetric and heterogeneous; for example, one side of the market or segment of participants may place relatively greater value on the other side(s).

- A conflict of interest can arise when a platform operator is also a platform participant. The Agencies refer to a "conflict of interest" as the divergence that can arise between the operator's incentives to operate the platform as a forum for competition and its incentive to operate as a competitor on the platform itself. As discussed below, a conflict of interest sometimes exacerbates competitive concerns from mergers.

Consistent with the Clayton Act's protection of competition "in any line of commerce," the Agencies will seek to prohibit a merger that harms competition within a relevant market for any product or service offered on a platform to any group of participants—i.e., around one side of the platform (see Section 4.3).[47]

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[45] For example, on 1990s operating-system platforms for personal computer (PC) software, software developers were on one side, PC manufacturers on another, and software purchasers on another.

[46] For example, 1990s PC manufacturers, software developers, and consumers all contributed to the value of the operating system platform for one another.

[47] In the limited scenario of a "special type of two-sided platform known as a 'transaction' platform," under Section 1 of the Sherman Act, a relevant market encompassing both sides of a two-sided platform may be warranted. *Ohio v. American Express Co.*, 138 S. Ct. 2274, 2280 (2018). This approach to Section 1 of the Sherman Act is limited to platforms with the "key feature . . . that they cannot make a sale to one side of the platform without simultaneously making a sale to the other." *Id.* Because "they cannot sell transaction services to [either user group] individually . . . transaction platforms are better understood as supplying only one product—transactions." *Id.* at 2286. This characteristic is not present for many types of two-sided or multi-sided platforms; in addition, many platforms offer simultaneous transactions as well as other products and services, and further they may bundle these products with access to transact on the platform or offer quantity discounts.

The Agencies protect competition *between* platforms by preventing the acquisition or exclusion of other platform operators that may substantially lessen competition or tend to create a monopoly. This scenario can arise from various types of mergers:

A. Mergers involving two platform operators eliminate the competition between them. In a market with a platform, entry or growth by smaller competing platforms can be particularly challenging because of network effects. A common strategy for smaller platforms is to specialize, providing distinctive features. Thus, dominant platforms can lessen competition and entrench their position by systematically acquiring firms competing with one or more sides of a multi-sided platform while they are in their infancy. The Agencies seek to stop these trends in their incipiency.

B. A platform operator may acquire a platform participant, which can entrench the operator's position by depriving rivals of participants and, in turn, depriving them of network effects. For example, acquiring a major seller on a platform may make it harder for rival platforms to recruit buyers. The long-run benefits to a platform operator of denying network effects to rival platforms create a powerful incentive to withhold or degrade those rivals' access to platform participants that the operator acquires. The more powerful the platform operator, the greater the threat to competition presented by mergers that may weaken rival operators or increase barriers to entry and expansion.

C. Acquisitions of firms that provide services that facilitate participation on multiple platforms can deprive rivals of platform participants. Many services can facilitate such participation, such as tools that help shoppers compare prices across platforms, applications that help sellers manage listings on multiple platforms, or software that helps users switch among platforms.

D. Mergers that involve firms that provide other important inputs to platform services can enable the platform operator to deny rivals the benefits of those inputs. For example, acquiring data that helps facilitate matching, sorting, or prediction services may enable the platform to weaken rival platforms by denying them that data.

The Agencies protect competition *on* a platform in any markets that interact with the platform. When a merger involves a platform operator and platform participants, the Agencies carefully examine whether the merger would create conflicts of interest that would harm competition. A platform operator that is also a platform participant may have a conflict of interest whereby it has an incentive to give its own products and services an advantage over other participants competing on the platform. Platform operators must often choose between making it easy for users to access their preferred products and directing those users to products that instead provide greater benefit to the platform operator. Merging with a firm that makes a product offered on the platform may change how the platform operator balances these competing interests. For example, the platform operator may find it is more profitable to give its own product greater prominence even if that product is inferior or is offered on worse terms after the merger—and even if some participants leave the platform as a result.[48] This can harm competition in

[48] However, few participants will leave if, for example, the switching costs are relatively high or if the advantaged product is a small component of the overall set of services those participants access on the platform. Moreover, in the long run few participants will leave if scale economies, network effects, or entry barriers enable the advantaged product to eventually gain market power of its own, with rivals of the advantaged product exiting or becoming less attractive. After these dynamics play

the product market for the advantaged product, where the harm to competition may be experienced both on the platform and in other channels.

The Agencies protect competition to *displace* the platform or any of its services. For example, new technologies or services may create an important opportunity for firms to replace one or more services the incumbent platform operator provides, shifting some participants to partially or fully meet their needs in different ways or through different channels. Similarly, a non-platform service can lessen dependence on the platform by providing an alternative to one or more functions provided by the platform operators. When platform owners are dominant, the Agencies seek to prevent even relatively small accretions of power from inhibiting the prospects for displacing the platform or for decreasing dependency on the platform.

In addition, a platform operator that advantages its own products that compete *on* the platform can lessen competition *between* platforms and to *displace* the platform, as the operator may both advantage its own product or service, and also deprive rival platforms of access to it, limiting those rivals' network effects.

2.10. Guideline 10: When a Merger Involves Competing Buyers, the Agencies Examine Whether It May Substantially Lessen Competition for Workers, Creators, Suppliers, or Other Providers.

A merger between competing buyers may harm sellers just as a merger between competing sellers may harm buyers.[49] The same—or analogous—tools used to assess the effects of a merger of sellers can be used to analyze the effects of a merger of buyers, including employers as buyers of labor. Firms can compete to attract contributions from a wide variety of workers, creators, suppliers, and service providers. The Agencies protect this competition in all its forms.

A merger of competing buyers can substantially lessen competition by eliminating the competition between the merging buyers or by increasing coordination among the remaining buyers. It can likewise lead to undue concentration among buyers or entrench or extend the position of a dominant buyer. Competition among buyers can have a variety of beneficial effects analogous to competition among sellers. For example, buyers may compete by raising the payments offered to suppliers, by expanding supply networks, through transparent and predictable contracting, procurement, and payment practices, or by investing in technology that reduces frictions for suppliers. In contrast, a reduction in competition among buyers can lead to artificially suppressed input prices or purchase volume, which in turn reduces incentives for suppliers to invest in capacity or innovation. Labor markets are important buyer markets. The same general concerns as in other markets apply to labor markets where employers are the buyers of labor and workers are the sellers. The Agencies will consider whether workers face a risk that the merger may substantially lessen competition for their labor.[50] Where a merger between

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out, the platform operator could advantage its own products without losing as many participants, as there would be fewer alternative products available through other channels.

[49] *See, e.g.*, *Mandeville Island Farms, Inc. v. Am. Crystal Sugar Co.*, 334 U.S. 219, 235-36 (1948) ("The [Sherman Act] does not confine its protection to consumers, or to purchasers, or to competitors, or to sellers. . . . The Act is comprehensive in its terms and coverage, protecting all who are made victims of the forbidden practices by whomever they may be perpetrated.").

[50] *See, e.g.*, *Alston*, 141 S. Ct. 2141 (applying the Sherman Act to protect workers from an employer-side agreement to limit compensation).

employers may substantially lessen competition for workers, that reduction in labor market competition may lower wages or slow wage growth, worsen benefits or working conditions, or result in other degradations of workplace quality.[51] When assessing the degree to which the merging firms compete for labor, evidence that a merger may have any one or more of these effects can demonstrate that substantial competition exists between the merging firms.

Labor markets frequently have characteristics that can exacerbate the competitive effects of a merger between competing employers. For example, labor markets often exhibit high switching costs and search frictions due to the process of finding, applying, interviewing for, and acclimating to a new job. Switching costs can also arise from investments specific to a type of job or a particular geographic location. Moreover, the individual needs of workers may limit the geographical and work scope of the jobs that are competitive substitutes.

In addition, finding a job requires the worker and the employer to agree to the match. Even within a given salary and skill range, employers often have specific demands for the experience, skills, availability, and other attributes they desire in their employees. At the same time, workers may seek not only a paycheck but also work that they value in a workplace that matches their own preferences, as different workers may value the same aspects of a job differently. This matching process often narrows the range of rivals competing for any given employee. The level of concentration at which competition concerns arise may be lower in labor markets than in product markets, given the unique features of certain labor markets. In light of their characteristics, labor markets can be relatively narrow.

The features of labor markets may in some cases put firms in dominant positions. To assess this dominance in labor markets (see Guideline 6), the Agencies often examine the merging firms' power to cut or freeze wages, slow wage growth, exercise increased leverage in negotiations with workers, or generally degrade benefits and working conditions without prompting workers to quit.

If the merger may substantially lessen competition or tend to create a monopoly in upstream markets, that loss of competition is not offset by purported benefits in a separate downstream product market. Because the Clayton Act prohibits mergers that may substantially lessen competition or tend to create a monopoly in *any* line of commerce and in *any* section of the country, a merger's harm to competition among buyers is not saved by benefits to competition among sellers. That is, a merger can substantially lessen competition in one or more buyer markets, seller markets, or both, and the Clayton Act protects competition in any one of them.[52] If the parties claim any benefits to competition in a relevant buyer market, the Agencies will assess those claims using the frameworks in Section 3.

Just as they do when analyzing competition in the markets for products and services, the Agencies will analyze labor market competition on a case-by-case basis.

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[51] A decrease in wages is understood as relative to what would have occurred in the absence of the transaction; in many cases, a transaction will not reduce wage levels, but rather slow wage growth. Wages encompass all aspects of pecuniary compensation, including benefits. Job quality encompasses non-pecuniary aspects that workers value, such as working conditions and terms of employment.

[52] Often, mergers that harm competition among buyers also harm competition among sellers as a result. For example, when a monopsonist lowers purchase prices by decreasing input purchases, they will generally decrease sales in downstream markets as well. (See Section 4.2.D)

2.11. Guideline 11: When an Acquisition Involves Partial Ownership or Minority Interests, the Agencies Examine Its Impact on Competition.

In many acquisitions, two companies come under common control. In some situations, however, the acquisition of less-than-full control may still influence decision-making at the target firm or another firm in ways that may substantially lessen competition. Acquisitions of partial ownership or other minority interests may give the investor rights in the target firm, such as rights to appoint board members, observe board meetings, influence the firm's ability to raise capital, impact operational decisions, or access competitively sensitive information. The Agencies have concerns with both cross-ownership, which refers to holding a non-controlling interest in a competitor, as well as common ownership, which occurs when individual investors hold non-controlling interests in firms that have a competitive relationship that could be affected by those joint holdings.

Partial acquisitions that do not result in control may nevertheless present significant competitive concerns. The acquisition of a minority position may permit influence of the target firm, implicate strategic decisions of the acquirer with respect to its investment in other firms, or change incentives so as to otherwise dampen competition. The post-acquisition relationship between the parties and the independent incentives of the parties outside the acquisition may be important in determining whether the partial acquisition may substantially lessen competition. Such partial acquisitions are subject to the same legal standard as any other acquisition.[53]

The Agencies recognize that cross-ownership and common ownership can reduce competition by softening firms' incentives to compete, even absent any specific anticompetitive act or intent. While the Agencies will consider any way in which a partial acquisition may affect competition, they generally focus on three principal effects:

First, a partial acquisition can lessen competition by giving the partial owner the ability to influence the competitive conduct of the target firm.[54] For example, a voting interest in the target firm or specific governance rights, such as the right to appoint members to the board of directors, influence capital budgets, determine investment return thresholds, or select particular managers, can create such influence. Additionally, a nonvoting interest may, in some instances, provide opportunities to prevent, delay, or discourage important competitive initiatives, or otherwise impact competitive decision making. Such influence can lessen competition because the partial owner could use its influence to induce the target firm to compete less aggressively or to coordinate its conduct with that of the acquiring firm.

Second, a partial acquisition can lessen competition by reducing the incentive of the acquiring firm to compete.[55] Acquiring a minority position in a rival might blunt the incentive of the partial owner to compete aggressively because it may profit through dividend or other revenue share even when it loses business to the rival. For example, the partial owner may decide not to develop a new product feature to win market share from the firm in which it has acquired an interest, because doing so will

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[53] *See United States v. E. I. du Pont de Nemours & Co.*, 353 U.S. 586, 592 (1957) ("[A]ny acquisition by one corporation of all or any part of the stock of another corporation, competitor or not, is within the reach of [Section 7 of the Clayton Act] whenever the reasonable likelihood appears that the acquisition will result in a restraint of commerce or in the creation of a monopoly of any line of commerce.").

[54] *See United States v. Dairy Farmers of Am., Inc.*, 426 F.3d 850, 860-61 (6th Cir. 2005).

[55] *See Denver & Rio Grande v. United States*, 387 U.S. 485, 504 (1967) (identifying Section 7 concerns with a 20% investment).

reduce the value of its investment in its rival. This reduction in the incentive of the acquiring firm to compete arises even when it cannot directly influence the conduct or decision making of the target firm.

Third, a partial acquisition can lessen competition by giving the acquiring firm access to non-public, competitively sensitive information from the target firm. Even absent any ability to influence the conduct of the target firm, access to competitively sensitive information can substantially lessen competition through other mechanisms. For example, it can enhance the ability of the target and the partial owner to coordinate their behavior and make other accommodating responses faster and more targeted. The risk of coordinated effects is greater if the transaction also facilitates the flow of competitively sensitive information from the investor to the target firm. Even if coordination does not occur, the partial owner may use that information to preempt or appropriate a rival's competitive business strategies for its own benefit. If rivals know their efforts to win trading partners can be immediately appropriated, they may see less value in taking competitive actions in the first place, resulting in a lessening of competition.

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The analyses above address common scenarios that the Agencies use to assess the risk that a merger may substantially lessen competition or tend to create a monopoly. However, they are not exhaustive. The Agencies have in the past encountered mergers that lessen competition through mechanisms not covered above. For example:

A. A merger that would enable firms to avoid a regulatory constraint because that constraint was applicable to only one of the merging firms;

B. A merger that would enable firms to exploit a unique procurement process that favors the bids of a particular competitor who would be acquired in the merger; or

C. In a concentrated market, a merger that would dampen the acquired firm's incentive or ability to compete due to the structure of the acquisition or the acquirer.

As these scenarios and these Guidelines indicate, a wide range of evidence can show that a merger may lessen competition or tend to create a monopoly. Whatever the sources of evidence, the Agencies look to the facts and the law in each case.

Whatever frameworks the Agencies use to identify that a merger may substantially lessen competition or tend to create a monopoly, they also examine rebuttal evidence under the framework in Section 3.

3. Rebuttal Evidence Showing that No Substantial Lessening of Competition is Threatened by the Merger

The Agencies may assess whether a merger may substantially lessen competition or tend to create a monopoly based on a fact-specific analysis under any one or more of the Guidelines discussed above.[56] The Supreme Court has determined that analysis should consider "other pertinent factors" that may "mandate[] a conclusion that no substantial lessening of competition [is] threatened by the acquisition."[57] The factors pertinent to rebuttal depend on the nature of the threat to competition or tendency to create a monopoly resulting from the merger.

Several common types of rebuttal and defense evidence are subject to legal tests established by the courts. The Agencies apply those tests consistent with prevailing law, as described below.

3.1. Failing Firms

When merging parties suggest the weak or weakening financial position of one of the merging parties will prevent a lessening of competition, the Agencies examine that evidence under the "failing firm" defense established by the Supreme Court. This defense applies when the assets to be acquired would imminently cease playing a competitive role in the market even absent the merger.

As set forth by the Supreme Court, the failing firm defense has three requirements:

A. "[T]he evidence show[s] that the [failing firm] face[s] the grave probability of a business failure."[58] The Agencies typically look for evidence in support of this element that the allegedly failing firm would be unable to meet its financial obligations in the near future. Declining sales and/or net losses, standing alone, are insufficient to show this requirement.

B. "The prospects of reorganization of [the failing firm are] dim or nonexistent."[59] The Agencies typically look for evidence suggesting that the failing firm would be unable to reorganize successfully under Chapter 11 of the Bankruptcy Act, taking into account that "companies reorganized through receivership, or through [the Bankruptcy Act] often emerge[] as strong competitive companies."[60] Evidence of the firm's actual attempts to resolve its debt with creditors is important.

C. "[T]he company that acquires the failing [firm] or brings it under dominion is the only available purchaser."[61] The Agencies typically look for evidence that a company has made unsuccessful good-faith efforts to elicit reasonable alternative offers that pose a less severe danger to competition than does the proposed merger.[62]

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[56] *See United States v. AT&T, Inc.*, 916 F.3d at 1032.

[57] *See United States v. Gen. Dynamics Corp.*, 415 U.S. 486, 498 (1974); *Baker Hughes*, 908 F.2d at 990 (quoting *General Dynamics* and describing its holding as permitting rebuttal based on a "finding that 'no substantial lessening of competition occurred or was threatened by the acquisition'").

[58] *Citizen Publ'g Co. v. United States*, 394 U.S. 131, 138 (1969).

[59] *Id*.

[60] *Id*.

[61] *Id.* at 136-39 (quoting *Int'l Shoe Co. v. FTC*, 280 U.S. 291, 302 (1930)).

[62] Any offer to purchase the assets of the failing firm for a price above the liquidation value of those assets will be regarded as a reasonable alternative offer. Parties must solicit reasonable alternative offers before claiming that the business is failing.

Although merging parties sometimes argue that a poor or weakening position should serve as a defense even when it does not meet these elements, the Supreme Court has "confine[d] the failing company doctrine to its present narrow scope."[63] The Agencies evaluate evidence of a failing firm consistent with this prevailing law.[64]

3.2. Entry and Repositioning

Merging parties sometimes raise a rebuttal argument that a reduction in competition resulting from the merger would induce entry or repositioning[65] into the relevant market, preventing the merger from substantially lessening competition or tending to create a monopoly in the first place. This argument posits that a merger may, by substantially lessening competition, make the market more profitable for the merged firm and any remaining competitors, and that this increased profitability may induce new entry. To evaluate this rebuttal evidence, the Agencies assess whether entry induced by the merger would be "timely, likely, and sufficient in its magnitude, character, and scope to deter or counteract the competitive effects of concern."[66]

Timeliness. To show that no substantial lessening of competition is threatened by a merger, entry must be rapid enough to replace lost competition before any effect from the loss of competition due to the merger may occur. Entry in most industries takes a significant amount of time and is therefore insufficient to counteract any substantial lessening of competition that is threatened by a merger. Moreover, the entry must be durable: an entrant that does not plan to sustain its investment or that may exit the market would not ensure long-term preservation of competition.

Likelihood. Entry induced by lost competition must be so likely that no substantial lessening of competition is threatened by the merger. Firms make entry decisions based on the market conditions they expect once they participate in the market. If the new entry is sufficient to counteract the merger's effect on competition, the Agencies analyze why the merger would induce entry that was not planned in pre-merger competitive conditions.

The Agencies also assess whether the merger may increase entry barriers. For example, the merging firms may have a greater ability to discourage or block new entry when combined than they would have as separate firms. Mergers may enable or incentivize unilateral or coordinated exclusionary

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Liquidation value is the highest value the assets could command outside the market. If a reasonable alternative offer was rejected, the parties cannot claim that the business is failing.

[63] *Citizen Publ'g*, 394 U.S. at 139.

[64] The Agencies do not normally credit claims that the assets of a division would exit the relevant market in the near future unless: (1) applying cost allocation rules that reflect true economic costs, the division has a persistently negative cash flow on an operating basis, and such negative cash flow is not economically justified for the firm by benefits such as added sales in complementary markets or enhanced customer goodwill; and (2) the owner of the failing division has made unsuccessful good-faith efforts to elicit reasonable alternative offers that would keep its assets in the relevant market and pose a less severe danger to competition than does the proposed acquisition. Because firms can allocate costs, revenues, and intra-company transactions among their subsidiaries and divisions, the Agencies require evidence that is not solely based on management plans that could have been prepared for the purpose of demonstrating negative cash flow or the prospect of exit from the relevant market.

[65] Repositioning is a supply-side response that is evaluated like entry. If repositioning requires movement of assets from other markets, the Agencies will consider the costs and competitive effects of doing so. Repositioning that would reduce competition in the markets from which products or services are moved is not a cognizable rebuttal for a lessening of competition in the relevant market.

[66] *FTC v. Sanford Health*, 926 F.3d 959, 965 (8th Cir. 2019).

strategies that make entry more difficult. Entry can be particularly challenging when a firm must enter at multiple levels of the market at sufficient scale to compete effectively.

Sufficiency. Even where timely and likely, the prospect of entry may not effectively prevent a merger from threatening a substantial lessening of competition. Entry may be insufficient due to a wide variety of constraints that limit an entrant's effectiveness as a competitor. Entry must at least replicate the scale, strength, and durability of one of the merging parties to be considered sufficient. The Agencies typically do not credit entry that depends on lessening competition in other markets.

As part of their analysis, the Agencies will consider the economic realities at play. For example, lack of successful entry in the past will likely suggest that entry may be slow or difficult. Recent examples of entry, whether successful or unsuccessful, provide the starting point for identifying the elements of practical entry barriers and the features of the industry that facilitate or interfere with entry. The Agencies will also consider whether the parties' entry arguments are consistent with the rationale for the merger or imply that the merger itself would be unprofitable.

3.3. Procompetitive Efficiencies

The Supreme Court has held that "possible economies [from a merger] cannot be used as a defense to illegality."[67] Competition usually spurs firms to achieve efficiencies internally, and firms also often work together using contracts short of a merger to combine complementary assets without the full anticompetitive consequences of a merger.

Merging parties sometimes raise a rebuttal argument that, notwithstanding other evidence that competition may be lessened, evidence of procompetitive efficiencies shows that no substantial lessening of competition is in fact threatened by the merger. This argument asserts that the merger would not substantially lessen competition in any relevant market in the first place.[68] When assessing this argument, the Agencies will not credit vague or speculative claims, nor will they credit benefits outside the relevant market that would not prevent a lessening of competition in the relevant market. Rather, the Agencies examine whether the evidence[69] presented by the merging parties shows each of the following:

Merger Specificity. The merger will produce substantial competitive benefits that could not be achieved without the merger under review.[70] Alternative ways of achieving the claimed benefits are considered in making this determination. Alternative arrangements could include organic growth of one of the merging firms, contracts between them, mergers with others, or a partial merger involving only those assets that give rise to the procompetitive efficiencies.

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[67] *Phila. Nat'l Bank*, 374 U.S. at 371; *Procter & Gamble Co.*, 386 U.S. at 580 ("Congress was aware that some mergers which lessen competition may also result in economies but it struck the balance in favor of protecting competition.").

[68] *United States v. Anthem*, 855 F.3d 345, 353-55 (D.C. Cir. 2017) (although efficiencies not a "defense" to antitrust liability, evidence sometimes used "to rebut a prima facie case"); *Saint Alphonsus Medical Center-Nampa*, 778 F.3d at 791 ("The Clayton Act focuses on competition, and the claimed efficiencies therefore must show that the prediction of anticompetitive effects from the prima facie case is inaccurate.").

[69] In general, evidence related to efficiencies developed prior to the merger challenge is much more probative than evidence developed during the Agencies' investigation or litigation.

[70] If inter-firm collaborations are achievable by contract, they are not merger specific. The Agencies will credit the merger specificity of efficiencies only in the presence of evidence that a contract to achieve the asserted efficiencies would not be practical. *See Anthem*, 855 F.3d at 357.

Verifiability. These benefits are verifiable, and have been verified, using reliable methodology and evidence not dependent on the subjective predictions of the merging parties or their agents. Procompetitive efficiencies are often speculative and difficult to verify and quantify, and efficiencies projected by the merging firms often are not realized. If reliable methodology for verifying efficiencies does not exist or is otherwise not presented by the merging parties, the Agencies are unable to credit those efficiencies.

Prevents a Reduction in Competition. To the extent efficiencies merely benefit the merging firms, they are not cognizable. The merging parties must demonstrate through credible evidence that, within a short period of time, the benefits will prevent the risk of a substantial lessening of competition in the relevant market.

Not Anticompetitive. Any benefits claimed by the merging parties are cognizable only if they do not result from the anticompetitive worsening of terms for the merged firm's trading partners.[71]

Procompetitive efficiencies that satisfy each of these criteria are called cognizable efficiencies. To successfully rebut evidence that a merger may substantially lessen competition, cognizable efficiencies must be of a nature, magnitude, and likelihood that no substantial lessening of competition is threatened by the merger in any relevant market. Cognizable efficiencies that would not prevent the creation of a monopoly cannot justify a merger that may tend to create a monopoly.

[71] The Agencies will not credit efficiencies if they reflect or require a decrease in competition in a separate market. For example, if input costs are expected to decrease, the cost savings will not be treated as an efficiency if they reflect an increase in monopsony power.

4. Analytical, Economic, and Evidentiary Tools

The analytical, economic, and evidentiary tools that follow can be applicable to many parts of the Agencies' evaluation of a merger as they apply the factors and frameworks discussed in Sections 2 and 3.

4.1. Sources of Evidence

This subsection describes the most common sources of evidence the Agencies draw on in a merger investigation. The evidence the Agencies rely upon to evaluate whether a merger *may* substantially lessen competition or tend to create a monopoly is weighed based on its probative value. In assessing the available evidence, the Agencies consider documents, testimony, available data, and analysis of those data, including credible econometric analysis and economic modeling.

Merging Parties. The Agencies often obtain substantial information from the merging parties, including documents, testimony, and data. Across all of these categories, evidence created in the normal course of business is more probative than evidence created after the company began anticipating a merger review. Similarly, the Agencies give less weight to predictions by the parties or their employees, whether in the ordinary course of business or in anticipation of litigation, offered to allay competition concerns. Where the testimony of outcome-interested merging party employees contradicts ordinary course business records, the Agencies typically give greater weight to the business records.

Evidence that the merging parties intend or expect the merger to lessen competition, such as plans to coordinate with other firms, raise prices, reduce output or capacity, reduce product quality or variety, lower wages, cut benefits, exit a market, cancel plans to enter a market without a merger, withdraw products or delay their introduction, or curtail research and development efforts after the merger, can be highly informative in evaluating the effects of a merger on competition. The Agencies give little weight, however, to the lack of such evidence or the expressed contrary intent of the merging parties.

Customers, Workers, Industry Participants, and Observers. Customers can provide a variety of information to the Agencies, ranging from information about their own purchasing behavior and choices to their views about the effects of the merger itself. The Agencies consider the relationship between customers and the merging parties in weighing customer evidence. The ongoing business relationship between a customer and a merging party may discourage the customer from providing evidence inconsistent with the interests of the merging parties.

Workers and representatives from labor organizations can provide information regarding, among other things, wages, non-wage compensation, working conditions, the individualized needs of workers in the market in question, the frictions involved in changing jobs, and the industry in which they work.

Similarly, other suppliers, indirect customers, distributors, consultants, and industry analysts can also provide information helpful to a merger inquiry. As with other interested parties, the Agencies give less weight to evidence created in anticipation of a merger investigation and more weight to evidence developed in the ordinary course of business.

Market Effects in Consummated Mergers. Evidence of observed post-merger price increases or worsened terms is given substantial weight. A consummated merger, however, may substantially lessen competition even if such effects have not yet been observed, perhaps because the merged firm may be aware of the possibility of post-merger antitrust review and is therefore moderating its conduct.

Consequently, in evaluating consummated mergers, the Agencies also consider the same types of evidence when evaluating proposed mergers.

***Econometric Analysis and Economic Modeling*.** Econometric analysis of data and other types of economic modeling can be informative in evaluating the potential effects of a merger on competition. The Agencies give more weight to analysis using high quality data and adhering to rigorous standards. But the Agencies also take into account that in some cases, the availability or quality of data or reliable modeling techniques might limit the availability and relevance of econometric modeling. When data is available, the Agencies recognize that the goal of economic modeling is not to create a perfect representation of reality, but rather to inform an assessment of the likely change in firm incentives resulting from a merger.

Transaction Terms. The financial terms of the transaction may also be informative regarding a merger's impact on competition. For example, a purchase price that exceeds the acquired firm's stand-alone market value can sometimes indicate that the acquiring firm is paying a premium because it expects to be able to benefit from reduced competition.

4.2. Evaluating Competition Among Firms

This subsection discusses evidence and tools the Agencies look to when assessing competition among firms. The evidence and tools in this section can be relevant to a variety of settings, for example: to assess competition between rival firms (Guideline 2); the ability and incentive to limit access to a product rivals use to compete (Guideline 5); or for market definition (Section 4.3), for example when carrying out the Hypothetical Monopolist Test (Section 4.3.A).

For clarity, the discussion in this subsection often focuses on competition between two suppliers of substitute products that set prices. Analogous analytic tools may also be relevant in more general settings, for example when considering: competition among more than two suppliers; competition among buyers or employers to procure inputs and labor; competition that derives from customer willingness to buy in different locations; and competition that takes place in dimensions other than price or when terms are determined through, for example, negotiations or auctions.

Guideline 2 describes how different types of evidence can be used in assessing the potential harm to competition from a merger; some portions of Guideline 2 that are relevant in other settings are repeated below.

4.2.A. Generally Applicable Considerations

The Agencies may consider one or more of the following types of evidence, tools, and metrics when assessing the degree of competition among firms:

***Strategic Deliberations or Decisions*.** The Agencies may analyze the extent of competition among firms, for example between the merging firms, by examining evidence of their strategic deliberations or decisions in the regular course of business. For example, in some markets, the firms may monitor each other's pricing, marketing campaigns, facility locations, improvements, products, capacity, output, input costs, and/or innovation plans. This can provide evidence of competition between the merging firms, especially when they react by taking steps to preserve or enhance the competitiveness or profitability of their own products or services.

Prior Merger, Entry, and Exit Events. The Agencies may look to historical events to assess the presence and substantiality of direct competition between the merging firms. For example, the Agencies may examine the impact of recent relevant mergers, entry, expansion, or exit events on the merging parties or their competitive behavior.

Customer Substitution. Customers' willingness to switch between different firms' products is an important part of the competitive process. Firms are closer competitors the more that customers are willing to switch between their products, for example because they are more similar in quality, price, or other characteristics.

Evidence commonly analyzed to show the extent of substitution among firms' products includes: how customers have shifted purchases in the past in response to relative changes in price or other terms and conditions; documentary and testimonial evidence such as win/loss reports, evidence from discount approval processes, switching data, customer surveys, as well as information from suppliers of complementary products and distributors; objective information about product characteristics; and market realities affecting the ability of customers to switch.

Impact of Competitive Actions on Rivals. When one firm takes competitive actions to attract customers, this can benefit the firm at the expense of its rivals. The Agencies may gauge the extent of competition among firms by considering the impact that competitive actions by one firm have on the others. The impact of a firm's competitive actions on a rival generally depends on how many sales a rival would lose as a result of the competitive actions, as well as the profitability of those lost sales. The Agencies may use margins to measure the profitability of the sale a rival would have made.[72]

Impact of Eliminating Competition Between the Firms. In some instances, evidence may be available to assess the impact of competition from one or more firms on the other firms' actions, such as firm choices about price, quality, wages, or another dimension of competition. This can be gauged by comparing the two firms' actions when they compete and make strategic choices independently against the actions the firms might choose if they acted jointly. Actual or predicted changes in these results of competition, when available, can indicate the degree of competition between the firms.

To make this type of comparison, the Agencies sometimes rely on economic models. Often, such models consider the firms' incentives to change their actions in one or more selected dimensions, such as price, in a somewhat simplified scenario. For example, a model might focus on the firms' short-run incentives to change price, while abstracting from a variety of additional competitive forces and dimensions of competition, such as the potential for firms to reposition their products or for the merging firms to coordinate with other firms. Such a model may incorporate data and evidence in order to produce quantitative estimates of the impact of the merger on firm incentives and corresponding choices. This type of exercise is sometimes referred to by economists as "merger simulation" despite the fact that the hypothetical setting considers only selected aspects of the loss of competition from a merger. The Agencies use such models to give an indication of the scale and importance of competition, not to precisely predict outcomes.

[72] The margin on incremental units is the difference between incremental revenue (often equal to price) and incremental cost on those units. The Agencies may use accounting data to measure incremental costs, but they do not necessarily rely on accounting margins recorded by firms in the ordinary course of business because such margins often do not align with the concept of incremental cost that is relevant in economic analysis of a merger.

4.2.B. Considerations When Terms Are Set by Firms

The Agencies may use various types of evidence and metrics to assess the strength of competition among firms that set terms to their customers. Firms might offer the same terms to different customers or different terms to different groups of customers.

Competition in this setting can lead firms to set lower prices or offer more attractive terms when they act independently than they would in a setting where that competition was eliminated by a merger. When considering the impact of competition on the incentives to set price, to the extent price increases on one firm's products would lead customers to switch to products from another firm, their merger will enable the merged firm to profit by unilaterally raising the price of one or both products above the pre-merger level. Some of the sales lost because of the price increase will be diverted to the products of the other firm, and capturing the value of these diverted sales can make the price increase profitable even though it would not have been profitable prior to the merger.

A measure of customer substitution between firms in this setting is the diversion ratio. The diversion ratio from one product to another is a metric of how customers likely would substitute between them. The diversion ratio is the fraction of unit sales lost by the first product due to a change in terms, such as an increase in its price, that would be diverted to the second product. The higher the diversion ratio between two products made by different firms, the stronger the competition between them.

A high diversion ratio between the products owned by two firms can indicate strong competition between them even if the diversion ratio to another firm is higher. The diversion ratio from one of the products of one firm to a group of products made by other firms, defined analogously, is sometimes referred to as the aggregate diversion ratio or the recapture rate.

A measure of the impact on rivals of competitive actions is the value of diverted sales from a price increase. The value of sales diverted from one firm to a second firm, when the first firm raises its price on one of its products, is equal to the number of units that would be diverted from the first firm to the second, multiplied by the difference between the second firm's price and the incremental cost of the diverted sales. To interpret the magnitude of the value of diverted sales, the Agencies may use as a basis of comparison either the incremental cost to the second firm of making the diverted sales, or the revenues lost by the first firm as a result of the price increase. The ratio of the value of diverted sales to the revenues lost by the first firm can be an indicator of the upward pricing pressure that would result from the loss of competition between the two firms. Analogous concepts can be applied to analyze the impact on rivals of worsening terms other than price.

4.2.C. Considerations When Terms Are Set Through Bargaining or Auctions

In some industries, buyers and sellers negotiate prices and other terms of trade. In bargaining, buyers commonly negotiate with more than one seller and may play competing sellers off against one another. In other industries, sellers might sell their products, or buyers might procure inputs, using an auction. Negotiations may involve aspects of an auction as well as aspects of one-on-one negotiation. Competition among sellers can significantly enhance the ability of a buyer to obtain a result more favorable to it, and less favorable to the sellers, compared to a situation where the elimination of competition through a merger prevents buyers from playing those sellers off against each other in negotiations.

Sellers may compete even when a customer does not directly play their offers against each other. The attractiveness of alternative options influences the importance of reaching an agreement to the

negotiating parties and thus the terms of the agreement. A party that has many attractive alternative trading partners places less importance on reaching an agreement with any one particular trading partner than a party with few attractive alternatives. As alternatives for one party are eliminated (such as through a merger), the trading partner gains additional bargaining leverage reflecting that loss of competition. A merger between sellers may lessen competition even if the merged firm handles negotiations for the merging firms' products separately.

Thus, qualitative or quantitative evidence about the leverage provided to buyers by competing suppliers may be used to assess the extent of competition among firms in this setting. Analogous evidence may be used when analyzing a setting where terms are set using auctions, for example, procurement auctions where suppliers bid to serve a buyer. If, for some categories of procurements, certain suppliers are often among the most attractive to the buyer, competition among that group of suppliers is likely to be strong.

Firms sometimes keep records of the progress and outcome of individual sales efforts, and the Agencies may use these data to generate measures of the extent to which customers would likely substitute between the two firms. Examples of such measures might include a diversion ratio based on the rate at which customers would buy from one firm if the other one was not available, or the frequency with which the two firms bid on contracts with the same customer.

4.2.D. Considerations When Firms Determine Capacity and Output

In some markets, the choice of how much to produce (output decisions) or how much productive capacity to maintain (capacity decisions) are key strategic variables. When a firm decreases output, it may lose sales to rivals, but also drive up prices. Because a merged firm will account for the impact of higher prices across all of the merged firms' sales, it may have an incentive to decrease output as a result of the merger. The loss of competition through a merger of two firms may lead the merged firm to leave capacity idle, refrain from building or obtaining capacity that would have been obtained absent the merger, lay off or stop hiring workers, or eliminate pre-existing production capabilities. A firm may also divert the use of capacity away from one relevant market and into another market so as to raise the price in the former market. The analysis of the extent to which firms compete may differ depending on how a merger between them might create incentives to suppress output.

Competition between merging firms is greater when (1) the merging firms' market shares are relatively high; (2) the merging firms' products are relatively undifferentiated from each other; (3) the market elasticity of demand is relatively low; (4) the margin on the suppressed output is relatively low; and (5) the supply responses of non-merging rivals are relatively small. Qualitative or quantitative evidence may be used to evaluate and weigh each of these factors.

In some cases, competition between firms—including one firm with a substantial share of the sales in the market and another with significant excess capacity to serve that market—can prevent an output suppression strategy from being profitable. This can occur even if the firm with the excess capacity has a relatively small share of sales, as long as that firm's ability to expand, and thus keep prices from rising, makes an output suppression strategy unprofitable for the firm with the larger market share.

4.2.E. Considerations for Innovation and Product Variety Competition

Firms can compete for customers by offering varied and innovative products and features, which could range from minor improvements to the introduction of a new product category. Features can include new or different product attributes, services offered along with a product, or higher-quality services standing alone. Customers value the variety of products or services that competition generates, including having a variety of locations at which they can shop.

Offering the best mix of products and features is an important dimension of competition that may be harmed as a result of the elimination of competition between the merging parties.

When a firm introduces a new product or improves a product's features, some of the sales it gains may be at the expense of its rivals, including rivals that are competing to develop similar products and features. As a result, competition between firms may lead them to make greater efforts to offer a variety of products and features than would be the case if the firms were jointly owned, for example, if they merged. The merged firm may have a reduced incentive to continue or initiate development of new products that would have competed with the other merging party, but post-merger would "cannibalize" what would be its own sales.[73] A service provider may have a reduced incentive to continue valuable upgrades offered by the acquired firm. The merged firm may have a reduced incentive to engage in disruptive innovation that would threaten the business of one of the merging firms. Or it may have the incentive to change its product mix, such as by ceasing to offer one of the merging firms' products, leaving worse off the customers who previously chose the product that was eliminated. For example, competition may be harmed when customers with a preference for a low-price option lose access to it, even if remaining products have higher quality.

The incentives to compete aggressively on innovation and product variety depend on the capabilities of the firms and on customer reactions to the new offerings. Development of new features depends on having the appropriate expertise and resources. Where firms are two of a small number of companies with specialized employees, development facilities, intellectual property, or research projects in a particular area, competition between them will have a greater impact on their incentives to innovate.

Innovation may be directed at outcomes beyond product features; for example, innovation may be directed at reducing costs or adopting new technology for the distribution of products.

4.3. Market Definition

The Clayton Act protects competition "in any line of commerce in any section of the country."[74] The Agencies engage in a market definition inquiry in order to identify whether there is any line of commerce or section of the country in which the merger may substantially lessen competition or tend to create a monopoly. The Agencies identify the "area of effective competition" in which competition may be lessened "with reference to a product market (the 'line of commerce') and a geographic market (the 'section of the country.')."[75] The Agencies refer to the process of identifying market(s) protected by the Clayton Act as a "market definition" exercise and the markets so defined as "relevant antitrust markets,"

[73] Sales "cannibalization" refers to a situation where customers of a firm substitute away from one of the firm's products to another product offered by the same firm.
[74] 15 U.S.C. § 18.
[75] *Brown Shoe*, 370 U.S. at 324.

or simply "relevant markets." Market definition can also allow the Agencies to identify market participants and measure market shares and market concentration.

A relevant antitrust market is an area of effective competition, comprising both product (or service) and geographic elements. The outer boundaries of a relevant product market are determined by the "reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it."[76] Within a broad relevant market, however, effective competition often occurs in numerous narrower relevant markets.[77] Market definition ensures that relevant antitrust markets are sufficiently broad, but it does not always lead to a single relevant market. Section 7 of the Clayton Act prohibits any merger that may substantially lessen competition "in any line of commerce" and in "any section of the country," and the Agencies protect competition by challenging a merger that may lessen competition in any one or more relevant markets.

Market participants often encounter a range of possible substitutes for the products of the merging firms. However, a relevant market cannot meaningfully encompass that infinite range of substitutes.[78] There may be effective competition among a narrow group of products, and the loss of that competition may be harmful, making the narrow group a relevant market, even if competitive constraints from significant substitutes are outside the group. The loss of both the competition between the narrow group of products and the significant substitutes outside that group may be even more harmful, but that does not prevent the narrow group from being a market in its own right.

Relevant markets need not have precise metes and bounds. Some substitutes may be closer, and others more distant, and defining a market necessarily requires including some substitutes and excluding others. Defining a relevant market sometimes requires a line-drawing exercise around product features, such as size, quality, distances, customer segment, or prices. There can be many places to draw that line and properly define a relevant market. The Agencies recognize that such scenarios are common, and indeed "fuzziness would seem inherent in any attempt to delineate the relevant . . . market."[79] Market participants may use the term "market" colloquially to refer to a broader or different set of products than those that would be needed to constitute a valid relevant antitrust market.

The Agencies rely on several tools to demonstrate that a market is a relevant antitrust market. For example, the Agencies may rely on any one or more of the following to identify a relevant antitrust market.

A. Direct evidence of substantial competition between the merging parties can demonstrate that a relevant market exists in which the merger may substantially lessen competition and can be sufficient to identify the line of commerce and section of the country affected by a merger, even if the metes and bounds of the market are only broadly characterized.

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[76] *Id.* at 325.

[77] *Id.* ("[W]ithin [a] broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes."). Multiple overlapping markets can be appropriately defined relevant markets. For example, a merger to monopoly for food worldwide would lessen competition in well-defined relevant markets for, among others, food, baked goods, cookies, low-fat cookies, and premium low-fat chocolate chip cookies. Illegality in any of these in any city or town comprising a relevant geographic market would suffice to prohibit the merger, and the fact that one area comprises a relevant market does not mean a larger, smaller, or overlapping area could not as well.

[78] *United States v. Cont'l Can Co.*, 378 U.S. 441, 449 (1964); *see also FTC v. Advoc. Health Care Network*, 841 F.3d 460, 469 (7th Cir. 2016) ("A geographic market does not need to include all of the firm's competitors; it needs to include the competitors that would substantially constrain the firm's price-increasing ability." (cleaned up)).

[79] *Phila. Nat'l Bank*, 374 U.S. at 360 n.37.

B. Direct evidence of the exercise of market power can demonstrate the existence of a relevant market in which that power exists. This evidence can be valuable when assessing the risk that a dominant position may be entrenched, maintained, or extended, since the same evidence identifies market power and can be sufficient to identify the line of commerce and section of the country affected by a merger, even if the metes and bounds of the market are only broadly characterized.

C. A relevant market can be identified from evidence on observed market characteristics ("practical indicia"), such as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.[80] Various practical indicia may identify a relevant market in different settings.

D. Another common method employed by courts and the Agencies is the hypothetical monopolist test.[81] This test examines whether a proposed market is too narrow by asking whether a hypothetical monopolist over this market could profitably worsen terms significantly, for example, by raising price. An analogous hypothetical monopsonist test applies when considering the impact of a merger on competition among buyers.

The Agencies use these tools to define relevant markets because they each leverage market realities to identify an area of effective competition.

Section 4.3.A below describes the Hypothetical Monopolist Test in greater detail. Section 4.3.B addresses issues that may arise when defining relevant markets in several specific scenarios.

4.3.A. The Hypothetical Monopolist Test

This Section describes the Hypothetical Monopolist Test, which is a method by which the Agencies often define relevant antitrust markets. As outlined above, a relevant antitrust market is an area of effective competition. The Hypothetical Monopolist/Monopsonist Test ("HMT") evaluates whether a group of products is sufficiently broad to constitute a relevant antitrust market. To do so, the HMT asks whether eliminating the competition among the group of products by combining them under the control of a hypothetical monopolist likely would lead to a worsening of terms for customers. The Agencies generally focus their assessment on the constraints from competition, rather than on constraints from regulation, entry, or other market changes. The Agencies are concerned with the impact on economic incentives and assume the hypothetical monopolist would seek to maximize profits.

When evaluating a merger of sellers, the HMT asks whether a hypothetical profit-maximizing firm, not prevented by regulation from worsening terms, that was the only present and future seller of a group of products ("hypothetical monopolist") likely would undertake at least a small but significant and non-transitory increase in price ("SSNIP") or other worsening of terms ("SSNIPT") for at least one

[80] *Brown Shoe*, 370 U.S. at 325, *quoted in United States v. U.S. Sugar Corp.*, 73 F.4th 197, 204-07 (3d Cir. 2023) (affirming district court's application of *Brown Shoe* practical indicia to evaluate relevant product market that included, based on the unique facts of the industry, those distributors who "could counteract monopolistic restrictions by releasing their own supplies").

[81] *See FTC v. Penn State Hershey Med. Center*, 838 F.3d 327, 338 (3d Cir. 2016). While these guidelines focus on applying the hypothetical monopolist test in analyzing mergers, the test can be adapted for similar purposes in cases involving alleged monopolization or other conduct. *See, e.g.*, *McWane, Inc. v. FTC*, 783 F.3d 814, 829-30 (11th Cir. 2015).

product in the group.[82] For the purpose of analyzing this issue, the terms of sale of products outside the candidate market are held constant. Analogously, when considering a merger of buyers, the Agencies ask the equivalent question for a hypothetical monopsonist. This Section often focuses on merging sellers to simplify exposition.

4.3.B. Implementing the Hypothetical Monopolist Test

The SSNIPT. A SSNIPT may entail worsening terms along any dimension of competition, including price (SSNIP), but also other terms (broadly defined) such as quality, service, capacity investment, choice of product variety or features, or innovative effort.

Input and Labor Markets. When the competition at issue involves firms buying inputs or employing labor, the HMT considers whether the hypothetical monopsonist would undertake at least a SSNIPT, such as a decrease in the offered price or a worsening of the terms of trade offered to suppliers, or a decrease in the wage offered to workers or a worsening of their working conditions or benefits.

The Geographic Dimension of the Market. The hypothetical monopolist test is generally applied to a group of products together with a geographic region to determine a relevant market, though for ease of exposition the two dimensions are discussed separately, with geographic market definition discussed in Section 4.3.D.2.

Negotiations or Auctions. The HMT is stated in terms of a hypothetical monopolist *undertaking* a SSNIPT. This covers settings where the hypothetical monopolist sets terms and makes them worse. It also covers settings where firms bargain, and the hypothetical monopolist would have a stronger bargaining position that would likely lead it to extract a SSNIPT during negotiations, or where firms sell their products in an auction, and the bids submitted by the hypothetical monopolist would result in the purchasers of its products experiencing a SSNIPT.

Benchmark for the SSNIPT. The HMT asks whether the hypothetical monopolist likely would worsen terms relative to those that likely would prevail absent the proposed merger. In some cases, the Agencies will use as a benchmark different outcomes than those prevailing prior to the merger. For example, if outcomes are likely to change absent the merger, e.g., because of innovation, entry, exit, or exogenous trends, the Agencies may use anticipated future outcomes as the benchmark. Or, if suppliers in the market are coordinating prior to the merger, the Agencies may use a benchmark that reflects conditions that would arise if coordination were to break down. When evaluating whether a merging firm is dominant (Guideline 6), the Agencies may use terms that likely would prevail in a more competitive market as a benchmark.[83]

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[82] If the pricing incentives of the firms supplying the products in the group differ substantially from those of the hypothetical monopolist, for reasons other than the latter's control over a larger group of substitutes, the Agencies may instead employ the concept of a hypothetical profit-maximizing cartel comprised of the firms (with all their products) that sell the products in the candidate market. This approach is most likely to be appropriate if the merging firms sell products outside the candidate market that significantly affect their pricing incentives for products in the candidate market. This could occur, for example, if the candidate market is one for durable equipment and the firms selling that equipment derive substantial net revenues from selling spare parts and service for that equipment. Analogous considerations apply when considering a SSNIPT for terms other than price.

[83] In the entrenchment context, if the inquiry is being conducted after market or monopoly power has already been exercised, using prevailing prices can lead to defining markets too broadly and thus inferring that dominance does not exist when, in

Magnitude of the SSNIPT. What constitutes a "small but significant" worsening of terms depends upon the nature of the industry and the merging firms' positions in it, the ways that firms compete, and the dimension of competition at issue. When considering price, the Agencies will often use a SSNIP of five percent of the price charged by firms for the products or services to which the merging firms contribute value. The Agencies, however, may consider a different term or a price increase that is larger or smaller than five percent.[84]

The Agencies may base a SSNIP on explicit or implicit prices for the firms' specific contribution to the value of the product sold, or an upper bound on the firms' specific contribution, where these can be identified with reasonable clarity. For example, the Agencies may derive an implicit price for the service of transporting oil over a pipeline as the difference between the price the pipeline firm paid for oil at one end and the price it sold the oil for at the other and base the SSNIP on this implicit price.

4.3.C. Evidence and Tools for Carrying Out the Hypothetical Monopolist Test

Section 4.2 describes some of the qualitative and quantitative evidence and tools the Agencies can use to assess the extent of competition among firms. The Agencies can use similar evidence and analogous tools to apply the HMT, in particular to assess whether competition among a set of firms likely leads to better terms than a hypothetical monopolist would undertake.

To assess whether the hypothetical monopolist likely would undertake at least a SSNIP on one or more products in the candidate market, the Agencies sometimes interpret the qualitative and quantitative evidence using an economic model of the profitability to the hypothetical monopolist of undertaking price increases; the Agencies may adapt these tools to apply to other forms of SSNIPTs.

One approach utilizes the concept of a "recapture rate" (the percentage of sales lost by one product in the candidate market, when its price alone rises, that is recaptured by other products in the candidate market). A price increase is profitable when the recapture rate is high enough that the incremental profits from the increased price plus the incremental profits from the recaptured sales going to other products in the candidate market exceed the profits lost when sales are diverted outside the candidate market. It is possible that a price increase is profitable even if a majority of sales are diverted outside the candidate market, for example if the profits on the lost sales are relatively low or the profits on the recaptured sales are relatively high.

Sometimes evidence is presented in the form of "critical loss analysis," which can be used to assess whether undertaking at least a SSNIPT on one or more products in a candidate market would raise or lower the hypothetical monopolist's profits. Critical loss analysis compares the magnitude of the two offsetting effects resulting from the worsening of terms. The "critical loss" is defined as the number of lost unit sales that would leave profits unchanged. The "predicted loss" is defined as the number of unit sales that the hypothetical monopolist is predicted to lose due to the worsening of terms. The worsening of terms raises the hypothetical monopolist's profits if the predicted loss is less than the

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fact, it does. The problem with using prevailing prices to define the market when a firm is already dominant is known as the "Cellophane Fallacy."

[84] The five percent price increase is not a threshold of competitive harm from the merger. Because the five percent SSNIP is a minimum expected effect of a hypothetical monopolist of an *entire* market, the actual predicted effect of a merger within that market may be significantly lower than five percent. A merger within a well-defined market that causes undue concentration can be illegal even if the predicted price increase is well below the SSNIP of five percent.

critical loss. While this "breakeven" analysis differs somewhat from the profit-maximizing analysis called for by the HMT, it can sometimes be informative.

The Agencies require that estimates of the predicted loss be consistent with other evidence, including the pre-merger margins of products in the candidate market used to calculate the critical loss. Unless the firms are engaging in coordinated interaction, high pre-merger margins normally indicate that each firm's product individually faces demand that is not highly sensitive to price. Higher pre-merger margins thus indicate a smaller predicted loss as well as a smaller critical loss. The higher the pre-merger margin, the smaller the recapture rate[85] necessary for the candidate market to satisfy the hypothetical monopolist test. Similar considerations inform other analyses of the profitability of a price increase.

4.3.D. Market Definition in Certain Specific Settings

This Section provides details on market definition in several specific common settings. In much of this section, concepts are presented for the scenario where the merger involves sellers. In some cases, clarifications are provided as to how the concepts apply to merging buyers; in general, the concepts apply in an analogous way.

4.3.D.1. Targeted Trading Partners

If the merged firm could profitably target a subset of customers for changes in prices or other terms, the Agencies may identify relevant markets defined around those targeted customers. The Agencies may do so even if firms are not currently targeting specific customer groups but could do so after the merger.

For targeting to be feasible, two conditions typically must be met. First, the suppliers engaging in targeting must be able to set different terms for targeted customers than other customers. This may involve identification of individual customers to which different terms are offered or offering different terms to different types of customers based on observable characteristics.[86] Markets for targeted customers need not have precise metes and bounds. In particular, defining a relevant market for targeted customers sometimes requires a line-drawing exercise on observable characteristics. There can be many places to draw that line and properly define a relevant market. Second, the targeted customers must not be likely to defeat a targeted worsening of terms by arbitrage (e.g., by purchasing indirectly from or through other customers). Arbitrage may be difficult if it would void warranties or make service more difficult or costly for customers, and it is inherently impossible for many services. Arbitrage on a modest scale may be possible but sufficiently costly or limited, for example due to transaction costs or search costs, that it would not deter or defeat a discriminatory pricing strategy.

If prices are negotiated or otherwise set individually, for example through a procurement auction, there may be relevant markets that are as narrow as an individual customer. Nonetheless, for analytic convenience, the Agencies may define cluster markets for groups of targeted customers for whom the

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[85] The recapture rate is sometimes referred to as the aggregate diversion ratio, defined in Section 4.2.B.

[86] In some cases, firms offer one or more versions of products or services defined by their characteristics (where brand might be a characteristic). When customers can select among these products and terms do not vary by customer, the Agencies will typically define markets based on products rather than the targeted customers. In such cases, relevant antitrust markets may include only some of the differentiated products, for example products with only "basic" features, or products with "premium features." The tools described in Section 4.2 can be used to assess competition among differentiated products.

conditions of competition are reasonably similar. (See Section 4.3.D.4 for further discussion of cluster markets.)

Analogous considerations arise for a merger involving one or more buyers or employers. In this case, the analysis considers whether buyers target suppliers, for example by paying targeted suppliers or workers less, or by degrading the terms of supply contracts for targeted suppliers. Arbitrage would involve a targeted supplier selling to the buyer indirectly, through a different supplier who could obtain more favorable terms from the buyer.

If the HMT is applied in a setting where targeting of customers is feasible, it requires that a hypothetical profit-maximizing firm that was the only present or future seller of the relevant product(s) to customers in the targeted group would undertake at least a SSNIPT on some, though not necessarily all, customers in that group. The products sold to those customers form a relevant market if the hypothetical monopolist likely would undertake at least a SSNIPT despite the potential for customers to substitute away from the product or to take advantage of arbitrage. In this exercise, the terms of sale for products sold to all customers outside the region are held constant.

4.3.D.2. Geographic Markets

A relevant antitrust market is an area of effective competition, comprising both product (or service) and geographic elements. A market's geography depends on the limits that distance puts on some customers' willingness or ability to substitute to some products, or some suppliers' willingness or ability to serve some customers. Factors that may limit the geographic scope of the market include transportation costs, language, regulation, tariff and non-tariff trade barriers, custom and familiarity, reputation, and local service availability.

4.3.D.2.a. Geographic Markets Based on the Locations of Suppliers

The Agencies sometimes define geographic markets as regions encompassing a group of supplier locations. When they do, the geographic market's scope is determined by customers' willingness to switch between suppliers. Geographic markets of this type often apply when customers receive goods or services at suppliers' facilities, for example when customers buy in-person from retail stores. A single firm may offer the same product in a number of locations, both within a single geographic market or across geographic markets; customers' willingness to substitute between products may depend on the location of the supplier. When calculating market shares, sales made from supplier locations in the geographic market are included, regardless of whether the customer making the purchase travelled from outside the boundaries of the geographic market (see Section 4.4 for more detail about calculating market shares).

If the HMT is used to evaluate the geographic scope of the market, it requires that a hypothetical profit-maximizing firm that was the only present or future supplier of the relevant product(s) at supplier locations in the region likely would undertake at least a SSNIPT in at least one location. In this exercise, the terms of sale for products sold to all customers at facilities outside the region are typically held constant.[87]

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[87] In some circumstances, as when the merging parties operate in multiple geographies, if applying the HMT, the Agencies may apply a "Hypothetical Cartel" framework for market definition, following the approach outlined in Section 4.3.A, n.81.

4.3.D.2.b. Geographic Markets Based on Targeting of Customers by Location

When targeting based on customer location is feasible (see Section 4.3.D.1), the Agencies may define geographic markets as a region encompassing a group of customers.[88] For example, geographic markets may sometimes be defined this way when suppliers deliver their products or services to customers' locations, or tailor terms of trade based on customers' locations. Competitors in the market are firms that sell to customers that are located in the specified region. Some suppliers may be located outside the boundaries of the geographic market, but their sales to customers located within the market are included when calculating market shares (see Section 4.4 for more detail about calculating market shares).

If prices are negotiated individually with customers that may be targeted, geographic markets may be as narrow as individual customers. Nonetheless, the Agencies often define a market for a cluster of customers located within a region if the conditions of competition are reasonably similar for these customers. (See Section 4.3.D.4 for further discussion of cluster markets.)

A firm's attempt to target customers in a particular area with worsened terms can sometimes be undermined if some customers in the region substitute by travelling outside it to purchase the product. Arbitrage by customers on a modest scale may be possible but sufficiently costly or limited that it would not deter or defeat a targeting strategy.[89]

If the HMT is used to evaluate market definition when customers may be targeted by location, it requires that a hypothetical profit-maximizing firm that was the only present or future seller of the relevant product(s) to customers in the region likely would undertake at least a SSNIPT on some, though not necessarily all, customers in that region. The products sold in that region form a relevant market if the hypothetical monopolist would undertake at least a SSNIPT despite the potential for customers to substitute away from the product or to locations outside the region. In this exercise, the terms of sale for products sold to all customers outside the region are held constant.[90]

4.3.D.3. Supplier Responses

Market definition focuses solely on demand substitution factors, that is, on customers' ability and willingness to substitute away from one product or location to another in response to a price increase or other worsening of terms. Supplier responses may be considered in the analysis of competition between firms (Guideline 2 and Section 4.2), entry and repositioning (Section 3.2), and in calculating market shares and concentration (Section 4.4).

4.3.D.4. Cluster Markets

A relevant antitrust market is generally a group of products that are substitutes for each other. However, when the competitive conditions for multiple relevant markets are reasonably similar, it may be appropriate to aggregate the products in these markets into a "cluster market" for analytic convenience, even though not all products in the cluster are substitutes for each other. For example, competing hospitals may each provide a wide range of acute health care services. Acute care for one health issue is not a substitute for acute care for a different health issue. Nevertheless, the Agencies may

[88] For customers operating in multiple locations, only those customer locations within the targeted region are included in the market.
[89] Arbitrage by suppliers is a type of supplier response and is thus not considered in market definition. (See Section 4.3.D.3)
[90] In some circumstances, as when the merging parties operate in multiple geographies, the Agencies may apply a "Hypothetical Cartel" framework for market definition, as described in Section 4.3.A, n.81.

aggregate them into a cluster market for acute care services if the conditions of competition are reasonably similar across the services in the cluster.

The Agencies need not separately analyze market definition for each product included in the cluster market, and market shares will typically be calculated for the cluster market as a whole.

Analogously, the Agencies sometimes define a market as a cluster of targeted customers (see Section 4.3.D.1) or a cluster of customers located in a region (see Section 4.3.D.2.b).

4.3.D.5. Bundled Product Markets

Firms may sell a combination of products as a bundle or a "package deal," rather than offering products "*a la carte*," that is, separately as standalone products. Different bundles offered by the same or different firms might package together different combinations of component products and therefore be differentiated according to the composition of the bundle. If the components of a bundled product are also available separately, the bundle may be offered at a price that represents a discount relative to the sum of the *a la carte* product prices.

The Agencies take a flexible approach based on the specific circumstances to determine whether a candidate market that includes one or more bundled products, standalone products, or both is a relevant antitrust market. In some cases, a relevant market may consist of only bundled products. A market composed of only bundled products might be a relevant antitrust market even if there is significant competition from the unbundled products. In other cases, a relevant market may include both bundled products and some unbundled component products.

Even in cases where firms commonly sell combinations of products or services as a bundle or a "package deal," relevant antitrust markets do not necessarily include product bundles. In some cases, a relevant market may be analyzed as a cluster market, as discussed in Section 4.3.D.4.

4.3.D.6. One-Stop Shop Markets

In some settings, the Agencies may consider a candidate market that includes one or more "one-stop shops," where customers can select a combination of products to purchase from a single seller, either in a single purchase instance or in a sequence of purchases. Products are commonly sold at a one-stop shop when customers value the convenience, which might arise because of transaction costs or search costs, savings of time, transportation costs, or familiarity with the store or web site.

A multi-product retailer such as a grocery store or online retailer is an example of a one-stop shop. Customers can select a particular basket of groceries from a range of available goods and different customers may select different baskets. Some customers may make multiple stops at specialty shops (e.g., butcher, baker, greengrocer), or they may do the bulk of their shopping at a one-stop shop (the grocery store) but also shop at specialty shops for particular product categories.

There are several ways in which markets may be defined in one-stop shop settings, depending on market realities, and the Agencies may further define more than one relevant antitrust market for a particular merger. For example, a relevant market may consist of only one-stop shops, even if there is significant competition from specialty shops; or it may include both one-stop shops and specialty shops. When a product category is sold by both one-stop shops and specialty suppliers (such as a type of produce sold in grocery stores and produce stands), the Agencies may define relevant antitrust markets for the product category sold by a particular type of supplier, or it may include multiple types of suppliers.

4.3.D.7. Market Definition When There is Harm to Innovation

When considering harm to competition in innovation, market definition may follow the same approaches that are used to analyze other dimensions of competition. In the case where a merger may substantially lessen competition by decreasing incentives to innovate, the Agencies may define relevant antitrust markets around the products that would result from that innovation if successful, even if those products do not yet exist.[91] In some cases, the Agencies may analyze different relevant markets when considering innovation than when considering other dimensions of competition.

4.3.D.8. Market Definition for Input Markets and Labor Markets

The same market definition tools and principles discussed above can be used for input markets and labor markets, where labor is a particular type of input. In input markets, firms compete with each other to attract suppliers, including workers. Therefore, input suppliers are analogous to customers in the discussions above about market definition. In defining relevant markets, the Agencies focus on the alternatives available to input suppliers. An antitrust input market consists of a group of products and a geographic area defined by the location of the buyers or input suppliers. Just as buyers of a product may consider products to be differentiated according to the brand or the identity of the seller, suppliers of a product or service may consider different buyers to be differentiated. For example, if the suppliers are contractors, they may have distinct preferences about who they provide services to, due to different working conditions, location, reliability of buyers in terms of paying invoices on time, or the propensity of the buyer to make unexpected changes to specifications.

The HMT considers whether a hypothetical monopsonist likely would undertake a SSNIPT, such as a reduction in price paid for inputs, or imposing less favorable terms on suppliers. (See Section 4.2.C for more discussion about competition in settings where terms are set through auctions and negotiations, as is common for input markets.)

When defining a market for labor the Agencies will consider the job opportunities available to workers who supply a relevant type of labor service, where worker choice among jobs or between geographic areas is the analog of consumer choices among products and regions when defining a product market. The Agencies may consider workers' willingness to switch in response to changes to wages or other aspects of working conditions, such as changes to benefits or other non-wage compensation, or adoption of less flexible scheduling. Depending on the occupation, alternative job opportunities might include the same occupation with alternative employers, or alternative occupations. Geographic market definition may involve considering workers' willingness or ability to commute, including the availability of public transportation. The product and geographic market definition may involve assessing whether workers may be targeted for less favorable wages or other terms of employment according to factors such as education, experience, certifications, or work locations. The Agencies may define cluster markets for different jobs when firms employ workers in a variety of jobs characterized by similar competitive conditions (see Section 4.3.D.4).

4.4. Calculating Market Shares and Concentration

This subsection further describes how the Agencies calculate market shares and concentration metrics.

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[91] *See Illumina*, slip op. at 12 (affirming a relevant market defined around "what . . . developers reasonably sought to achieve, not what they currently had to offer").

As discussed above, the Agencies may use evidence about market shares and market concentration as part of their analysis. These structural measures can provide insight into the market power of firms as well as into the extent to which they compete. Although any market that is properly identified using the methods in Section 4.3 is valid, the extent to which structural measures calculated in that market are probative in any given context depends on a number of considerations. The following market considerations affect the extent to which structural measures are probative in any given context.[92]

First, structural measures may be probative if the market used to estimate them includes the products that are the focus of the competitive concern that the structural inquiry intends to address. For example, the concentration measures discussed in Guideline 1 will be most probative about whether the merger eliminates substantial competition between the merging parties when calculated on a market that includes at least one competing product from each merging firm.

Second, the market used to estimate shares should be broad enough that it contains sufficient additional products so that a loss of competition among all the suppliers of the products in the market would lead to significantly worse terms for at least some customers of at least one product. Markets identified using the various tools in Section 4.3 can satisfy this condition—for example, all markets that satisfy the HMT do so.

Third, the competitive significance of the parties may be understated by their share when calculated on a market that is broader than needed to satisfy the considerations above, particularly when the market includes products that are more distant substitutes, either in the product or geographic dimension, for those produced by the parties.

4.4.A. Market Participants

All firms that currently supply products (or consume products, when buyers merge) in a relevant market are considered participants in that market. Vertically integrated firms are also included to the extent that their inclusion accurately reflects their competitive significance. Firms not currently supplying products in the relevant market, but that have committed to entering the market in the near future, are also considered market participants.

Firms that are not currently active in a relevant market, but that very likely would rapidly enter with direct competitive impact in the event of a small but significant change in competitive conditions, without incurring significant sunk costs, are also considered market participants. These firms are termed "rapid entrants." Sunk costs are entry or exit costs that cannot be recovered outside a relevant market. Entry that would take place more slowly in response to a change in competitive conditions, or that requires firms to incur significant sunk costs, is considered in Section 3.2.

Firms that are active in the relevant product market but not in the relevant geographic market may be rapid entrants. Other things equal, such firms are most likely to be rapid entrants if they are already active in geographies that are close to the geographic market. Factors such as transportation

[92] For simplicity, the discussion in the text focuses on the case where concerns arise that involve competition among the suppliers of products; analogous considerations may also arise for suppliers of services, or when concerns arise about competition among buyers of a product or service, or when analyzing market shares in certain specific settings (see Section 4.3.D).

costs are important; or for services or digital goods, other factors may be important, such as language or regulation.

In markets for relatively homogeneous goods where a supplier's ability to compete depends predominantly on its costs and its capacity, and not on other factors such as experience or reputation in the relevant market, a supplier with efficient idle capacity, or readily available "swing" capacity currently used in adjacent markets that can easily and profitably be shifted to serve the relevant market, may be a rapid entrant. However, idle capacity may be inefficient, and capacity used in adjacent markets may not be available, so a firm's possession of idle or swing capacity alone does not make that firm a rapid entrant.

4.4.B. Market Shares

The Agencies normally calculate product market shares for all firms that currently supply products (or consume products, when buyers merge) in a relevant market, subject to the availability of data. The Agencies measure each firm's market share using metrics that are informative about the market realities of competition in the particular market and firms' future competitive significance. When interpreting shares based on historical data, the Agencies may consider whether significant recent or reasonably foreseeable changes to market conditions suggest that a firm's shares overstate or understate its future competitive significance.

How market shares are calculated may further depend on the characteristics of a particular market, and on the availability of data. Moreover, multiple metrics may be informative in any particular case. For example:

- Revenues in a relevant market often provide a readily available basis on which to compute shares and are often a good measure of attractiveness to customers.
- Unit sales may provide a useful measure of competitive significance in cases where one unit of a low-priced product can serve as a close substitute for one unit of a higher-priced product. For example, a new, much less expensive product may have great competitive significance if it substantially erodes the revenues earned by older, higher-priced products, even if it earns relatively low revenues.
- Revenues earned from recently acquired customers (or paid to recently acquired buyers, in the case of merging buyers) may provide a useful measure of competitive significance of firms in cases where trading partners sign long-term contracts, face switching costs, or tend to re-evaluate their relationships only occasionally.
- Measures based on capacities or reserves may be used to calculate market shares in markets for homogeneous products where a firm's competitive significance may derive principally from its ability and incentive to rapidly expand production in a relevant market in response to a price increase or output reduction by others in that market (or to rapidly expand its purchasing in the case of merging buyers).
- Non-price indicators, such as number of users or frequency of use, may be useful indicators in markets where price forms a relatively small or no part of the exchange of value.

654 F.Supp.3d 892
United States District Court, N.D. California,
San Jose Division.

FEDERAL TRADE COMMISSION, Plaintiff,
v.
META PLATFORMS INC., et al., Defendants.

Case No. 5:22-cv-04325-EJD
|
Signed January 31, 2023
|
Filed February 3, 2023

Synopsis
Background: Federal Trade Commission (FTC) filed enforcement action to block merger between virtual reality (VR) device provider and VR software developer for VR dedicated fitness application, as alleged antitrust violation of Clayton Act. FTC moved for preliminary injunction to prevent consummation of merger pending outcome of administrative proceedings, and provider and developer moved to dismiss for failure to state claim and to strike expert opinion.

Holdings: The District Court, Edward J. Davila, J., held that:

[1] VR dedicated fitness applications constituted relevant market;

[2] FTC established prima facie case that relevant market was substantially concentrated;

[3] in matter of first impression, reasonable probability standard of proof applied under actual potential competition theory;

[4] FTC was not likely to succeed on merits of claim based on merger substantially lessening actual potential competition; and

[5] FTC was not likely to succeed on merits of claim based on merger substantially lessening perceived potential competition.

Motions denied.

Procedural Posture(s): Motion for Preliminary Injunction; Motion to Dismiss for Failure to State a Claim; Motion to Strike Expert Report.

West Headnotes (54)

[1] **Antitrust and Trade Regulation** Preliminary

In evaluating a motion for a preliminary injunction brought under the FTC Act, courts must: (1) determine the likelihood that the Federal Trade Commission (FTC) will ultimately succeed on the merits, and (2) balance equities. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b)(2).

[2] **Antitrust and Trade Regulation** Mergers and Acquisitions

Antitrust and Trade Regulation Preliminary

On a motion by the Federal Trade Commission (FTC) for a preliminary injunction to bar a merger, the federal court is not tasked with making a final determination on whether the proposed merger violates the Clayton Act, prohibiting mergers and acquisitions where the effect may be substantially to lessen competition or to tend to create a monopoly, but rather is charged with making only a preliminary assessment of the merger's impact on competition. Clayton Act § 7, 15 U.S.C.A. § 18; Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b)(2).

[3] **Antitrust and Trade Regulation** Preliminary

To obtain a preliminary injunction under the FTC Act, the Federal Trade Commission (FTC) must raise questions going to the merits so serious, substantial, difficult, and doubtful as to make them fair ground for thorough investigation, study, deliberation, and determination by the FTC in the first instance

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and ultimately by the Court of Appeals. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b)(2).

[4] **Antitrust and Trade Regulation** Preliminary

On a motion by the Federal Trade Commission (**FTC**) for a preliminary injunction, although a district court may not require the **FTC** to prove the merits, the court must exercise independent judgment about the questions the **FTC** Act commits to it. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b)(2).

[5] **Antitrust and Trade Regulation** Preliminary

On a motion by the Federal Trade Commission (**FTC**) for a preliminary injunction, the **FTC** is required to provide more than mere questions or speculations supporting its likelihood of success on the merits, and the district court must decide the motion based on all the evidence before it, from the defendants as well as from the **FTC**. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b)(2).

1 Case that cites this headnote

[6] **Antitrust and Trade Regulation** Mergers and Acquisitions

The first step in analyzing a merger challenge under the Clayton Act provision, prohibiting mergers and acquisitions where the effect may be substantially to lessen competition or to tend to create a monopoly, is to determine the relevant market. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[7] **Antitrust and Trade Regulation** Geographical market; section of country

Antitrust and Trade Regulation Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, the relevant market is determined by the relevant product market and the relevant geographic market. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[8] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, the outer boundaries of a product market are determined by the reasonable interchangeability of use or cross-elasticity of demand between the product itself and substitutes for it. Clayton Act § 7, 15 U.S.C.A. § 18.

[9] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, within the general product market, well-defined submarkets may exist which, in themselves, constitute product markets. Clayton Act § 7, 15 U.S.C.A. § 18.

[10] **Antitrust and Trade Regulation** Questions of law and fact

In analyzing an antitrust challenge to a merger, under the Clayton Act, the definition of the relevant market is basically a fact question dependent upon special characteristics of the industry involved. Clayton Act § 7, 15 U.S.C.A. § 18.

[11] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, products need not be fungible to be included in the relevant market, but the relevant market cannot meaningfully encompass an infinite range of substitutes for the product. Clayton Act § 7, 15 U.S.C.A. § 18.

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[12] **Antitrust and Trade Regulation** Relevant market in general

In analyzing an antitrust challenge to a merger, under the Clayton Act, the overarching goal of market definition is to recognize competition where, in fact, competition exists. Clayton Act § 7, 15 U.S.C.A. § 18.

[13] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, courts use both qualitative and quantitative tools to aid their determinations of relevant markets. Clayton Act § 7, 15 U.S.C.A. § 18.

[14] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, a qualitative analysis of the relevant market, including submarkets, involves examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[15] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, a common quantitative metric used by parties and the courts to determine relevant markets is the Hypothetical Monopolist Test (HMT). Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[16] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, there is no requirement to use any specific methodology in defining the relevant market. Clayton Act § 7, 15 U.S.C.A. § 18.

[17] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, the suitability of a submarket as a relevant market turns ultimately upon whether the factors used to define the submarket are economically significant. Clayton Act § 7, 15 U.S.C.A. § 18.

[18] **Antitrust and Trade Regulation** Product market; line of commerce

The factors set forth in *Brown Shoe Co. v. U.S.*, 82 S.Ct. 1502, are practical indicia of a relevant antitrust market such as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.

1 Case that cites this headnote

[19] **Antitrust and Trade Regulation** Product market; line of commerce

Industry or public recognition factor weighed in favor of Federal Trade Commission's (**FTC**) proposed relevant product market consisting of virtual reality (VR) dedicated fitness applications, in **FTC's** enforcement action seeking injunction to block merger, between VR device provider and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly, since VR dedicated fitness application makers and broader fitness industry viewed VR dedicated fitness applications as economic submarket of VR applications and as

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constituting distinct market opportunity within VR ecosystem due to application's distinct uses, customers, and prices. Clayton Act § 7, 15 U.S.C.A. § 18.

[20] **Antitrust and Trade Regulation** Computer and internet

Peculiar characteristics and uses factor weighed in favor of Federal Trade Commission's (**FTC**) proposed relevant product market consisting of virtual reality (VR) dedicated fitness applications, in **FTC's** suit seeking injunction to block merger, between VR device provider and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly; compared to other VR applications and non-VR fitness offerings, VR dedicated fitness applications had several peculiar characteristics and uses, as they were specifically marketed to customers for exercise, and that customers could exercise in VR setting was distinct core functionality indicative of submarket. Clayton Act § 7, 15 U.S.C.A. § 18.

[21] **Antitrust and Trade Regulation** Computer and internet

Unique production facilities factor weighed in favor of Federal Trade Commission's (**FTC**) proposed relevant product market consisting of virtual reality (VR) dedicated fitness applications, in **FTC's** enforcement action seeking injunction to block merger, between VR device provider and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly, since VR dedicated fitness applications required unique combination of production inputs, including expertise, equipment, and production facilities. Clayton Act § 7, 15 U.S.C.A. § 18.

[22] **Antitrust and Trade Regulation** Product market

Although relevant antitrust markets are generally defined by demand-side substitutability, supply-side substitution also informs whether alternative products may be counted in the relevant market.

[23] **Antitrust and Trade Regulation** Product market

Supply-side substitution informing whether alternative products may be counted in the relevant antitrust market focuses on suppliers' responsiveness to price increases and their ability to constrain anticompetitive pricing by readily shifting what they produce.

[24] **Antitrust and Trade Regulation** Computer and internet

Distinct customers factor weighed in favor of Federal Trade Commission's (**FTC**) proposed relevant product market consisting of virtual reality (VR) dedicated fitness applications, in **FTC's** enforcement action seeking injunction to block merger, between VR device provider and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly, since users of VR dedicated fitness applications differed from those of other VR applications and several other fitness offerings along multiple axes, including that users of VR dedicated fitness applications tended to have older and more female user base. Clayton Act § 7, 15 U.S.C.A. § 18.

[25] **Antitrust and Trade Regulation** Computer and internet

Distinct prices factor weighed slightly in favor of Federal Trade Commission's (**FTC**) proposed relevant product market consisting of virtual reality (VR) dedicated fitness applications, in **FTC's** enforcement action seeking injunction to block merger, between VR device provider

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and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly; VR dedicated fitness applications were more likely to have subscription-based pricing model and were much more affordable than non-VR fitness products that came closest to offering level of immersion available in VR. Clayton Act § 7, 15 U.S.C.A. § 18.

[26] **Antitrust and Trade Regulation** Computer and internet

Sensitivity to price changes factor was neutral with respect to Federal Trade Commission's (**FTC**) proposed relevant product market consisting of virtual reality (VR) dedicated fitness applications, in **FTC's** enforcement action seeking injunction to block merger, between VR device provider and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly. Clayton Act § 7, 15 U.S.C.A. § 18.

[27] **Antitrust and Trade Regulation** Computer and internet

Specialized vendors factor was neutral with respect to Federal Trade Commission's (**FTC**) proposed relevant product market consisting of virtual reality (VR) dedicated fitness applications, in **FTC's** enforcement action seeking injunction to block merger, between VR device provider and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly, since **FTC** did not present any evidence that VR dedicated fitness application market required specialized vendors. Clayton Act § 7, 15 U.S.C.A. § 18.

[28] **Antitrust and Trade Regulation** Computer and internet

Balance of factors in *Brown Shoe Co. v. U.S.*, 82 S.Ct. 1502, weighed in favor of Federal Trade Commission's (**FTC**) proposed relevant product market consisting of virtual reality (VR) dedicated fitness applications, in **FTC's** suit seeking injunction to block merger, between VR device provider and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly; industry or public recognition, peculiar characteristics and uses, unique production facilities, distinct customers, and distinct prices indicated VR dedicated fitness applications presented in-market firms with economic opportunity distinct from other VR applications and fitness offerings. Clayton Act § 7, 15 U.S.C.A. § 18.

[29] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, the Hypothetical Monopolist Test (HMT) is a quantitative tool used by courts to help define a relevant market by determining reasonably interchangeable products. Clayton Act § 7, 15 U.S.C.A. § 18.

[30] **Antitrust and Trade Regulation** Product market; line of commerce

In analyzing an antitrust challenge to a merger, under the Clayton Act, the Hypothetical Monopolist Test (HMT) asks whether a hypothetical monopolist that owns a given set of products likely would impose at least a small but significant and nontransitory increase in price (SSNIP) on at least one product in the market, including at least one product sold by one of the merging firms; if enough consumers would respond to a SSNIP, often calculated as a 5% increase in price, by making purchases outside the proposed market definition so as to make the

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SSNIP not profitable, then the proposed market is defined too narrowly. Clayton Act § 7, 15 U.S.C.A. § 18.

[31] **Federal Courts** Matters of Procedure in General

District court's decision not to rely on challenged portions of report by Federal Trade Commission's (**FTC**) expert rendered moot motion to strike his opinion that virtual reality (VR) dedicated fitness applications constituted relevant product market, in **FTC's** enforcement action seeking injunction to block merger, between VR device provider and software developer for VR dedicated fitness application, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly. Clayton Act § 7, 15 U.S.C.A. § 18.

[32] **Antitrust and Trade Regulation** Geographical market; section of country

In analyzing an antitrust challenge to a merger, under the Clayton Act, the relevant geographic market is the area of effective competition where buyers can turn for alternate sources of supply. Clayton Act § 7, 15 U.S.C.A. § 18.

[33] **Antitrust and Trade Regulation** Geographical market; section of country

In a potential-competition case, under the Clayton Act, prohibiting mergers and acquisitions that could substantially lessen competition or tend to create monopoly, the relevant geographic market or appropriate section of the country is the area in which the acquired firm is an actual, direct competitor; that is, the geographic market must correspond to the commercial realities of the industry. Clayton Act § 7, 15 U.S.C.A. § 18.

[34] **Antitrust and Trade Regulation** Computer and internet

Relevant geographic market for virtual reality (VR) dedicated fitness applications was United States, in analyzing competitive impacts of VR device provider's acquisition of VR software developer for VR dedicated fitness application, in Federal Trade Commission's (**FTC**) enforcement action seeking injunction to block merger, between provider and developer, that allegedly violated Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly, since content developed in other countries might not be available in United States, and developer's application was not available outside of United States and Canada. Clayton Act § 7, 15 U.S.C.A. § 18.

[35] **Antitrust and Trade Regulation** Presumptions and burden of proof

In analyzing an antitrust challenge to a merger, under the Clayton Act, the two species of potential competition theories, namely, actual potential competition and perceived potential competition, have different elements and are grounded in different presumptions about the market, but they share a common requirement in that they have meaning only as applied to concentrated markets; because both doctrines posit that potential competitors can or will soon impact the market, there would be no need for concern if the market is already genuinely competitive. Clayton Act § 7, 15 U.S.C.A. § 18.

[36] **Antitrust and Trade Regulation** Presumptions and burden of proof

In analyzing an antitrust challenge to a merger, under the Clayton Act, under the potential-competition doctrine, in order to assess whether the relevant market is substantially concentrated, a burden-shifting framework is employed: (1) Federal Trade Commission (**FTC**) may establish a prima facie case that the relevant market

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is substantially concentrated by introducing evidence of concentration ratios, and once established, (2) the burden shifts to the merging companies to show that the concentration ratios, which can be unreliable indicators of actual market behavior, did not accurately depict the economic characteristics of the relevant market, and if the prima facie case is not rebutted, then the market is suitable for the potential competition doctrines. Clayton Act § 7, 15 U.S.C.A. § 18.

[37] **Antitrust and Trade Regulation** Mergers and acquisitions

Federal Trade Commission (**FTC**) established prima facie case that relevant market for virtual reality (VR) dedicated fitness applications in United States was substantially concentrated, as supported **FTC's** claim that, under potential-competition doctrine, proposed merger between VR device provider and VR software developer for VR dedicated fitness application would violate Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly, since **FTC** sufficiently presented evidence using concentration ratios for relevant market, all of which reflected market concentration well above what **FTC's** Merger Guidelines designated as highly concentrated. Clayton Act § 7, 15 U.S.C.A. § 18.

[38] **Antitrust and Trade Regulation** Mergers and acquisitions

Federal Trade Commission (**FTC**) was not required to allege oligopolistic, interdependent, or parallel behavior by virtual reality (VR) device provider and VR software developer for VR dedicated fitness application, in order to establish prima facie case that relevant market for VR dedicated fitness applications in United States was substantially concentrated, as supported **FTC's** claim that, under potential-competition doctrine, proposed merger between provider and developer would violate Clayton Act's prohibition against mergers and acquisitions that could substantially lessen competition or tend to create monopoly, since provider and developer, not **FTC**, had burden to present absence of parallel behavior in order to rebut **FTC's** prima facie case of substantial concentration of market. Clayton Act § 7, 15 U.S.C.A. § 18.

[39] **Antitrust and Trade Regulation** Mergers and Acquisitions

In analyzing an antitrust challenge to a merger, under the Clayton Act, under the potential-competition doctrine, the absence of blatantly anti-competitive effects may not necessarily preclude the propriety of potential competition theories, because the high degree of market concentration indicates that the seeds of anti-competitive conduct are present. Clayton Act § 7, 15 U.S.C.A. § 18.

[40] **Antitrust and Trade Regulation** Mergers and Acquisitions

In analyzing an antitrust challenge to a merger, under the Clayton Act, there are two essential preconditions before actual potential competition theory can be applied: (1) the alleged potential entrant must have available feasible means for entering the relevant market other than by acquiring the target company, and (2) those means offer a substantial likelihood of ultimately producing deconcentration of that market or other significant procompetitive effects. Clayton Act § 7, 15 U.S.C.A. § 18.

[41] **Antitrust and Trade Regulation** Mergers and Acquisitions

Reasonable probability standard, in other words, likelihood noticeably greater than 50%, was standard of proof that Federal Trade Commission (**FTC**) was required to present, under actual potential competition theory of whether merger between virtual reality (VR) device provider and VR software developer for VR dedicated fitness application would substantially lessen

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competition in violation of Clayton Act. Clayton Act § 7, 15 U.S.C.A. § 18.

[42] **Antitrust and Trade Regulation** Preliminary

In determining whether Federal Trade Commission (**FTC**) was entitled to preliminary injunction barring merger between virtual reality (VR) device provider and VR software developer for VR dedicated fitness application, as allegedly substantially lessening competition in violation of Clayton Act based on actual potential competition theory, district court would first consider whether objective evidence presented by **FTC** supported findings and conclusions necessary to satisfy actual potential competition doctrine, and if objective evidence was weak, inconclusive, or conflicting, court would consult subjective evidence to illuminate ambiguities left by objective evidence, with understanding that subjective evidence could not overcome any directly conflicting objective evidence. Clayton Act § 7, 15 U.S.C.A. § 18.

[43] **Antitrust and Trade Regulation** Mergers and Acquisitions

In exploring the feasible means of entry alternative to the challenged acquisition, the court must analyze the incentive and capability of the acquiring firm to enter the relevant market under the actual potential competition theory of an antitrust challenge to a merger, under the Clayton Act. Clayton Act § 7, 15 U.S.C.A. § 18.

[44] **Antitrust and Trade Regulation** Preliminary

Although virtual reality (VR) device provider possessed financial and engineering resources to undertake de novo entry into relevant market for VR dedicated fitness applications in United States, objective evidence that provider presently lacked capability to create fitness and workout content and lacked production studio was probative as to reasonable probability that provider would not enter VR dedicated fitness application market de novo, in support of determining that Federal Trade Commission (**FTC**), seeking injunction barring merger between provider and VR software developer of VR dedicated fitness application, was not likely to succeed on merits of claim that merger would violate Clayton Act, under actual potential competition theory. Clayton Act § 7, 15 U.S.C.A. § 18.

[45] **Antitrust and Trade Regulation** Preliminary

Objective evidence of virtual reality (VR) device provider's incentives and motivations for de novo entry into relevant market for VR dedicated fitness applications did not establish it was reasonably probable that provider would enter relevant market, in support of determining that Federal Trade Commission (**FTC**), seeking injunction barring merger between provider and VR software developer of VR dedicated fitness application, was not likely to succeed on merits of claim that merger would violate Clayton Act, under actual potential competition theory; although demographic, use, and growth metrics undergirded provider's interest in VR fitness, provider would enjoy those incentives even if it remained outside relevant market and provided funding or technical support for in-market developers. Clayton Act § 7, 15 U.S.C.A. § 18.

[46] **Antitrust and Trade Regulation** Preliminary

Subjective evidence of virtual reality (VR) device provider's incentives and motivations for de novo entry into relevant market for VR dedicated fitness applications did not establish it was reasonably probable that provider would enter relevant market, in support of determining that Federal Trade Commission (**FTC**), seeking injunction barring merger between provider and VR software developer of VR dedicated fitness application, was not likely to succeed on merits of claim that merger would violate Clayton Act, under actual potential competition theory, since

provider's subjective interest in entering relevant market, either for hardware development or defensive market purposes, did not result in provider ever seriously contemplating de novo entry by building its own VR fitness application. Clayton Act § 7, 15 U.S.C.A. § 18.

[47] **Antitrust and Trade Regulation** Mergers and acquisitions

Where objective evidence is weak or inconclusive and does not strongly point to feasibility of entry de novo into the relevant market, it is incumbent on the court to consider the potential entrant's actual plans of entry into the relevant market for purposes of ensuring that enforcement of Clayton Act provision, prohibiting mergers and acquisitions where the effect may be substantially to lessen competition or to tend to create a monopoly, does not veer into the realm of ephemeral possibilities. Clayton Act § 7, 15 U.S.C.A. § 18.

[48] **Antitrust and Trade Regulation** Preliminary

Virtual reality (VR) device provider's de novo entry into relevant market for VR dedicated fitness applications by expanding its existing rhythm game application into dedicated fitness and partnering with fitness brand was not reasonably probable, in support of determining that Federal Trade Commission (**FTC**), seeking injunction barring merger between provider and VR software developer of VR dedicated fitness application, was not likely to succeed on merits of claim that merger would violate Clayton Act, under actual potential competition theory, since proposal to reposition provider's top-selling VR application into dedicated fitness application did not enjoy uniform or even widespread support among provider's personnel, who were researching VR fitness opportunities. Clayton Act § 7, 15 U.S.C.A. § 18.

[49] **Antitrust and Trade Regulation** Preliminary

Federal Trade Commission (**FTC**) seeking preliminary injunction barring merger between virtual reality (VR) device provider and VR software developer of VR dedicated fitness application was not likely to succeed on merits of claim that merger would violate Clayton Act, under actual potential competition theory that provider's acquisition of developer would have substantially lessened competition by depriving VR dedicated fitness application market of competition that would have arisen from provider's independent entry into market, since provider's entry into market was not reasonably probable due to lack of fitness content creation and studio production facilities, so provider did not have available feasible means to enter market other than by acquisition. Clayton Act § 7, 15 U.S.C.A. § 18.

[50] **Antitrust and Trade Regulation** Mergers and Acquisitions

To prevail on a claim that an acquisition would have eliminated perceived potential competition, the Federal Trade Commission (**FTC**) must establish, in addition to showing a highly concentrated market, the following: (1) defendant possessed the characteristics, capabilities, and economic incentive to render it a perceived potential de novo entrant into the relevant market, and (2) defendant's premerger presence on the fringe of the target market in fact tempered oligopolistic behavior on the part of existing participants in that market. Clayton Act § 7, 15 U.S.C.A. § 18.

[51] **Antitrust and Trade Regulation** Mergers and Acquisitions

The same objective facts regarding a defendant's capability of entering the relevant market under an actual potential competition theory are also probative of violation of the Clayton Act's prohibition against prohibiting mergers and acquisitions where the effect may be substantially to lessen competition or to tend to create a monopoly, through loss of a procompetitive on-the-fringe influence;

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however, whereas a claim for actual potential competition may consider the potential entrant's intent to enter the market, a perceived potential competition claim ignores the potential entrant's subjective intent to enter the market and instead focuses on the subjective perceptions of the in-market firms. Clayton Act § 7, 15 U.S.C.A. § 18.

[52] **Antitrust and Trade Regulation** Mergers and acquisitions

Antitrust and Trade Regulation Preliminary

Objective and subjective evidence did not demonstrate it was reasonably probable that virtual reality (VR) device provider was perceived as potential competitor into VR dedicated fitness application market, in support of determining that Federal Trade Commission (**FTC**), seeking injunction barring merger between provider and VR software developer of VR dedicated fitness application, was not likely to succeed on merits of claim that merger of provider and developer would violate Clayton Act, under perceived potential competition theory; provider would enjoy demographic, use, and growth incentives even without entering relevant market, and provider's subjective interest in entering market for hardware development or defensive market purposes did not result in serious contemplation of entry. Clayton Act § 7, 15 U.S.C.A. § 18.

[53] **Antitrust and Trade Regulation** Preliminary

Virtual reality (VR) device provider's presence as potential competitor in VR dedicated fitness applications market lacked reasonable probability of having direct effect on existing participants in that market, in support of determining that Federal Trade Commission (**FTC**), seeking injunction barring merger between provider and VR software developer of VR dedicated fitness application, was not likely to succeed on merits of claim that merger would violate Clayton Act, under perceived potential competition theory, since there was no direct or circumstantial evidence to suggest that provider's presence as potential competitor did in fact temper oligopolistic behavior or result in any other procompetitive benefits. Clayton Act § 7, 15 U.S.C.A. § 18.

[54] **Antitrust and Trade Regulation** Preliminary

Federal Trade Commission (**FTC**) seeking preliminary injunction barring merger between virtual reality (VR) device provider and VR software developer of VR dedicated fitness application was not likely to succeed on merits of claim that merger would violate Clayton Act, under perceived potential competition theory that provider's acquisition of developer would have substantially lessened competition by eliminating competitive influence that provider exerted on firms within market by virtue of its presence on fringes of market; objective evidence did not support reasonable probability that firms in market perceived provider as potential entrant, and no evidence suggested that provider's presence did in fact temper oligopolistic behavior or result in any other procompetitive benefits. Clayton Act § 7, 15 U.S.C.A. § 18.

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ORDER DENYING PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTION

Re: ECF Nos. 108, 164, 470

EDWARD J. DAVILA, United States District Judge

***903** This action was brought by Plaintiff Federal Trade Commission ("**FTC**") to block the merger between a virtual reality ("VR") device provider and a VR software developer. Defendant **Meta** Platforms Inc. ("**Meta**") has agreed to acquire all shares of Within Unlimited, Inc. ("Within," collectively with **Meta**, "Defendants"). The **FTC** has come before the Court to seek preliminary injunctive relief pursuant to Section 13(b) of the Federal Trade Commission Act, 15 U.S.C. § 53(b), to enjoin Defendants from consummating their proposed merger (the "Acquisition") pending the outcome of ongoing administrative proceedings before the **FTC**. ECF Nos. 101, 164.

In addition to the **FTC's** motion for preliminary injunction, Defendants have filed a motion to dismiss the Amended Complaint ("FAC") and a motion to strike the opinion of the **FTC's** expert, Dr. Hal J. Singer, regarding the relevant product market definition. ECF Nos. 108, 470.

Over the course of a seven-day evidentiary hearing, the Court heard the parties' arguments and evidence. The Court has also received briefing on all pending motions, as well as pre-hearing and post-hearing submissions of the parties' proposed findings of fact. Having considered the parties' submissions and evidence, the Court DENIES Defendants' motion to dismiss, DENIES the Defendants' motion to strike, and DENIES the **FTC's** motion for preliminary injunction.

I. FACTUAL FINDINGS

A. Defendant **Meta** Platforms, Inc.

1. Defendant **Meta** Platforms, Inc. is a publicly traded corporation organized under Delaware law and headquartered in Menlo Park, California. DX1237, at 11. **Meta** operates a collection of social networking platforms referred to as its "Family of Apps," which includes Facebook, Instagram, Messenger, and WhatsApp. PX0937, at 51. **Meta** also manufactures VR devices, such as the Quest 2 and the Quest

Pro headsets, through its Reality Labs division. Stojsavljevic Hr'g Tr. 71:2–13; 74:10–19.

2. VR technology enables users to experience and interact with a digitally generated three-dimensional environment by wearing a headset with stereoscopic displays in front of each eye. Stojsavljevic Hr'g Tr. 72:25–74:9. Users can download a wide variety of VR software applications (“apps”) from digital marketplaces, or app stores, for use on their personal VR devices. Pruett Hr'g Tr. 219:19–25. Quest headsets are designed so that a user's geolocation determines what content is available and at what price. Stojsavljevic Hr'g Tr. 79:23–80:6.

3. In 2020, 2021, and 2022, Meta spent several billion dollars each year on its VR Reality Labs division. Zuckerberg Hr'g Tr. 1280:9–1282:15.

4. Meta operates an app store called the Quest Store, previously known as the Oculus Store. Third-party app developers can request to have their app distributed in the Quest Store, and Meta also actively seeks out and invites developers to bring apps to the Quest Store. Stojsavljevic Hr'g Tr. 79:16–22; Pruett Hr'g Tr. 220:8–13. Apps must meet several content, technical, and ***904** asset requirements before they may be considered for listing on the Quest Store; however, Meta may still reject an app that meets all the requirements pursuant to the Quest Store's curation policy. Pruett Hr'g Tr. 220:25–223:16. Apart from the Quest Store, Meta also operates App Lab, an app distribution service for VR applications that meet basic technical and content requirements but is otherwise free from any editorial curating by Meta. Pruett Hr'g Tr. 260:16–22. Quest users can also download VR apps from other app stores on VR platforms that Meta does not own, such as SideQuest and Steam VR Store. Pruett Hr'g Tr. 274:8–21.

5. The content and apps that are available for a particular VR system plays an important role in the widespread adoption of that system, and many users may purchase a VR system for specific content they want to experience. Zuckerberg Hr'g Tr. 1294:16–125:2; Stojsavljevic Hr'g Tr. 101:6–13, 101:21–27. As a result, high quality and popular VR apps—dubbed as “system sellers”—can drive adoption and sales of the specific headsets for which they are available. Stojsavljevic Hr'g Tr. 107:23–108:5. Broad adoption of a specific VR system, in turn, will attract third-party app developers to create more VR content for that system, a phenomenon referred to as a “flywheel” effect. PX0100, at 2–3; Bosworth Hr'g Tr. 1048:21–1049:3.

6. When a VR app is developed wholly by a developer unaffiliated with Meta, Meta refers to that as third-party (“3P”) development. When Meta funds all or most of a VR app's development, Meta refers to that as second-party (“2P”) development. When a VR app is developed in-house at Meta, either by acquired VR studios or Meta employees themselves, Meta refers to that as first-party (“1P”) development. Stojsavljevic Hr'g Tr. 72:12–16; 106:16–21.

7. Meta encourages third-party VR app developers to build apps for the Quest platform by providing funding and technical VR engineering assistance to those developers. Stojsavljevic Hr'g Tr. 106:5–15. Specifically, Meta provides grants that are designed to improve existing VR software or incentivize the development of software on Quest that may only exist on another platform. Meta also maintains a developer relations engineering team consisting of veteran engineers who work directly with developers to improve software quality, fix bugs, or polish the experience they are building. Pruett Hr'g Tr. 285:19–286:12. Meta's VR content organization spends approximately [Redacted]. PX0066 (“Rubin Dep.”) 24:5–25:8.

8. In addition to providing funding or engineering support to third-party VR app developers, Meta has also sought to increase the VR app content available on its platform by acquiring third-party app developers and developing its own apps internally. PX0055 (“Verdu Dep.”) 117:5–118:12.

9. Although decisions may be made on a case-by-case basis, Meta typically will seek to acquire or build its own VR app if: [Redacted] PX0127, at 4–5.

10. Similarly, Meta is more inclined to build its own VR app instead of acquiring an existing third-party developer [Redacted] PX0127, at 5.

11. In the past three years, Meta has acquired at least nine VR app studios: Beat Games, Sanzaru Games, Ready at Dawn Studios, Downpour Interactive, BigBox VR, Unit 2 Games, Twisted Pixel, Armature Studio, and Camouflaj. Stojsavljevic Hr'g Tr. 87:5–88:2.

12. The VR apps that Meta has independently developed and released include Horizon Worlds (world building), Horizon Workrooms (productivity), Horizon Venues (live events),

and Horizon Home (social networking). **Meta's** Answer and Affirmative ***905** Defenses ¶ 35, ECF No. 84. **Meta's** background and emphasis has been on communication and social VR apps. Zuckerberg Hr'g Tr. 1273:15–1274:22. That said, **Meta** has also developed and released Dead and Buried, a multiplayer shooter game. Bosworth Hr'g Tr. 1051:18–20.

B. Defendant Within Unlimited, Inc.

13. Defendant Within Unlimited, Inc. is a privately held corporation organized under the laws of Delaware with headquarters in Los Angeles, California. PX0006, at 1, 161. Within is a software development company founded by Chris Milk and Aaron Koblin, who were experienced visual artists. Milk Hr'g Tr. 669:25–670:6; Koblin Hr'g Tr. 649:9–13.

14. Within's flagship product is Supernatural, a subscription VR fitness service launched in April 2020 on the Quest Store. PX0005, at 77. Supernatural releases new workouts daily and continues to add new modalities (*e.g.*, aerobic boxing, meditation) to its lineup of workouts. Koblin Hr'g Tr. 605:15–606:4; Milk Hr'g Tr. 734:1–11. Users access Supernatural's workouts by paying a monthly subscription fee of $18.99 or an annual subscription fee of $179.99. FAC ¶ 24, ECF No. 101-1; Within's Answer and Affirmative Defense ¶ 25, ECF No. 83. [Redacted] Koblin Hr'g Tr. 636:15–22; Milk Hr'g Tr. 735:17–21. Within has never changed Supernatural's prices. Carlton Report ¶ 77. At present, [Redacted] Milk Hr'g Tr. 735:20–21.

C. The Alleged "VR Dedicated Fitness App" Market

15. The **FTC** alleges that the relevant market consists of VR dedicated fitness apps in the United States. Mot. 13, ECF No. 164. The government defines "VR dedicated fitness apps" as VR apps that are "designed so users can exercise through a structured physical workout in a virtual setting anywhere they choose to use their highly portable VR headset." *Id.*

16. Both **Meta** and Within have repeatedly referred to VR apps intended to provide immersive at-home structured physical exercise as "deliberate" or "dedicated" fitness apps. *E.g.*, Rabkin Hr'g Tr. 831:12-24; PX0001, at 5; PX0286, at 1; Milk Hr'g Tr. 681:19-21; PX487, at 4; Pruett Hr'g Tr. 263:6–264:2; PX0004, at 169. **Meta** now describes these apps as "trainer workout apps." PX0060 ("Paynter Dep.") 24:2–12, 56:14–23. VR dedicated fitness apps are sometimes called "VR deliberate fitness apps" or "trainer workout apps." The Court will use the phrase "VR dedicated fitness apps" throughout.

17. VR dedicated fitness apps are marketed to customers for the purpose of exercise. Pruett Hr'g Tr. 263:6–18. Some other VR apps, often called "incidental" or "accidental" fitness apps, may include mechanics that may allow users to exercise as a byproduct but have a primary focus other than fitness (such as gaming). PX0001, at 5 n.10; PX0529, at 2; Carmack Hr'g Tr. 562:12–18. Unlike VR incidental fitness apps, VR dedicated fitness apps often have features like trackable progress goals, heart rate tracking, and motion calibration. PX0001, at 5 n.10; Milk Hr'g Tr. 683:8–21. Additionally, VR dedicated fitness apps generally require the producing company to have expertise and assets that allow them to create exercise content, *e.g.*, workout coaches, green screen studios, stereoscopic capture, post processing pipelines. PX0111; PX0251, at 2–3; PX0127, at 7; Koblin Hr'g Tr. 650:3–12; Garcia Hr'g Tr. 1079:16–24. And because VR dedicated fitness apps create content on an ongoing basis to avoid user boredom, they are better suited than most other VR apps to be priced using a subscription model (although not all VR dedicated fitness apps follow this model). Pruett Hr'g Tr. 269:9–270:17; Singer Hr'g Tr. 359:2–18; Vickey Report ¶ 47.

***906** 18. The user base for VR dedicated fitness apps differs from that of VR overall. VR users generally skew younger and male, but VR dedicated fitness app users tend to have an older and more female set of users. PX0003, at 17; PX0004, at 167; Rubin Dep. 131:19–132:14; PX0127, at 1, 6; Bosworth Hr'g Tr. 1035:18–22. In addition to the diverse appeal of VR dedicated fitness apps, they have strong user retention and rapid growth. Carlton Report ¶¶ 33–35; PX0386, at 12. [Redacted]. PX0003, at 9, 44. [Redacted] PX0386, at 12. [Redacted] Carlton Report ¶ 67, Table 10.

19. Multiple companies that make VR dedicated fitness apps consider their products to compete with the extensive range of methods by which an individual can seek to exercise. According to Within, Supernatural "compete[s] with every product or service or offering that offers fitness or wellness," ranging from connected fitness devices like Peloton equipment to gyms to YouTube videos intended to be mimicked by a viewer. Milk Hr'g Tr. 724:15–25. Within does not, however, consider a VR incidental fitness app to constitute a fitness offering. Koblin Hr'g Tr. 606:5–8. The founder of VirZoom, another VR company with a dedicated fitness app (VZfit), made similar claims, and added that VZfit even "compete[s] with somebody who wants to just jump on their bike and go for a bike ride." Janszen Hr'g Tr. 1143:8–

12; DX1290 ("Janszen Decl.") ¶ 23. However, Odders Lab, another VR company that makes not only a dedicated fitness app but also a rhythm game app and a chess app, stated that its fitness app competed most directly with other fitness dedicated apps, such as Supernatural and FitXR, and that the launch of its fitness app had not diminished sales of its rhythm game app. Garcia Hr'g Tr. 1105:18–1106:21.

20. [Redacted] Apple provides Fitness+, a paid subscription app, and [Redacted] but it does not currently offer its own headset. DX1257, at 3, 24–28; Bosworth Hr'g Tr. 1022:13–16.

21. The customers for more established fitness offerings are perceived to be more likely to have long-term or well-developed fitness routines, while VR dedicated fitness app users are targeted more toward "[Redacted]" who have less fitness experience. PX0051 ("Cibula Dep.") 84:20–25; PX0318, at 1; PX0563, at 1; DX1081, at 1–2. No record evidence suggests that these firms possess VR engineering expertise. PX0118, at 1; Singer Report ¶ 82. As such, these fitness offerings do not create the 360-degree embodiment in a virtual environment provided by VR dedicated fitness apps. *See, e.g.*, Zuckerberg Hr'g Tr. 1298:5–6; Rabkin Hr'g Tr. 835:24–836:3. Although some fitness offerings may display videos of various locations around the world, those videos are displayed on a flat screen. Vickey Hr'g Tr. 1184:12–21.

22. Connected fitness devices are generally stationary and larger than the portable and relatively small VR headset equipment required to use a VR dedicated fitness app. *See, e.g.*, Milk Hr'g Tr. 689:17–25. The upfront device cost can be over $1,000, and users pay a monthly subscription fee to access fitness content; for example, Peloton and Tonal are connected fitness device companies, and cost, respectively $1,445 plus $44 per month and $3,495 plus $49 per month. Singer Report ¶¶ 68–69. There are also more affordable alternatives outside of VR, such as a Peloton mobile app-only subscription, which costs $12.99 per month. *Id.* ¶ 65; DX1081, at 1–2. The subscription model is common in the overall fitness industry—in addition to the examples above, traditional gyms and Fitness+ charge monthly subscriptions. PX0001, at 2; DX1081, at 1–2; DX1257, at 3, 24–28.

23. Within's VR app Supernatural is a dedicated fitness app: it was designed specifically ***907** for fitness and offers "daily personalized full-body workouts and expert coaching from real-world trainers." PX0906, at 1. Within began developing Supernatural in February 2019, and launched it in the Quest Store on April 23, 2020. PX0005, at 77; PX0906, at 1. Supernatural now offers over 800 fully immersive video workouts set to music in various photorealistic landscapes, such as the Galapagos Islands and the Great Wall of China. FAC ¶ 24, ECF No. 101-1; Koblin Hr'g Tr. 604:18–605:19; ECF No. 83 ¶ 25; PX0906, at 1; *see id.* at 3–4, 6, 8. Through deals with major music studios, Supernatural sets each workout to songs from A-list artists like Katy Perry, Imagine Dragons, Lady Gaga, and Coldplay. FAC ¶ 24, ECF No. 101-1. Within optimized the exercise movements in Supernatural through consultations with experts holding PhDs in kinesiology and biomechanics; the workouts are led by personal trainers, calibrated to users' range of motion, mapped out in VR by dance choreographers, and filmed at Within's studio in Los Angeles. PX0712, at 18–20, 27–29. Within's founders are experienced directors of interactive music videos. *Id.* at 3–4. [Redacted] Supernatural is only available to Quest headset users in the United States and Canada. Milk Hr'g Tr. 671:4–9.

24. Other VR dedicated fitness apps include FitXR, Les Mills Bodycombat, VZfit, VZfit Premium, PowerBeats VR, RealFit, Holofit, Liteboxer, Liteboxer Premium VR, and VRWorkout. Singer Report ¶ 39. Like Supernatural, Liteboxer Premium VR costs $18.99 per month. *Id.* Les Mills Bodycombat, PowerBeatsVR, and RealFit have respective one-time costs of $29.99, $22.99, and $19.99; Liteboxer and VRWorkout are free; and the other VR dedicated fitness apps charge monthly subscription prices ranging from about $9 to $12. *Id.* Companies producing VR dedicated fitness apps generally pursue business strategies optimized for growth and market penetration, [Redacted]. Milk Hr'g Tr. 736:15–21; Garcia Hr'g Tr. 1111:8–1112:14; Janszen Hr'g Tr. 1147:22–1148:1. These companies expect that high growth and penetration metrics will render them attractive acquisition targets. *Id.*; Zyda Hr'g Tr. 1227:18–22, 1228:15–18.

25. All of these apps, including Supernatural, were launched within the past five years. Carlton Report ¶ 125. New VR dedicated fitness apps are expected to launch in the near future. *Id.* Supernatural currently possesses an 82.4% share of market revenue among the existing VR dedicated fitness apps (or a 77.6% share of VR apps in the Quest Store's "Fitness and Wellness" category). Singer Report ¶ 75, Tables 2-A, 2-B. [Redacted] Singer Rebuttal Report ¶¶ 124–25, Tables 1-A, 1-B.

26. The **FTC's** economics expert, Dr. Singer, analyzed the concentration of the VR dedicated fitness app market using the Herfindahl-Hirschman Index ("HHI"). Singer Report ¶

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76. Dr. Singer performed the HHI calculation multiple times to account for different conceptions of the firms contained within the VR dedicated fitness app market. *Id.* Using a set of firms based off a list of Supernatural competitors provided by **Meta** to the **FTC**, Dr. Singer calculated an HHI of 6,917 by measuring each firm's market share of revenue. *Id.* ¶¶ 46, 76, Table 2-A. Then, to capture broader potential set of firms within the VR dedicated fitness app market, Dr. Singer analyzed all apps listed in **Meta's** Quest Store under its "Fitness & Wellness" category and calculated an HHI of 6,148 (again, based on revenue). *Id.* ¶¶ 48, 76, Table 2-A. Dr. Singer also calculated HHI using market share of total hours spent and identified outputs 6,307 for the set of firms based off **Meta's** list and 4,863 for the broader set of "Fitness & Wellness firms." Singer Rebuttal Report ¶¶ 124–25, Table 1-A. Lastly, Dr. Singer calculated ***908** HHI using market share of monthly active users and identified outputs of 3,377 and 2,098 for the two respective sets of firms. *Id.* ¶¶ 124–25, Table 1-B. Markets are generally considered "highly concentrated" when the HHI is above 2,500 and "moderately concentrated" when the HHI is between 1,500 and 2,500. Singer Report ¶ 76 & n.129.

D. The Challenged Acquisition

27. **Meta** and Zuckerberg first expressed interest in acquiring Within as early as February 22, 2021. PX0170, at 1–2.

28. After Zuckerberg showed some interest in [Redacted], Michael Verdu (Vice President of VR Content) investigated and [Redacted]. PX0118, at 2, Mar. 4, 2022; Verdu Dep. 7:22–8:02.

29. On March 11, 2021, **Meta** employees met to discuss potential VR fitness investments with Mark Rabkin, the head of VR technology at **Meta** and one of the final decision makers to approve any VR investment. PX0179, at 2; Rabkin Hr'g Tr. 800:7–11; Stojsavljevic Hr'g Tr. 189:24–190:12. In advance of this meeting, Ananda Dass (**Meta's** director of non-gaming VR content) and Jane Chiao (business-side employee) prepared a pre-read document analyzing five potential investment options. PX0127, Mar. 10, 2021; Stojsavljevic Hr'g Tr. 69:18–24, 138:11–18, 140:23–141:1, 149:16–151:12. Shortly before this meeting, on March 4, 2021, Jane Chiao had also prepared a document titled, [Redacted]. PX0492, at 7, Mar. 9, 2021. During the meeting, the attendees decided [Redacted]. PX0179.

30. On March 17, 2021, Dass and Chiao summarized the advantages and disadvantages of acquiring Supernatural [Redacted]. At this time, they proposed spending the next few months inquiring into [Redacted]. PX0284, Mar. 17, 2021.

31. On April 20, 2021, Melissa Brown (Head of Developer Relations) prepared an executive summary pre-read in advance of **Meta's** meeting with Within, which was circulated to Verdu and Dass. The executive summary contains [Redacted] PX0565, Apr. 20, 2021.

32. On April 26, 2021, Brown circulated a [Redacted] PX0253, Apr. 26, 2021.

33. On May 26, 2021, Anand Dass [Redacted] DX1012, at 1, 3, May 26, 2021. [Redacted] *Id.*; *see also* PX0123, at 2. [Redacted] PX0117, June 10, 2021.

34. Frank Casanova (Apple's senior director of augmented reality product marketing) testified that Apple [Redacted]. Casanova's personal recollection was that [Redacted]. DX1219 ("Casanova Dep.") 90:20–93:15.

35. In mid-July 2021, **Meta** and Within entered into a non-binding term sheet regarding a potential acquisition. PX0062 ("Milk Dep.") 129:2–14; Milk Hr'g Tr. 720:12–15. **Meta** and Within executed the Merger Agreement on October 22, 2021. DX1072, Oct. 22, 2021.

E. Beat Saber Expansion Proposal

36. Beat Saber is a VR rhythm game in which players use virtual swords to slash oncoming blocks timed to music. FAC ¶ 30; **Meta's** Answer and Affirmative Defenses ¶ 33. Beat Saber is the most popular and best-selling VR app of all time. Stojsavljevic Hr'g Tr. 82:23–83:8; Rabkin Hr'g Tr. 820:9–11.

37. **Meta** acquired Beat Games, the studio that produces Beat Saber, in late 2019. **Meta's** Answer and Affirmative Defenses ¶ 4.

38. At the time it acquired Beat Games, **Meta** viewed Beat Saber as a potential "vector into fitness as a game-adjacent use case." PX0342, at 2, Sept. 27, 2019. There was a continuing internal dialogue at **Meta** regarding a potential fitness version of Beat Saber, which was referred to as the ***909** "perpetual white whale quest to get ... Beat Games to build a fitness version of Beat Saber." Verdu Dep. 112:04–112:12, 178:12–20. The founders of Beat Games were "warm to the idea" and released a "FitBeat" song for Beat Saber, but the idea otherwise did not gain traction. Verdu Dep. 178:12–20; see also PX0123 [Redacted] Sept. 15, 2021.

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39. On February 16, 2021, Rade Stojsavljevic (director of **Meta's** first party studios) was riding his Peloton bike on a workout with a live DJ spinning music when he came up with the idea of a Peloton partnership with Beat Saber. Stojsavljevic Hr'g Tr. 127:20–128:24.

40. Shortly thereafter, Stojsavljevic collaborated on a presentation called "Operation Twinkie," in which he proposed repositioning Beat Saber as a fitness app in a partnership with Peloton. The same presentation recommended [Redacted] PX0527, at 5, 8.

41. On March 4, 2021, Chiao responded to comments regarding partnering with Peloton to create VR content, [Redacted] PX0251, at 2–3, Mar. 4, 2021.

42. On March 11, 2021, Stojsavljevic attended the VR fitness investment meeting with Mark Rabkin. PX0179, at 2; *see also supra* ¶ 31. Alongside the acquisitions of [Redacted] Supernatural, the March 11 meeting concluded that Stojsavljevic was to prepare a presentation to Rabkin to expand Beat Saber to dedicated fitness. PX0179, at 2.

43. On March 15, 2021, Stojsavljevic queried a group chat and solicited feedback on his proposal for a Beat Saber–Peloton partnership. PX0407, at 1, Mar. 15, 2021. The group members discussed different forms the partnership could take. *Id.*

44. On March 25, 2021, Stojsavljevic received a presentation from a consultant, [Redacted], titled "Beat Saber x Peloton Opportunity Identification." PX0121, at 2. The presentation provided a quote for [Redacted] to investigate the Beat Saber and Peloton opportunity, which was to take about 8 weeks and cost $23,500. *Id.* at 8. [Redacted]'s proposed research approach included nine action items, as follows: (1) analyze the home fitness market; (2) analyze the Peloton market; (3) assess the Peloton bike capabilities; (4) analyze the current XR [1] fitness market; (5) analyze Beat Saber's current strategy and its Fitbeat song; (6) identify Beat Saber x Peloton opportunities; (7) identify XR fitness opportunities; (8) define the go-to-market approach; and (9) define how to approach Peloton with the partnership. *Id.* at 5–6. Stojsavljevic ultimately did not engage [Redacted] to undertake this research project. PX0052 ("Stojsavljevic Dep.") 219:23–220:1.

45. Based on the parties' representations and to the best of the Court's review of the evidence, the next reference to the Beat Saber–Peloton proposal was on June 11, 2021, after **Meta** began pursuing Within as an acquisition target. PX0341, at 2, June 11, 2021. In a chat, Stojsavljevic briefly mentioned that Chiao and Dass had disagreed with his Beat Saber–Peloton proposal and had wanted to [Redacted]. *Id.* At the evidentiary hearing, Stojsavljevic testified that his enthusiasm for the Beat Saber–Peloton proposal had "slowed down" before **Meta's** decision to acquire Within. Stojsavljevic Hr'g Tr. 165:12–17. He also testified that he had not undertaken the research project that he had promised Rabkin because he had been busy working ***910** on another **Meta** acquisition. *Id.*; *see also supra* ¶ 44.

46. On September 15, 2021, [Redacted] Jason Rubin—who had just transitioned into his role as the vice president of Metaverse content on August 1, 2021—made comments about Beat Saber in response to [Redacted]PX0123, at 2, Sept. 15, 2021; *see also* Rubin Dep. 28:8–15. Rubin suggested that [Redacted] PX0123, at 2. He subsequently remarked that [Redacted] *Id.*

II. PROCEDURAL HISTORY

Defendants signed an Agreement and Plan of Merger for a proposed acquisition of Within by **Meta** (the "Acquisition") on October 22, 2021. ECF No. 101-1 ("FAC") ¶ 24; PX0004, at 161. On July 27, 2022, the **FTC** filed a complaint for a temporary restraining order and preliminary injunction enjoining the Acquisition. *See* Compl., ECF No. 1. At the time of the **FTC's** filing, Defendants would have been free to consummate the Acquisition after July 31, 2022. *Id.* ¶ 27. On July 29, 2022, the Court granted the parties' stipulated order preventing Defendants from consummating the Acquisition until after August 6, 2022. ECF No. 19. On August 5, 2022, the Court granted the parties' second stipulated order and entered a temporary restraining order enjoining the Acquisition until after December 31, 2022. ECF No. 56. The **FTC** filed its amended complaint on October 7, 2022, *see* FAC, and Defendants moved to dismiss the amended complaint on October 13, 2022, ECF No. 108 ("MTD"). The Court took the MTD under submission without oral argument on December 2, 2022. ECF No. 388.

On October 31, 2022, pursuant to the parties' stipulated order, the **FTC** filed its memorandum in support of its motion for a preliminary injunction (the "Motion"). ECF Nos. 86, 164. The evidentiary hearing on the Motion began on December 8, 2022. *See* ECF No. 441. Following the in-Court testimony of the **FTC's** economics expert, Dr. Hal J. Singer, on December 13, 2022, Defendants orally moved the Court to

strike Dr. Singer's testimony. *See* ECF No. 464. Defendants subsequently filed a motion to strike Dr. Singer's opinion regarding the definition of the relevant product market. ECF No. 470. The evidentiary hearing concluded on December 20, 2022, *see* ECF No. 492, and the Court granted the parties' stipulated order extending the temporary restraining order to enjoin the Acquisition until January 31, 2023, ECF No. 508.

On January 31, 2023, the **FTC** filed an emergency motion requesting an extension of the temporary restraining order if the Court either was not prepared to rule on the Motion until after that date or denied the Motion. ECF No. 543 ("Emergency Motion"). The Court's ruling on the Emergency Motion will be filed in a separate order.

The Court now rules on the Motion, the MTD, and the motion to strike Dr. Singer's opinion on the relevant product market definition. *See* ECF Nos. 108, 164, 470.

III. LEGAL CONCLUSIONS

A. Legal Standard

[1] Section 13(b) of the **FTC** Act provides that "[u]pon a proper showing that, weighing the equities and considering the Commission's likelihood of ultimate success, such action would be in the public interest, and after notice to the defendant, a temporary restraining order or a preliminary injunction may be granted without bond." 15 U.S.C. § 53(b)(2). In evaluating a motion for preliminary injunction brought under Section 13(b), courts must "1) determine the likelihood that the Commission will ultimately succeed on the merits and 2) balance the equities." *F.T.C. v. Warner Commc'ns Inc.*, 742 F.2d 1156, 1160 (9th Cir. 1984) (emphasis added) (citing ***911** *F.T.C. v. Simeon Mgmt. Corp.*, 532 F.2d 708, 713–14 (9th Cir. 1976)).

[2] **[3]** **[4]** **[5]** The federal court is not tasked with "mak[ing] a final determination on whether the proposed merger violates Section 7, but rather [with making] only a preliminary assessment of the merger's impact on competition." *Warner Commc'ns Inc.*, 742 F.2d at 1162. To obtain a preliminary injunction, the **FTC** must "raise questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the **FTC** in the first instance and ultimately by the Court of Appeals." *Id.* (citations omitted); *see also* ***FTC*** *v. Whole Foods Market, Inc.*, 548 F.3d 1028, 1035 (D.C. Cir. 2008) ("the **FTC** [must] 'raise questions going to the merits so serious, substantial, difficult[,] and doubtful as to make them fair ground for thorough investigation.' "). Although a district court may not "require the **FTC** to prove the merits, ... it must 'exercise independent judgment' about the questions § 53(b) commits to it." *Whole Foods Market, Inc.*, 548 F.3d at 1035 (citations omitted). The **FTC** is therefore required to provide more than mere questions or speculations supporting its likelihood of success on the merits, and the district court must decide the motion based on "all the evidence before it, from the defendants as well as from the **FTC**." *Id.* (citations omitted); *see United States v. Siemens Corp.*, 621 F.2d 499, 506 (2d Cir. 1980) (noting that "the Government must do far more than merely raise sufficiently serious questions with respect to the merits" in demonstrating a "reasonable probability" of a Section 7 violation.).

B. Relevant Market Definition

[6] **[7]** The first step in analyzing a merger challenge under Section 7 of the Clayton Act is to determine the relevant market. *U.S. v. Marine Bancorporation, Inc.*, 418 U.S. 602, 619, 94 S.Ct. 2856, 41 L.Ed.2d 978 (1974) (citing *E.I. Du Pont*, 353 U.S. 586, 593, 77 S.Ct. 872, 1 L.Ed.2d 1057 (1957)); *see* ***FTC*** *v. Qualcomm Inc.*, 969 F.3d 974, 992 (9th Cir. 2020) ("A threshold step in any antitrust case is to accurately define the relevant market, which refers to 'the area of effective competition.' "). The relevant market for antitrust purposes is determined by (1) the relevant product market and (2) the relevant geographic market. *Brown Shoe Co. v. U.S.*, 370 U.S. 294, 324, 82 S.Ct. 1502, 8 L.Ed.2d 510 (1962).

1. Product Market

[8] **[9]** **[10]** **[11]** **[12]** "The outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it." *Brown Shoe*, 370 U.S. at 325, 82 S.Ct. 1502. "Within a general product market, 'well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes.' " *Hicks v. PGA Tour, Inc.*, 897 F.3d 1109, 1121 (9th Cir. 2018) (quoting *Brown Shoe*, 370 U.S.

at 325, 82 S.Ct. 1502); *see also* *Newcal Indus., Inc. v. Ikon Office Sol'n*, 513 F.3d 1038, 1045 (9th Cir. 2008) ("[A]lthough the general market must include all economic substitutes, it is legally permissible to premise antitrust allegations on a submarket."). The definition of the relevant market is "basically a fact question dependent upon the special characteristics of the industry involved." *Twin City Sportservice, Inc. v. Charles O. Finley & Co., Inc.*, 676 F.2d 1291, 1299 (9th Cir. 1982). Products need not be fungible to be included in a relevant market, but a relevant market "cannot meaningfully encompass th[e] infinite range" of substitutes for a product. *Id.* at 1271 (quoting ***912** *Times–Picayune Publishing Co. v. United States*, 345 U.S. 594, 611, 612 n. 31, 73 S.Ct. 872, 97 L.Ed. 1277, (1953)). The overarching goal of market definition is to "recognize competition where, in fact, competition exists." *Brown Shoe*, 370 U.S. at 326, 82 S.Ct. 1502; *see also* *U.S. v. Continental Can Co.*, 378 U.S. 441, 449, 84 S.Ct. 1738, 12 L.Ed.2d 953 (1964) ("In defining the product market between these terminal extremes [of fungibility and infinite substitution], we must recognize meaningful competition where it is found to exist."); ***FTC** v. Whole Foods Market, Inc.*, 548 F.3d 1028, 1039 (D.C. Cir. 2008) ("As always in defining a market, we must 'take into account the realities of competition.' ") (citations omitted).

[13] **[14]** **[15]** Courts have used both qualitative and quantitative tools to aid their determinations of relevant markets. A qualitative analysis of the relevant antitrust market, including submarkets, involves "examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors." *Brown Shoe*, 370 U.S. at 325, 82 S.Ct. 1502; *see also, e.g., Klein v. Facebook, Inc.*, 580 F. Supp. 3d 743, 766–68 (N.D. Cal. 2022) (applying *Brown Shoe* factors). A common quantitative metric used by parties and courts to determine relevant markets is the Hypothetical Monopolist Test ("HMT"), as described in the U.S. Department of Justice and the **FTC's** 2010 Merger Guidelines. U.S. Dep't of Justice & **FTC**, *Horizontal Merger Guidelines* ("2010 Merger Guidelines") § 4 (2010); *see also, e.g.,* *U.S. v. H & R Block, Inc.*, 833 F. Supp. 2d 36, 51 (D.D.C. 2011) ("An analytical method often used by courts to define a relevant market is to ask hypothetically whether it would be profitable to have a monopoly over a given set of substitutable products. If so, those products may constitute a relevant market.").

[16] **[17]** There is "no requirement to use any specific methodology in defining the relevant market." *Optronic Techs., Inc. v. Ningbo Sunny Elec. Co., Ltd.*, 20 F.4th 466, 482 (9th Cir. 2021). As such, courts have determined relevant antitrust markets using, for example, only the *Brown Shoe* factors, or a combination of the *Brown Shoe* factors and the HMT. *See, e.g.,* *Lucas Auto. Eng., Inc. v. Bridgestone/Firestone, Inc.*, 275 F.3d 762, 766–68 (9th Cir. 2001) (relying on *Brown Shoe* factors alone in review of district court's determination of relevant market); *United States v. Aetna Inc.*, 240 F. Supp. 3d 1, 20–21 (D.D.C. 2017) (using HMT and *Brown Shoe* factors to analyze relevant market). The Ninth Circuit has "repeatedly noted that the *Brown Shoe* indicia are practical aids for identifying the areas of actual or potential competition and that their presence or absence does not decide automatically the submarket issue." *Thurman Indus., Inc. v. Pay 'N Pak Stores, Inc.*, 875 F.2d 1369, 1375 (9th Cir. 1989) (citations omitted). The suitability of a submarket as a relevant antitrust market "turns ultimately upon whether the factors used to define the submarket are 'economically significant.' " *Id.*

The **FTC** proposes a relevant product market consisting of VR dedicated fitness apps, meaning VR apps "designed so users can exercise through a structured physical workout in a virtual setting." Mot. 13. According to the **FTC**, VR dedicated fitness apps are distinct from (1) other VR apps and (2) other fitness offerings. *Id.* 14. To differentiate their proposed market from other VR app markets, the **FTC** claims that VR dedicated fitness apps have distinct customers and pricing strategies. *Id.* The **FTC** further argues that VR dedicated fitness apps are in a separate market from other fitness offerings (*e.g.*, gyms, at-home fitness equipment) because they provide users with "fully immersive, 360-degree ***913** environments," are fully portable, save space, cost less, and target a different type of consumer. *Id.* 14–15. The **FTC** claims that these qualitative product differences satisfy the *Brown Shoe* practical indicia of a relevant market, and that the Hypothetical Monopolist Test conducted by

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the **FTC's** economics expert further confirms the relevant product market definition. *Id.* 15.

Unsurprisingly, Defendants disagree. They claim that the **FTC's** proposed market is impermissibly narrow because it excludes "scores of products, services, and apps" that are "reasonably interchangeable" with VR dedicated fitness apps, including dozens of VR apps categorized as "fitness" apps on the Quest platform, fitness apps on gaming consoles and other VR platforms, and non-VR connected fitness products and services. Opp. 8, ECF No. 216. Defendants argue that members of the **FTC's** proposed market subjectively consider other VR apps and other fitness offerings to be competing products, and that several such products also possess the very features—portability, immersion, and pricing models—that the **FTC** highlights as distinguishing or unique to its proposed market. *Id.* 8–10. Defendants also contend that Dr. Singer's HMT analysis is fatally flawed due to methodological errors in the survey underlying the test. *Id.* 11.

In this case, the Court finds the **FTC** has made a sufficient evidentiary showing that there exists a well-defined relevant product market consisting of VR dedicated fitness apps.

a. *Brown Shoe* Analysis

[18] The Court first examines in turn each of the *Brown Shoe* factors, *i.e.*, "practical indicia [such] as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors." 370 U.S. at 325, 82 S.Ct. 1502.

i. Industry or Public Recognition

[19] The evidence indicates that Defendants and other VR dedicated fitness app makers viewed VR dedicated fitness apps as an economic submarket of VR apps. For example, [Redacted] PX0003, at 44. [Redacted] *Id.* at 9. Within's contemporaneous view of untapped market segments indicates that a "fitness first" app paired with a VR headset—*i.e.*, a VR dedicated fitness app—would be in a distinct segment of the overall VR market. *See id.* at 31. Likewise, as explained in greater detail in the sections below, **Meta** repeatedly stated that VR dedicated fitness apps constituted a distinct market opportunity within the VR ecosystem due to their unique uses, distinct customers, and distinct prices. *See infra* Sections III.B.1.a.ii., iv., v. And a representative the VR app company Odders Lab testified that the launch of its VR dedicated fitness app did not diminish sales of its VR rhythm app, acknowledging that its VR fitness app "compete[d] more directly with fitness dedicated applications than gaming applications." Garcia Hr'g Tr. 1105:18–1106:21. Industry companies' internal communications showing frequent distinctions between various categories of applications is "strong[ ] support" of a distinct submarket. *Klein*, 580 F. Supp. 3d at 758.

Participants in the broader fitness industry also recognized VR fitness as a "separate economic entity." [Redacted] *See* *United States v. Microsoft Corp.*, 253 F.3d 34, 53 (D.C. Cir. 2001) (rejecting inclusion of middleware products in the relevant market where middleware was a potential, rather than current, competitor).

Defendants claim that members of the VR dedicated fitness app industry understood the market in which they operated to ***914** consist of "[s]cores of products, services, and apps available to consumers who want to exercise." Opp. 8; Milk Hr'g Tr. 724:15–25 ("[Redacted]"); *id.* 779:7–8 ("We have thousands of competitors."); *see also* Janszen Hr'g Tr. 1143:8–12 (VR dedicated fitness app VirZoom "compete[s] with somebody who wants to just jump on their bike and go for a bike ride"). Defendants also contend that "[e]stablished fitness and technology firms ... view VR fitness as competitive with off-VR products," and point as an example to Apple's inclusion of Supernatural and the Peloton Guide in the "competitive landscape" when it [Redacted]. [2] Opp. 9; DX1257, at 3, 24–28.

Defendants' evidence shows that there is a broad fitness market that includes everything from VR apps to bicycles. This in no way precludes the existence of a submarket constituting a relevant product market for antitrust purposes. *Brown Shoe*, 370 U.S. at 325, 82 S.Ct. 1502; *Newcal Indus.*, 513 F.3d at 1045. As the Ninth Circuit has noted, a relevant antitrust market "cannot meaningfully encompass th[e] infinite range" of substitutes for a product—yet this is exactly how Defendants propose to define the market. *Twin City Sportservice, Inc. v. Charles O'Finley & Co., Inc.*, 512 F.2d 1264, 1271 (9th Cir. 1975). The Court therefore acknowledges that VR dedicated fitness apps compete for consumers with every manner of exercise (including gyms,

bike rides, and connected fitness), but finds that Defendants and the broader fitness industry recognized VR dedicated fitness apps as an economically distinct submarket.

ii. Peculiar Characteristics and Uses

[20] The evidence indicates that VR dedicated fitness apps have several "peculiar characteristics and uses" in comparison to both other VR apps and non-VR fitness offerings. *Brown Shoe*, 370 U.S. at 325, 82 S.Ct. 1502. Even assuming "[a]lmost all VR applications require body movement," Pruett Hr'g Tr. 264:16, VR dedicated fitness apps are "specifically marketed to customers for the purpose of exercise," *id.* 263:6–18. To support that marketing, VR dedicated fitness apps (unlike other VR apps) are often characterized by their fitness-specific features, such as trainer-led workout regimens, calorie tracking, and the ability to set and track progress toward fitness goals. *See, e.g., id.* 263:14–23; Paynter Dep. 24:2–12 ("what [**Meta**] used to call [dedicated] fitness apps now correspond to a category ... call[ed] ... trainer workout apps"); PX0487, at 4 (VR dedicated fitness apps are "[d]esigned to allow a player to deliberately set and attain fitness goals, with fitness-specific features i.e. coaching, trackable progress"); PX0001, at 5 n.10 ("**Meta** draws a distinction between apps designed to allow users to set and attain fitness goals, with features like coaching and trackable progress (called 'deliberate' or 'dedicated' fitness apps) and games whose primary focus is not fitness that allow users to get a workout as a byproduct (sometimes called 'incidental' or 'accidental' fitness apps).").

The most "peculiar characteristic" of VR dedicated fitness apps in comparison to non-VR fitness offerings is, of course, the VR technology itself. A VR user is "embodied" in a virtual environment. Zuckerberg Hr'g Tr. 1298:5–6. She is "teleported to a different place, feeling like when you move your head and look around, you're in a new space and seeing virtual things as if they are real, which is virtual reality." Rabkin Hr'g Tr. 835:24–836:3. Defendants' fitness industry expert, Dr. Vickey, submitted that non-VR fitness options could also be immersive, describing the non-VR Hydrow rowing machine as an "immersive exercise piece of equipment" because the ***915** Hydrow displayed video footage of various locations on a touchscreen the user viewed while rowing.[3] Vickey Hr'g Tr. 1184:12–21. The Court finds that no matter how crisp or accurate a video may be, a two-dimensional screen display is inherently far less immersive than a 360-degree environment. The evidence does not suggest—and the Court is not aware of—any other at-home fitness offering that can transport the user in this way. That a user of a VR dedicated fitness app can exercise in a VR setting is, therefore, a "distinct core functionality" indicative of a submarket. *Klein*, 580 F. Supp. 3d at 767 (quoting *Datel Holdings, Ltd. v. Microsoft Corp.*, 712 F. Supp. 2d 974, 997 (N.D. Cal. 2010)).

The **FTC** puts forth other hallmarks of VR dedicated fitness apps that generally differ from characteristics of non-VR fitness offerings. For example, the **FTC** argues that "VR headsets are fully portable and take up little space." Mot. 14. These appear to be distinguishing features in relation to bulky connected fitness devices, such as the Peloton Bike or Hydrow rowing machine, but Defendants persuasively argue that mobile fitness apps can offer these same functionalities.[4] Opp. 10. Nonetheless, the virtual reality fitness experience created by VR dedicated fitness apps appears to be vastly different from a workout conducted on a large and stationary device or based off a mobile phone screen.

With respect to "peculiar ... uses," Defendants have shown that consumers use non-VR fitness offerings for exercise. *See supra* Section III.B.1.a.i. Defendants have additionally shown that consumers may use other VR apps for fitness. *See, e.g.*, Carmack Hr'g Tr. 562:12–18 ("You can work up a pretty good sweat in Beat Saber."); PX0529, at 2 ("UXR reports that many users have fitness intent among these [incidental fitness] apps"). As explained above, the existence of a broader fitness market does not mean a relevant submarket does not exist. *Supra* Section III.B.1.a.i. Defendants have themselves recognized the characteristics that distinguish VR dedicated fitness apps from other VR apps. *E.g.*, PX0001, at 5 n.10 ("**Meta** draws a distinction between apps designed to allow users to set and attain fitness goals, with features like coaching and trackable progress (called 'deliberate' or 'dedicated' fitness apps) and games whose primary focus is not fitness that allow users to get a workout as a byproduct (sometimes called 'incidental' or 'accidental' fitness apps)."); Milk Hr'g Tr. 683:8–21 (Supernatural, unlike Beat Saber, "employed experts in movement and fitness[;] built companion apps for the phones and for heart rate tracking integration[; and] calibrate[d to a] range of motion so that [it would not] injury anybody."); *see also* Koblin Hr'g Tr. 606:5–8 ("VR games that require some incidental physical exertion" are not a fitness offering). The Court therefore finds that the "peculiar characteristics and uses" factor of the *Brown Shoe* analysis

supports the finding that VR dedicated fitness apps constitute a relevant antitrust product market. *See, e.g., SC Innovations, Inc. v. Uber Techs., Inc.*, 434 F. Supp. 3d 782, 792 (N.D. Cal. 2020) (finding plaintiffs alleged a submarket for ride-sharing services excluding taxis, in part due to distinguishing features such as ability ***916** to rate and review drivers and share rides).

iii. Unique Production Facilities

[21] The parties did not explicitly develop arguments regarding unique production facilities in support of their positions regarding the relevant product market. *See* Mot. 13–16; Opp. 7–11. The Court notes, however, that VR dedicated fitness apps require a unique combination of production inputs. [Redacted] *See* Singer Report ¶ 82 ("[T]he talent needed to create true triple-A VR experiences is going to be scarce and really valuable in a few years.") (citing PX0118, at 1); Pruett Hr'g Tr. 286:6–8 ("I have an engineering team ... [who] are a group of veteran engineers who are particular experts in our VR technology and our hardware."). Similarly, most VR companies are unlikely to have the fitness expertise and equipment necessary to create content for VR dedicated fitness apps. *See* Singer Report ¶ 84 ("[Redacted]") (citing PX0251, at 2–3). Koblin Hr'g Tr. 650:3–12 ("[I]t seemed highly unlikely to me that [**Meta**] would get into virtual reality fitness ... honestly at that level of depth, it just seemed extremely unlikely that they would hire coaches and build a green screen studio and dive deep into the psychology of what makes fitness fitness."); Garcia Hr'g Tr. 1079:16–24 ("[One of the things that we have done in Odders Lab whenever developing any of our apps has always been looking into — been looking at the experts.... And for our fitness app, we also started reaching out to local experts.").

[22] Although relevant markets are generally defined by demand-side substitutability, supply-side substitution also informs whether alternative products may be counted in the relevant market. *Twin City Sportservice, Inc.*, 512 F.2d at 1271 ("While the majority of the decided cases in which the rule of reasonable interchangeability is employed deal with the 'use' side of the market, the courts have not been unaware of the importance of substitutability on the 'production' side as well."); *see also Brown Shoe*, 370 U.S. at 325 n.42, 82 S.Ct. 1502 ("The cross-elasticity of production facilities may also be an important factor in defining a product market."); Julian von Kalinowski et al., 2 Antitrust Laws & Trade Regulation § 24.02[1][c], at 24–55 (2d ed. 2012) ("Another important factor in defining a product market is the ability of existing companies to alter their facilities to produce the defendant's product.... The Supreme Court has long recognized the significance of this factor, often referred to as cross-elasticity of supply.") (footnote omitted); 2010 Merger Guidelines, § 5.1 & n.8 (high supply side substitutability may be used to aggregate products into a market description).

[23] Supply-side substitution focuses on suppliers' "responsiveness to price increases and their ability to constrain anticompetitive pricing by readily shifting what they produce." *Federal Trade Commission v. RAG-Stiftung*, 436 F. Supp. 3d 278, 293 (D.D.C. 2020) (citing *Rebel Oil Co. v. Atlantic Richfield Co.*, 51 F.3d 1421, 1436 (9th Cir. 1995) ("reasonable market definition must also be based on 'supply elasticity' "), *cert. denied*, 516 U.S. 987, 116 S.Ct. 515, 133 L.Ed.2d 424 (1995)). Here, as explained above, the evidence indicates that neither general fitness firms nor general VR firms have the production facilities to readily produce a substitute VR dedicated fitness app product, even if VR dedicated fitness apps were to raise prices and make market entry more attractive. *See also* Singer Report, Section F ("Would-Be Suppliers of VR Dedicated Fitness Apps Face Significant Barriers to Entry"). That existing companies are not easily able to alter their facilities to produce VR dedicated fitness apps is additional evidence that ***917** such apps constitute a distinct product market. [5]

iv. Distinct Customers

[24] The **FTC** proffered evidence showing that users of VR dedicated fitness apps differ from those of other VR apps along multiple axes. Internal evaluations by **Meta** and Within found that although overall users of VR apps skewed younger and male, users of VR dedicated fitness apps tended to have an older and more female user base. For example, **Meta** claimed in its response to the **FTC's** Second Request regarding the **Meta**-Within transaction that the overall Quest user base was about [Redacted] *See* PX0004, at 167, May 2, 2022. VR fitness apps, on the other hand, drew far more women. *Id.* [Redacted]; PX0003, at 17 [Redacted] Apr. 23, 2021; PX0127, at 1 [Redacted] Mar. 10, 2021. **Meta** expected that VR dedicated fitness apps would expand the reach of virtual reality to new customer segments. To that end, **Meta's** Vice President of Metaverse Content informed the company's

board of directors that "Supernatural, FitXR, and ... other fitness applications, ... unlike our gaming population ... had tended to be more successful with on average an older person, on average more women. It was a very different demographic, and ... we had always been in search of expanding VR beyond gaming into more of a general computing platform." PX0066 ("Rubin Dep.") 131:19–132:14; *see also* PX0127, at 6 ("[g]rowing [dedicated] fitness will broaden and diversify our user base, and bring on a disproportionate % of women").

Defendants acknowledge that VR fitness appeals to different user demographics than other VR apps. Opp. 5 ("Fitness is one such use case that can expand VR's audience beyond gamers (who tend to be younger males) to a broader population (including older and female users)."); *see also* Bosworth Hr'g Tr. 1035:18–22 (**Meta** perceived that "users of VR fitness apps represent[ed] a distinct category of customer compared to overall users of other VR apps on its platform"). Defendants do, however, dispute that VR dedicated fitness apps have a customer base that is distinct from that of non-VR fitness offerings. Opp. 9 n.1. The evidence indicates that VR dedicated fitness apps are targeted more toward "[Redacted]" who have less fitness experience and more difficulty finding motivating fitness products (rather than to individuals who have long-term or well-developed fitness routines.) As stated by Within's executive vice president of business development and finance, it was "Within's understanding that Supernatural appeals to [Redacted] in a way that other existing fitness products do not." PX0051 ("Cibula Dep.") 84:20–25. Within insiders also compared Supernatural to [Redacted] DX1081, at 1–2, Apr. 13, 2020. And in summer 2021—when **Meta** was in negotiations regarding the acquisition of Supernatural —a **Meta** employee described Within's business model as "encouraging users who don't think about fitness much as well as users with a light routine, not the fitness buff who is better served by the likes of Peloton cycling or Crossfit classes." PX0318, at 1, June 22, 2021; [Redacted] The Court finds the VR dedicated fitness apps have a customer base that is distinct from those of both other VR apps and several other fitness offerings—[Redacted] *See, e.g., **FTC** v. Sysco Corp.*, 113 F. Supp. 3d 1, 29–30 (D.D.C. 2015) (finding relevant product market in part based on erstwhile ***918** competitors' inability to serve certain types of customers).

v. Distinct Prices

[25] The pricing of VR dedicated fitness apps likewise differs in at least one key respect from other VR apps and non-VR fitness offerings. The main difference in comparison to the former category is that VR dedicated fitness apps are more likely to have a subscription-based pricing model. As one of Within's founders testified, Within's daily release of new workout content requires ongoing revenue, which is supported by a subscription membership. Milk Hr'g Tr. 671:10–19. Likewise, **Meta's** Director of Content Ecosystem testified that "subscriptions are particularly good monetization strategies for [fitness] applications" because "fitness applications need to produce content on an ongoing basis ... in order to not get boring." Pruett Hr'g Tr. 269:9–23. However, subscription pricing does not provide a clear basis for delineating between VR dedicated fitness apps and other VR apps. Some VR dedicated fitness apps do not charge subscription fees, Vickey Report ¶ 47, and other VR apps may also be a good fit for subscription pricing, *see* Pruett Hr'g Tr. 268:22–269:4 (the "fitness, productivity, and social genres ... all seem to be trending towards subscriptions as a default monetization method"). Nonetheless, the evidence indicates that "the majority of the video game applications on the Quest platform are not a good fit for subscriptions" including because "most of them don't have [an] ongoing content pipeline." Pruett Hr'g Tr. 270:12–17.

Many fitness offerings, whether virtual or physical, use subscription models. As **Meta** noted in its June 2022 white paper to the **FTC**, Supernatural's "monthly subscription model ... is similar in structure to other connected fitness solutions included specialized equipment solutions (*e.g.*, Peloton, Mirror, Tonal), paid apps (*e.g.*, Apple Fitness+), and other VR fitness apps (*e.g.*, FitXR, Holofit, VZfit), as well as in-person gym memberships (*e.g.*, Equinox, CrossFit, 24 Hour Fitness)." PX0001, at 2; *see also* DX1081, at 1–2 (listing subscription prices for "leading fitness offering[s]"). The **FTC** argues that despite sharing a subscription pricing model, VR dedicated fitness apps tend to be "far less expensive" than "other at-home smart fitness devices." Mot. 14. The evidence supports this assertion with respect to several connected fitness devices—Supernatural, the most expensive VR dedicated fitness app, [6] costs $399 plus $18.99 per month, while Peloton costs $1,445 plus $44 per month and Tonal costs $3,495 plus $49 per month. Singer Report ¶¶ 68–69. There are, however, digital fitness options—generally mobile phone apps—with subscriptions "in the sort of $8 to $12 range." Milk Hr'g Tr. 732:22–733:1; *see also* DX1081, at 1–2 (noting $12.99 Peloton app-only monthly subscription); Singer Report ¶ 65 (same).

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The Court finds that the VR app and non-VR pricing evidence tilts slightly in favor of the existence of a VR dedicated fitness app market. *See, e.g.*, ***FTC** v. Tronox Ltd.*, 332 F. Supp. 3d 187, 200–01 (D.D.C. 2018) ("The existence of distinct prices ... are 'not what one would expect if North American customers were willing and able to substitute one type of titanium dioxide for another in response to a change in their relative prices.' ") (citations omitted). Testimony from both Within and **Meta** indicate a practical reason for VR fitness apps to be generally best served by ***919** a subscription pricing model, which is in line with broader non-VR fitness offerings. And VR dedicated fitness apps are much more affordable than the non-VR fitness products that come closest to offering the level of immersion available in VR. *See* Vickey Hr'g Tr. 1184:12–21 (opining that touchscreen on Hydrow rowing machine provides immersive experience). However, in light of the evidence that there exist both other VR apps that can strategically employ a subscription model and non-VR fitness offerings that are comparably priced to VR fitness apps, the overall weight of this factor is lessened.

vi. Sensitivity to Price Changes

[26] The sixth *Brown Shoe* factor evaluates the change in sales of a possible substitute product given a change in the price of products within the relevant market. Because this is in essence the same question posed by the HMT, *see* ***FTC** v. Staples*, 970 F. Supp. 1066, 1075 (D.D.C. 1997), the Court will not duplicate its analysis here. Drawing from that analysis, *see infra*, Section III.B.1.b., the Court finds this factor to be neutral as to the existence of a VR dedicated fitness app market.

vii. Specialized Vendors

[27] The final *Brown Shoe* factor considers whether a product's distribution requires vendors with specialized knowledge or practices. *See* *Brown Shoe*, 370 U.S. at 325, 82 S.Ct. 1502; ***FTC** v. Staples, Inc.*, 190 F. Supp. 3d 100, 120–21 (D.D.C. 2016) (defining product market in part due to necessity that vendors have distinguishing capabilities such as sophisticated IT systems, personalized and high-quality service, and next-day delivery). The **FTC** has not presented evidence that the VR dedicated fitness app market requires specialized vendors.

* * *

[28] For the reasons explained above, the Court finds that the following *Brown Shoe* "practical indicia" support the **FTC's** assertion that VR dedicated fitness apps constitute the relevant product market: industry or public recognition; peculiar characteristics and uses; unique production facilities; distinct customers; and (to a lesser degree) distinct prices. These factors indicate that VR dedicated fitness apps present in-market firms with an economic opportunity that is distinct from both other VR apps and other fitness offerings. *See* *Thurman Indus., Inc.*, 875 F.2d at 1375. The Court therefore finds that the **FTC** has met its burden of showing that VR dedicated fitness apps constitute a relevant antitrust product market. *Brown Shoe*, 370 U.S. at 325–28, 82 S.Ct. 1502; *see also* *Lucas Auto. Eng.*, 275 F.3d at 766–68 (relying on *Brown Shoe* factors alone in review of relevant market); *Klein*, 580 F. Supp. 3d at 766–73 (same); *Newcal Indus.*, 513 F.3d at 1051 ("Even when a submarket is an *Eastman Kodak* submarket, though, it must bear the 'practical indicia' of an independent economic entity in order to qualify as a cognizable submarket under *Brown Shoe*.").

b. Hypothetical Monopolist Test (HMT)

[29] **[30]** In the interests of thoroughness, the Court also addresses the parties' HMT arguments. The HMT is a quantitative tool used by courts to help define a relevant market by determining reasonably interchangeable products. *Optronic Techs., Inc.*, 20 F.4th at 482 n.1. The test asks whether a "hypothetical monopolist that owns a given set of products likely would impose at least a small but significant and nontransitory increase in price (SSNIP) on at least one product in the market, including at least one product sold by one of the merging firms." Singer Report ¶ 32; *see* 2010 Merger Guidelines § 4.1.1. If enough consumers would respond to a SSNIP—often calculated as a five percent increase in price—by making ***920** purchases outside the proposed market definition so as to make the SSNIP not profitable, then the proposed market is defined too narrowly. Singer Report ¶ 32; *Optronic Techs., Inc.*, 20 F.4th at 482 n.1.

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The **FTC's** economics expert, Dr. Singer, conducted a hypothetical monopolist test on the VR dedicated fitness app market. Singer Report ¶¶ 49–68. To inform his analysis of the response to a SSNIP in the VR dedicated fitness app market, Dr. Singer commissioned Qualtrics to conduct "a survey of Supernatural users to determine what fitness apps they perceive to be a reasonably close substitutes to Supernatural and to VR dedicated fitness products generally." *Id.* ¶ 60. Dr. Singer testified that although an economist's natural path would be to collect data about Supernatural customers' transactions and reactions to any price increases, such data was unavailable here because Supernatural has never changed its price from $18.99 per month. Singer Hr'g Tr. 365:2–13. The survey was his "next best" option, and the approach is supported by the 2010 Merger Guidelines. *Id.* 365:16–18; Singer Report ¶¶ 60–61; 2010 Merger Guidelines § 4.1.3. Based on his analysis of the survey, Dr. Singer determined that VR dedicated fitness apps constituted a relevant market. Singer Hr'g Tr. 360:7–8.

Defendants deride Dr. Singer's survey as "junk science" and urge this Court not to rely on it. Opp. 11; **Meta** Closing Hr'g Tr. 1508:22–1509:3. In support of their arguments, Defendants relied on the expert reports and testimony of Dr. Dube and Dr. Carlton, who the Court found qualified as experts in the design and implementation of surveys and the economics of consumer demand for branded goods, *see* Dube Hr'g Tr. 872:16–873:19, and industrial organizations and microeconomics, *see* Carlton Hr'g Tr. 1355:15–20. Based on the testimony elicited by Defendants from Dr. Singer, Dr. Dube, and Dr. Carlton, the Court is troubled by various apparent flaws in the survey underlying Dr. Singer's HMT. Most pertinently, there appear to be several indications that a high fraction of the 150 surveyed individuals, on whose answers Dr. Singer's analysis necessarily relied, were untruthful in one or more responses. *See, e.g.*, Dube Hr'g Tr. 895:12–25 (respondents claimed to own multiple pieces of bulky, expensive equipment); Carlton Report ¶ 93 (over two dozen respondents claimed to regularly use all 27 fitness products listed on survey). Another facet of concern is the survey's apparent inclusion of a non-VR product in the question designed to capture a hypothetical monopolist's pricing power in a VR-only market. Carlton Hr'g Tr. 1428:21–1429:9. These questions, among others, suggest that the survey data underlying Dr. Singer's HMT analysis may not be reliable, which in turn casts doubt on the conclusions to be drawn from the HMT.

[31] The Court's reservations about the survey do not change its finding that VR dedicated fitness apps constitute a relevant antitrust product market. Because the Court bases its determination of the relevant product market on its *Brown Shoe* analysis, *see supra* Section III.B.1.a., rather than the HMT, it need not determine the validity of Dr. Singer's survey methodology. *See, e.g.*, Singer Hr'g Tr. 450:25–452:17. The *Brown Shoe* factors are sufficient to inform the Court's understanding of the "business reality" of the VR dedicated fitness app market. *Lucas Auto. Eng.*, 275 F.3d at 766–68; *see also* *United States v. Anthem, Inc.*, 236 F. Supp. 3d 171, (D.D.C. 2017) (noting *Brown Shoe* factors supported the "business reality" of the government's relevant market despite defense argument of "[in]sufficient economic rigor"); *RAG-Stiftung*, 436 F. Supp. 3d at 293 n.3 ("The *Brown Shoe* practical indicia may indeed be old school, ***921** and its analytical framework relegated 'to the jurisprudential sidelines.' But *Brown Shoe* remains the law, and this court cannot ignore its dictates.") (citations omitted). Because the Court does not rely on the challenged portions of Dr. Singer's report, the Court DENIES AS MOOT Defendants' motion to strike Dr. Singer's opinion that VR dedicated fitness apps constitute a relevant product market. [7] ECF No. 470.

2. Geographic Market

[32] **[33]** "The relevant geographic market is the 'area of effective competition where buyers can turn for alternate sources of supply.' " *Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd.*, 778 F.3d 775, 784 (9th Cir. 2015) (citations omitted). "[I]n a potential-competition case like this one, the relevant geographic market or appropriate section of the country is the area in which the acquired firm is an actual, direct competitor." *Marine Bancorporation*, 418 U.S. at 622, 94 S.Ct. 2856. That is, the geographic market must "correspond to the commercial realities of the industry." *Brown Shoe*, 370 U.S. at 336, 82 S.Ct. 1502; *see also* *Staples*, 970 F. Supp. at 1073 (relevant geographic market is region where "consumers can practically turn for alternative sources of the product and in which the antitrust defendant faces competition").

[34] The **FTC** asserts that the United States is the relevant geographic market, and Defendants do not argue to the

contrary. Mot. 15; *see generally* Opp. The Court agrees. As one of Within's founders testified, Supernatural is only available to Quest headset users in the United States and Canada mainly [Redacted]. Milk Hr'g Tr. 671:4–9. More broadly, Quest headsets are designed so that a user's geolocation determines the availability and prices of content. Stojsavljevic Hr'g Tr. 79:23–80:6. Because content developed in other countries may not be available in the United States, and because Supernatural is not available outside of the United States and Canada, the Court finds that the United States is an appropriate relevant geographic market. *See* *Staples*, 970 F. Supp. at 1073.

Accordingly, the relevant antitrust market for the analysis of the competitive impacts of **Meta's** acquisition of Within is VR dedicated fitness apps in the United States.

C. Substantial Market Concentration

[35] The **FTC** has challenged **Meta's** acquisition of Within on the basis that the merger would substantially lessen potential competition. The Supreme Court has taken note of two species of potential competition theories: actual potential competition and perceived potential competition. *See* *United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 93 S.Ct. 1096, 35 L.Ed.2d 475 (1973); *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 94 S.Ct. 2856, 41 L.Ed.2d 978 (1974). Although the two theories have different elements and are grounded in different presumptions about the market, they share a common requirement: they have "meaning only as applied to concentrated markets." *Marine Bancorporation*, 418 U.S. at 630–31, 94 S.Ct. 2856. Because both doctrines posit that potential competitors can or will soon impact the market, there would be no need for concern if the market is already genuinely competitive. *Id.*

***922** **[36]** In assessing whether the relevant market is "substantially concentrated," the Supreme Court sets forth a burden-shifting framework. First, the **FTC** may establish a prima facie case that the relevant market is substantially concentrated by introducing evidence of concentration ratios. *Id.* at 631, 94 S.Ct. 2856. Once established, the burden shifts to the merging companies to "show that the concentration ratios, which can be unreliable indicators of actual market behavior, did not accurately depict the economic characteristics of the [relevant] market." *Id.* If the prima facie case is not rebutted, then the market is suitable for the potential competition doctrines. *See* *United States v. Black & Decker Mfg. Co.*, 430 F. Supp. 729, 755 (D. Md. 1976).

1. Market Concentration Ratios

[37] The Court finds that the **FTC** has sufficiently presented evidence using concentration ratios as permitted by *Marine Bancorporation.* Here, the **FTC** has provided the Herfindahl-Hirschman Index ("HHI")—a widely accepted measure of industry concentration frequently used by courts considering antitrust merger and acquisition actions—for the relevant market. **FTC** Proposed Post-Hearing Findings of Fact ("**FTC's** Findings") ¶¶ 80–83, ECF No. 516; *Optronic Techs., Inc. v. Ningbo Sunny Elec. Co.*, 414 F. Supp. 3d 1256, 1263 (N.D. Cal. 2019), *aff'd*, 20 F.4th 466 (9th Cir. 2021). The **FTC's** 2010 Merger Guidelines provide that a market is considered "moderately concentrated" when the HHI exceeds 1500 and "highly concentrated" when it exceeds 2500. 2010 Merger Guidelines § 5.3.

The **FTC's** expert, Dr. Singer, calculated the HHI multiple times, accounting for different market definitions and stipulations. Dr. Singer first calculated the HHI by measuring each firm's market share using revenue. Singer Report ¶ 75, Table 2-A. This yielded an HHI of 6,917, [Redacted] *Id.* Dr. Singer also calculated the market's HHI using "total hours spent" and "average monthly active users" as metrics and data collected from the Quest Store. Singer Rebuttal Report ¶¶ 124–25, Tables 1-A, 1-B. The HHI for "total hours spent" was 6,307; and for "monthly active users" was 3,377. *Id.*

The Court finds that—regardless of the metrics used—every one of these ratios reflect a market concentration well above what the Merger Guidelines have designated as "highly concentrated." Accordingly, the **FTC** have made their prima facie showing, and the burden shifts to Defendants to "show that the concentration ratios ... did not accurately depict the economic characteristics of the [relevant] market." *Marine Bancorporation*, 418 U.S. at 631, 94 S.Ct. 2856.

2. Defendants' Pleading Challenges

[38] Before continuing to Defendants' substantive arguments seeking to rebut the **FTC's** prima facie case, the Court first turns to the Defendants' legal attacks on the **FTC's**

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pleadings. Defendants argue that the **FTC's** case stumbles right out of the blocks because the complaint does not allege oligopolistic or "interdependent or parallel behavior." Mot. Dismiss FAC ("MTD") 10–13, ECF No. 108. Defendants' position arises from the following language in *Marine Bancorporation*:

> The potential-competition doctrine has meaning only as applied to concentrated markets. That is, the doctrine comes into play only where there are dominant participants in the target market engaging in interdependent or parallel behavior and with the capacity effectively to determine price and total output of goods or services.

418 U.S. at 631, 94 S.Ct. 2856.

Defendants' argument is unpersuasive. Their fidelity to a stilted and strained reading of the Supreme Court's commentary conveniently dodges the actual burden-shifting ***923** framework that *Marine Bancorporation* set forth and applied. *Id.* at 631–32, 94 S.Ct. 2856. In fact, the Supreme Court held that the district court had erred by taking the precise course of action that Defendants urge the Court takes here, *i.e.*, requiring the **FTC** to allege parallel behavior when it is Defendants' burden to present the absence. *Id.* ("In our view, *appellees did not carry this burden*, and the District Court erred in holding to the contrary. Appellees introduced no significant evidence of the absence of parallel behavior in the pricing or providing of commercial bank services in [the relevant market].") (emphasis added). A similar attempt to stretch the language from *Marine Bancorporation* to pin the burden on the government was likewise unsuccessful. *Black & Decker*, 430 F. Supp. at 750 n.41 (rejecting argument that "the government has failed to produce evidence of any interdependent or parallel behavior in the market or of the market firms' capacity to determine price and total output"). Defendants also are unable to identify any authority that has adopted its proposed inversed framework, not even the one Fifth Circuit decision they cited. *See* MTD 6; *Republic of Texas Corp. v. Bd. of Governors*, 649 F.2d 1026, 1045–46 (5th Cir. 1981) ("Concentration ratios of this magnitude establish here ... a prima facie case that the [ ] market is a candidate for the potential competition doctrine, and *shift to Republic the burden to show that the concentration ratios ... do not accurately depict the economic characteristics of the [ ] market.*") (emphasis added).

For all the reasons discussed, Defendants' theory that the **FTC** was required to plead oligopolistic, interdependent, or parallel behavior is without merit. To the extent Defendants' motion to dismiss the FAC is premised on this theory, the Court DENIES Defendants' motion.

3. Economic Characteristics of the "VR Dedicated Fitness App" Market

The **FTC** having established a prima facie case of "substantial concentration" using concentration ratios, the burden now shifts to Defendants to rebut that showing that "the concentration ratios ... did not accurately depict the economic characteristics of the [relevant] market." *Marine Bancorporation*, 418 U.S. at 631, 94 S.Ct. 2856. The touchstone inquiry, however, appears to be whether the relevant market "is in fact genuinely competitive." *Marine Bancorporation*, 418 U.S. at 631, 94 S.Ct. 2856; *Tenneco, Inc. v. **FTC***, 689 F.2d 346, 353 (2d Cir. 1982) (finding the **FTC** was "fully justified in concluding that the [ ] market was not genuinely competitive"); *Republic of Texas*, 649 F.2d at 1046 (finding that rebuttal evidence did not "establish that the overall competition from the thrift institutions was sufficient"); *Black & Decker*, 430 F. Supp. at 755 (noting that "various facets of competitive performance in the gasoline powered chain saw market offer conflicting indications"). The Court addresses each argument that Defendants have raised in rebuttal.

The Court first makes an opening observation that there appear to be at least some characteristics of the market that may be difficult to express with concentration ratios. If nothing else, both parties seem to agree that the VR dedicated fitness app market is a nascent and emerging market, which would be an economic characteristic of the market not fully captured by the concentration ratios. *See* **FTC's** Findings ¶¶ 68–69; Singer Report ¶ 92. However, the Court must

consider whether those characteristics indicate that the market is genuinely competitive.

Nascency. The Court has received conflicting expert evidence from both parties as to whether nascent markets are more or less vulnerable to coordinated oligopolistic ***924** behaviors. Dr. Carlton submits that a nascent market with rapidly evolving products is more difficult to coordinate behaviors, while Dr. Singer has asserted that there is no accepted economic theory to support the segmentation of nascent, adolescent, or mature markets. *Compare* Carlton Report ¶¶ 127–29, *with* Singer Rebuttal Report ¶¶ 130-33.

The evidence presented suggests that companies in the VR dedicated fitness market do not exhibit revenue or profit-maximizing behaviors, such as price competition. Koblin Hr'g Tr. 636:11–14; Milk Hr'g Tr. 736:6–8. Instead, their strategies appear to be optimized for growth and penetration —[Redacted]—with the expectation that those qualities will render them an attractive acquisition target. *See, e.g.*, Milk Hr'g Tr. 736:15–21 ("[Redacted]."); Zyda Hr'g Tr. 1227:18–22, 1228:15–18 ("[S]tartups that work in the VR space can get acquired, and that's pretty much the dream of almost every startup."); Garcia Hr'g Tr. 1111:8–1112:14; Janszen Hr'g Tr. 1147:22–1148:1. It is unclear to the Court how this departure from conventional profit-maximization strategies —an assumption often made in defining antitrust markets, *see* 2010 Merger Guidelines § 4.1.1 (noting that the HMT "requires [ ] a hypothetical profit-maximizing firm")—should affect the assessment of genuine competition in this market. [8]

Notwithstanding the experts' robust economics discussions, neither party has presented the Court with a working definition of "nascency," such that it can distinguish a nascent market from a more mature market. Rather, the parties appear to use the "nascency" label—however the lines are drawn —as a proxy for other more observable market descriptions, such as highly differentiated products, unstable market shares, and new entrants. Carlton Report ¶¶ 127–29. Accordingly, the Court will give limited weight to the fact that the VR dedicated fitness market may be characterized as a nascent market and focus instead on the underlying market indicators.

Market Share Volatility. Dr. Carlton claims that the VR dedicated fitness market exhibits changing market shares, but he does not provide any historical data or evidence that the market shares have changed over time. Carlton Report ¶¶ 124–25. Instead, Dr. Carlton relies on the fact that none of the apps were in existence five years ago, that new entries are occurring, and on Dr. Singer's data on changes in *other* VR app markets. *Id.* ¶ 125. But new entrants do not necessarily result in shifting or deconcentrating market shares, and Defendants have not presented evidence of actual historical shifts in shares for the relevant market here. Moreover, [Redacted] *Id.* ¶ 67, Table 10.

New Entrants. Defendants and Dr. Carlton have made much ado about the incoming entrants and the fact that the **FTC's** relevant market has effectively doubled since the initiated this litigation. *See, e.g.*, Opp. 14. Although the "introduction of new firms and fluid condition of market entry and exit can indicate competitive behavior," the bottom line is that these new entrants have not significantly deconcentrated the market, nor do they suggest a trend towards such deconcentration. *Black & Decker*, 430 F. Supp. at 751; *see also* Singer Rebuttal Report ¶¶ 124–25, Tables 1-A, 1-B (indicating *de minimis* shares of new entrants).

Barriers to Entry. Defendants rely on the new entrants into the market as evidence that barriers to entry are low. Opp. ***925** 13. However, the number of new entrants "does not belie the substantial entry barriers characteristic of the [relevant] market." *Black & Decker*, 430 F. Supp. at 751. The evidence presented suggest that barriers to entry are existent but are not insurmountable. As the Court discusses further in this order, there are several ingredients required for a potential entrant considering entry into the VR dedicated fitness app entrant, including financial resources, VR engineering resources, fitness experience and content creation, and studio production capabilities. *See infra* Section III.D.2.a. On the other hand, for most potential entrants into any VR app market, **Meta** provides grants, software development kits, infrastructure code, and even engineering support to third-party VR app developers. Pruett Hr'g Tr. 284:18–285:18.

[39] Having considered the VR dedicated fitness app market's nascency, volatility, new entrants, barriers to entry, and price competition, the Court is inclined to find that Defendants have not rebutted the **FTC's** prima facie case. The Court certainly appreciates that a nascent market with an emerging technology may have some features and market incentives that are not captured by concentration ratios. However, the evidence does not support a finding that the VR dedicated fitness app market exhibits the characteristics or desirable behaviors of a competitive market. And as the Supreme Court noted in *Falstaff Brewing*, the absence of "blatantly anti-competitive effects" may not necessarily

preclude the propriety of potential competition theories, because the high degree of market concentration indicates that the "seeds of anti-competitive conduct are present." 410 U.S. 526, 550, 93 S.Ct. 1096; *see also* *id.* n.15 ("[A] market might be so concentrated that even though it is presently competitive, there is a serious risk that parallel pricing policies might emerge sometime in the near future.").

That said, because the Court finds *infra* that the **FTC** has not satisfied the other elements of the potential competition theories they have brought, the Court need—and does not—decide whether the Defendants' showing here is sufficient to rebut the **FTC's** prima facie case on substantial concentration. *See* *United States v. Siemens Corp.*, 621 F.2d 499, 506 (2d Cir. 1980).

D. Actual Potential Competition

[40] The **FTC** first argues that the Acquisition would substantially lessen competition because it deprives the VR dedicated fitness app market of the competition that would have arisen from **Meta's** independent entry into the market, a theory known as the "actual potential competition" or "actual potential entrant" doctrine. *See, e.g.,* *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 633, 94 S.Ct. 2856, 41 L.Ed.2d 978 (1974). Although the Supreme Court has twice declined to resolve the doctrine's validity when presented, it has nonetheless identified two essential preconditions before the theory can be applied: (1) the alleged potential entrant must have "available feasible means for entering the [relevant] market other than by acquiring [the target company]"; and (2) those "means offer a substantial likelihood of ultimately producing deconcentration of that market or other significant procompetitive effects." *Id.* The doctrine has since been applied by Courts of Appeal and district courts alike, though the Ninth Circuit has not yet had an opportunity to provide guidance on the actual potential competition theory.

Although "available feasible means" for entry may be established either by *de novo* entry or a toehold acquisition, the **FTC** has not argued that **Meta** could have entered the relevant market through a toehold acquisition, nor does it identify any company ***926** in the relevant market that could have served as such a target. *See, e.g.*, FAC ¶ 57; Mot. 19. "Since the [**FTC**] offered no evidence of a toe-hold purchase that was available and attractive to [**Meta**], any such theory must be rejected for lack of proof." *United States v. Siemens Corp.*, 621 F.2d 499, 508 (2d Cir. 1980). Accordingly, the Court will only consider whether **Meta** had "available feasible means" for entering the relevant market *de novo.*

1. Threshold Issues

Before discussing the evidence, the Court first turns to three threshold disputes of law between the parties, which are: (1) the continued vitality of the actual potential competition theory; (2) the standard of proof the **FTC** must meet; and (3) the roles and consideration of objective and subjective evidence.

a. Doctrinal Validity

Throughout this litigation, Defendants have sought to cast doubt as to the very existence of the actual potential competition theory because it has never been fully endorsed by the Supreme Court. *See, e.g.*, Opp. 2; MTD, at 2, 16–17. Notwithstanding Defendants' doubts, this doctrine has been applied by multiple Circuit Courts of Appeal, *e.g.,* *Yamaha Motor Co. v. **FTC***, 657 F.2d 971 (8th Cir. 1981); *United States v. Siemens Corp.*, 621 F.2d 499 (2d Cir. 1980); ***FTC** v. Atl. Richfield Co.*, 549 F.2d 289 (4th Cir. 1977); the Federal Trade Commission itself, *Altria Group, Inc.*, 2022 WL 622476 (Feb. 23, 2022); *B.A.T. Industries*, 1984 WL 565384 (Dec. 17, 1984); and various district courts, including one that ordered divestiture upon a finding of actual potential competition and whose judgment was affirmed by the Supreme Court. *United States v. Phillips Petroleum Co.*, 367 F. Supp. 1226 (C.D. Cal. 1973), *aff'd sub nom.* *Tidewater Oil Co. v. United States*, 418 U.S. 906, 94 S.Ct. 3199, 41 L.Ed.2d 1154 (1974), and *aff'd*, 418 U.S. 906, 94 S.Ct. 3199, 41 L.Ed.2d 1154 (1974). Given the actual potential competition doctrine's consistent, albeit distant, history of judicial recognition, the Court declines to reject the theory outright and will apply the doctrine as developed. *See* ***FTC** v. Steris Corp.*, 133 F. Supp. 3d 962, 966 (N.D. Ohio 2015) ("[T]he **FTC** has clearly endorsed this theory by filing this case, and the administrative law judge will be employing it during the proceeding .... Accordingly, in deciding the likelihood of success on the merits, the Court will assume the validity of this doctrine.").

To the extent Defendants' motion to dismiss sought dismissal of the **FTC's** actual potential competition claim on the

basis that it is a "dead-letter doctrine," ECF No. 108, at 2, Defendants' motion is DENIED.

b. Standard of Proof

There is less consistency among courts as to the proper standard of proof by which the **FTC** must prove its case on actual potential competition, and it is an issue of first impression within the Ninth Circuit. The Fourth Circuit has held that the **FTC** must establish its case with "strict proof." *Atl. Richfield*, 549 F.2d at 295. The Second Circuit has asked whether a defendant "*would likely have* entered the market in the near future." *Tenneco, Inc. v. FTC*, 689 F.2d 346, 352 (2d Cir. 1982) (emphasis added). The Fifth Circuit adopted the "reasonable probability" standard, which it remarked "signifies that an event has a better than fifty percent chance of occurring [with a] 'reasonable' probability represent[ing] an even greater likelihood of the event's occurrence." *Mercantile Texas Corp. v. Bd. of Governors*, 638 F.2d 1255, 1268–69 (5th Cir. 1981). The Eighth Circuit also appeared to adopt the "reasonable probability." *Yamaha Motor*, 657 F.2d at 977 (defining the inquiry as "would [defendant], absent the joint venture, *probably* have entered the [relevant] market independently") (emphasis added). ***927** Finally, the **FTC** itself has unambiguously adopted a "clear proof" standard. *B.A.T. Industries*, 1984 WL 565384, at *10.

[41] In the absence of guiding Ninth Circuit law, the Court begins with *Brown Shoe*'s teaching that Section 7 deals with neither certainties nor ephemeral possibilities but rather "probabilities." *Brown Shoe Co. v. U.S.*, 370 U.S. 294, 323, 82 S.Ct. 1502, 8 L.Ed.2d 510 (1962). In the context of an actual potential competition claim, however, the Court must not only consider the effects of future scenarios where the Acquisition occurs and where it is blocked, but it must also gauge the likelihood—in the second scenario—that the blocked would-be acquirer would enter the relevant market independently. Furthermore, the harm to competition the doctrine aims to prevent is not the loss of *present* competition but rather the potential loss of a *future* competitor (the acquiring company). Given the many *a priori* inferences required by the doctrine, the Court is wary of any inquiry that strays too close to the specters of ephemeral possibilities, yet it must nonetheless ensure the standard does not require the **FTC** to operate on certainties. The Court accordingly holds that the "reasonable probability" standard—as clarified by the Fifth Circuit to suggest a likelihood noticeably greater than fifty percent—is the standard of proof that the **FTC** must present.

To the extent Defendants' motion to dismiss is based on the assertion that the correct standard of proof is "clear proof," the Court DENIES Defendants' motion.

c. Objective vs. Subjective Evidence

Finally, the Court reaches the parties' disagreement as to the roles of objective and subjective evidence. The **FTC** asserts that it may meet its burden using solely objective evidence regarding **Meta's** "overall size, resources, capability, and motivation." Mot. 18–19; *see also* **FTC** Closing Hr'g Tr. 1494:12–18. Defendants, meanwhile, strenuously emphasize subjective evidence that **Meta** never had any plan to enter the Relevant Market *de novo* and would not do so if the Acquisition is blocked. Opp. 15.

Courts have uniformly recognized the highly probative value of objective evidence in evaluating whether a potential entrant is reasonably probable to enter the market *de novo*; the disagreement only arises as to whether plaintiffs can satisfy their burden using only objective evidence and whether subjective evidence should warrant any consideration. *Compare* *Mercantile Texas*, 638 F.2d at 1270 ("Not only is objective evidence undeniably probative, but subjective evidence is not required to establish a violation of the Clayton Act standard. On remand, the Board may rely exclusively on objective evidence if that evidence is sufficient to support the findings we require.") (internal citation omitted), *with* *B.A.T. Industries*, 1984 WL 565384, at *26 (noting that "the inherent limitations of economic evidence mean that, standing alone," purely objective evidence could not "establish liability under the actual potential entrant theory") (Bailey, Comm'r, concurring). Many courts have also consulted both objective and subjective evidence in reaching their conclusions. *See, e.g.*, *Siemens*, 621 F.2d at 507; *Yamaha Motor*, 657 F.2d at 979; *Phillips Petroleum*, 367 F. Supp. at 1239 (recognizing that subjective evidence is "relevant and entitled to consideration, [but] cannot be determinative").

[42] Here, the Court will first consider whether the objective evidence presented by the **FTC** supports the findings and conclusions necessary to satisfy the actual potential

competition doctrine. If the objective evidence is weak, inconclusive, or conflicting, the Court will consult subjective evidence to illuminate the ambiguities left by the objective evidence, with the ***928** understanding that the subjective evidence cannot overcome any directly conflicting objective evidence. *See* *Falstaff Brewing*, 410 U.S. at 570, 93 S.Ct. 1096 ("[T]he subjective evidence may serve as a counterweight to weak or inconclusive objective data. But when the district court can point to no compelling reason why the subjective testimony should be believed or when the objective evidence strongly points to the feasibility of entry de novo ... it is error for the court to rely in any way upon management's subjective statements.").

2. Objective Evidence

Having disposed of the threshold questions, the Court now proceeds to apply the doctrine. The inquiry can be stated as follows: "Is it reasonably probable that **Meta** would have entered the VR dedicated fitness app market *de novo* if it was not able to acquire Within?"[9]

[43] "In exploring the feasible means of entry alternative to the challenged acquisition, the court must analyze the incentive and capability of the acquiring firm to enter the relevant market." *Black & Decker*, 430 F. Supp. at 755. The Court thus considers in turn the objective evidence on **Meta's** capabilities and incentives to enter the VR dedicated fitness app market.

a. Capabilities of Entry

[44] There can be no serious dispute that **Meta** possesses the financial resources to undertake a *de novo* entry. **Meta** has spent over $12.4 billion in the most recent fiscal year on its VR business, and it anticipates investing more in the VR space. *See, e.g.*, DX1237, at 51, Dec. 31, 2021; ECF No. 514, Defs.' Proposed Post-Hearing Findings of Fact ("Defs.' Findings") ¶¶ 44–47. Unsurprisingly, **Meta** also enjoys a deep and talented pool of engineers in its Reality Labs Division, who could provide the technical VR expertise to develop a VR dedicated fitness app should **Meta** so choose. *See* ECF No. 516, **FTC** Proposed Post-Hearing Findings of Fact ("**FTC's** Findings") ¶¶ 32–33. In fact, **Meta** maintains a team of "veteran engineers who are particular experts in [**Meta's**] VR technology and hardware" and who work directly with third-party VR app developers to "improve the quality of their software or help them fix bugs or [ ] polish the experience that the developer is building." Pruett Hr'g Tr. 286:4–12. The Court finds that the objective evidence establishes that **Meta** has the financial resources and ready access to qualified VR engineers to enter the VR dedicated fitness app market *de novo.*

But financial and engineering capabilities alone are insufficient to conclude it was "reasonably probable" that **Meta** would enter the VR dedicated fitness app market. Indeed, **Meta** seems willing to concede—as is supported by the evidence—that it "does not take a large team or substantial resources to make a successful VR app." Defs.' Findings ¶ 53. Instead, courts often counterbalance undisputed financial capabilities with those capabilities unique to the relevant market, rarely relying solely on the potential entrant's substantial wherewithal. *Siemens*, 621 F.2d at 507 (finding no evidence that potential entrant could "transfer its acknowledged capability with respect to other types of equipment to *nuclear medical equipment*") (emphasis added); *Atl. Richfield*, 549 F.2d at 295 ("[Potential entrant] has no technological skills readily transferrable to the *copper markets*; it has no channels of distribution which may be utilized to distribute copper.") (emphasis added); *cf.* *Yamaha Motor*, 657 F.2d at 978 (noting that ***929** the potential entrant had "requisite experience in the production and marketing of *outboard motors* in areas of the world other than Japan.") (emphasis added). The Court here finds that **Meta** lacked certain capabilities that are unique and critical to the VR dedicated fitness app market. *See* PX0127, at 7 (noting that **Meta** "will need to build 4 new [fitness] functions that are not part of Facebook's pipelines; Content development, instructors, studio production ..., music rights & technology.").

First and foremost, although **Meta** has an abundance of VR personnel on hand, it lacks the capability to create fitness and workout content, a necessity for any fitness product or market. *See* PX0111 ("The answer is content creation.... You need that content variety to serve different ability levels, musical tastes, instructor personalities, etc."), Feb. 23, 2021. As a comparison, Supernatural's VR workouts are led by personal trainers and are optimized for VR activity through consultations with experts holding PhDs in kinesiology and biomechanics. PX0712, at 18, 27. Certainly, this absence is not an insurmountable obstacle; **Meta** could conceivably circumvent it by partnering with an established fitness brand

to provide the fitness content, as Odders Lab did with Les Mills. [10] FTC's Findings ¶¶ 123, 148; *see also* Garcia Hr'g Tr. 1072:18–1073:1. [Redacted] *see also* *Tenneco*, 689 F.2d at 354 (rejecting as "unsupported speculation" the FTC's suggestion that the potential entrant would have entered the market *de novo* "with the aid of a license" for necessary technology). Regardless of any potential workarounds, the objective fact that Meta presently lacks the capability to create fitness content is, at the very least, probative as to the reasonable probability that Meta would enter the VR dedicated fitness app market *de novo.*

In addition to fitness content, the evidence also indicates that Meta lacked the necessary studio production capabilities to create and film VR workouts. Once again comparing to Supernatural, Within records daily workout classes in its Los Angeles studio, and its founders have directed several interactive music videos. PX0712, at 3–4, 29. When Meta employees were strategizing VR fitness investments, they recognized that "studio production (e.g. green screen ops, stereoscopic capture, post processing pipelines)" was a new function that was "not part of Facebook's pipelines." [11] PX0127, at 7, Mar. 10, 2021. Contrary to the FTC's suggestion, the Court finds that Meta's acquisition of Armature Studio—a third-party VR studio with expertise in co-developing VR apps—does not provide the necessary studio production capabilities to develop a VR dedicated fitness app. *See* FTC's Findings ¶¶ 125, 290. The evidence indicates that Armature is very much a *game* studio, not a *production* studio [Redacted] PX0527, at 6 (listing Armature's [Redacted] The FTC highlights an internal Meta presentation that presented Armature as an acquisition target who could "build a fitness-first product based on Beat Saber x their sports experience.") *Id.* However, the basis for this suggestion comes not from any prior production studio experience but rather Armature's experience developing the rendered VR video game, Sports Scramble. *Id.* As with ***930** Meta's fitness expertise, its lack of production studio capabilities to film a VR fitness workout is a relevant—though less compelling—factor for the Court's "reasonably probable" consideration.

b. Incentives to Enter

[45] In addition to the objective evidence presented of Meta's capabilities of entering the VR dedicated fitness app market, the Court also considers the objective evidence of Meta's incentives and motivations for entering this market.

Users and Growth. The record is replete with evidence supporting Meta's interest in the VR fitness space. Defs.' Findings ¶ 280 ("[E]mployees at Reality Labs were interested in fitness as a promising VR use case"). First, fitness is a use for VR that appeals to a more diverse population, specifically consumers that are female and older. *Id.* ¶ 280 (citing testimony). This demographic is notably distinct from the typical VR demographic, which tends to skew younger and more male. *Id.*; *see also* *Black & Decker*, 430 F. Supp. at 756 ("[C]ommitment to diversification is an important factor to be considered in analyzing [ ] desire to enter a particular market."). Fitness is also "retentive," meaning that users will tend to regularly use the product or app. PX0386, at 12 (fitness apps had a "strong [Redacted] retention"), Apr. 12, 2022; *see* Stojsavljevic Hr'g Tr. 108:19–25. Meta's internal data also indicated that "deliberate fitness apps" were the "fastest growing segment" with [Redacted] year-over-year growth. PX0386, at 12. These promising demographic, use, and growth metrics are especially important to Meta, because it has "bet[ ] on VR technology as a general computing platform to join today's PCs, laptops, smartphones, and tablets." Defs.' Findings ¶ 44.

Although they undergird Meta's undisputed interest in VR fitness, the aforementioned factors provide limited probative value in assessing Meta's likelihood to enter the VR dedicated fitness app market itself. As the Court established earlier in this section, the relevant inquiry is whether it is "reasonably probable" that Meta would have entered the VR dedicated fitness app market *de novo*, not whether Meta was excited about or interested in more generally investing in VR fitness. Meta's interest in the promising VR fitness app metrics—diverse appeal, strong user retention, rapid growth—stems from the potential for broader VR adoption and market penetration. *See* Carlton Report ¶¶ 33–35. And Meta, as a competitor in the VR headset market, benefits from that growth so long as high-quality VR fitness apps exist in the VR ecosystem; Meta need not itself be a player in that ecosystem. *See* Defs.' Findings ¶ 49. This mutually beneficial relationship between the VR platform and third-party VR apps distinguishes this case from other potential competition cases where potential entrants are typically incentivized to enter the relevant market because they are not capturing any of the neighboring market's growth or profitability. *See, e.g.,* *Black & Decker*, 430 F. Supp. at

755 (electric saw manufacturer entering the gasoline-powered chain saw market); *Phillips Petroleum*, 367 F. Supp. at 1245 (non-California oil company entering the California market for gasoline sales); *Yamaha Motor*, 657 F.2d at 974 (Japanese motor company entering the U.S. outboard motor market). The Court accordingly does not find that these specific features of the VR dedicated fitness app market increase the probability that **Meta** would enter the market *de novo*, because **Meta** would enjoy those incentives even if it remained outside the relevant market and provided funding or technical support for in-market VR fitness app developers, as it already does.[12] *See supra* ¶ 7.

***931** Hardware Integration. Apart from the incentives arising from the VR fitness market itself, the evidence also reflects one other incentive that arises from **Meta's** direct participation in the relevant market. Specifically, entering the VR dedicated fitness app market with its own app would facilitate **Meta's** subsequent development of fitness-related VR hardware. This is an incentive to "first-party" entry that is acknowledge across multiple instances of internal contemporaneous correspondence at **Meta**. *See, e.g.*, PX0127, at 7 [Redacted], Mar. 10, 2021; PX0146, at 10 ("[First-party] will allow us to test and iterate tools in our Fitness platform that we can then surface to other 3P"), June 18, 2021; PX0487, at 5 ("We believe that increasing [headcount] for 1P investment (Option 3) is worth the tradeoffs in order to: 1. Develop a cohesive fitness ecosystem faster by enabling developers and building platform features."), May 14, 2021. That said, the evidence also suggests that *de novo* entry is not strictly necessary to develop fitness hardware, *see* **FTC's** Findings ¶ 185 (indicating that **Meta** has also already produced "wipeable interface, wrist straps, and adjustable knuckle straps"), though independent entry into the market could streamline that development.

Profitability. Finally, there is some evidence of the relevant market's profitability and that it [Redacted] PX0386, at 12. The profitability of the relevant market is unsurprisingly a relevant incentive that many courts consider. *See, e.g.*, *Phillips Petroleum*, 367 F. Supp. at 1245; *Black & Decker*, 430 F. Supp. at 755. While this factor is often quite salient in other potential competition cases, it is somewhat muted here, [Redacted]. PX0062 ("Milk Dep.") 19:8–12. Of course, a market's current profitability does not reflect its future profitability, especially if that market is exhibiting rapid growth as the VR dedicated fitness app market does here. Nonetheless, the fact that [Redacted] would indicate that the profitability of the relevant market warrants less consideration than it otherwise would.[13]

* * *

Having reviewed and considered the objective evidence of **Meta's** capabilities and incentives, the Court is not persuaded that this evidence establishes that it was "reasonably probable" **Meta** would enter the relevant market. **Meta's** undisputed financial resources and engineering manpower are counterbalanced by its necessary reliance on external fitness companies or experts to provide the actual workout content and a production studio for filming and post-production. Furthermore, the record is inconclusive as to **Meta's** incentives to enter the relevant market. There are certainly some incentives for **Meta** to enter the market *de novo*, such as a deeper integration between the VR fitness hardware and software. However, it is not clear that **Meta's** readily apparent excitement about fitness as a core VR use case would necessarily translate to an intent to build its own dedicated fitness app market if it could enter by acquisition.

***932** On balance, the objective evidence does not so "strongly point to the feasibility of entry de novo" that the Court should decline to consider subjective evidence of intent. *Falstaff Brewing*, 410 U.S. at 570, 93 S.Ct. 1096.

3. Subjective Evidence

The Court first notes that it will accord little weight to subjective evidence and statements provided by **Meta** employees during the course of this litigation. Although they are relevant, entitled to some weight, and no doubt offered by persons of character, the bias affiliated with such *ex post facto* testimony is widely recognized and unavoidable. *See, e.g.*, *Falstaff Brewing*, 410 U.S. at 565, 570, 93 S.Ct. 1096 (Marshall, J., concurring). In reviewing the subjective evidence in the record, the Court will refer primarily to contemporaneous statements made by **Meta** employees.

[46] The record reveals certain documents created contemporaneously by **Meta** employees that appear to set forth **Meta's** overall third-party VR investment strategy, along with individualized analyses of various VR fitness investment options. PX0492 ("Quick Fitness / M&A Thoughts"), Mar. 9, 2021; PX0127 ("VR Fitness Content

investment thesis v2"), Mar. 10, 2021; PX0146 ("FB Inc. Fitness Strategy Working Draft"), June 18, 2021. The **FTC** has represented that these documents were sponsored by **Meta** employees: Rade Stojsavljevic, who oversaw all of **Meta's** first-party VR gaming studios (Stojsavljevic Hr'g Tr. 69:18–24); Anand Dass, **Meta's** director of non-gaming VR content (*id.* 138:11–18); and Jane Chiao, a business-side employee who reported directly to Mark Rabkin, the head of VR technology at **Meta** (*id.* 140:23–141:1, Rabkin Hr'g Tr. 800:7–11). Furthermore, exhibit PX0127 was a "pre-read" circulated in advance of a meeting with Mark Rabkin, *see* Stojsavljevic Hr'g Tr. 149:16–151:12, who would have been one of the decisionmakers needed to sign off on any significant VR fitness investment. *Id.* 189:24–190:12. These are not "memoranda of lower echelon [ ] employees." *Siemens*, 621 F.2d at 508; *see* also *Atl. Richfield*, 549 F.2d at 297 n.9. Accordingly, the Court finds that the statements in these documents reflect the thoughts and impressions of relatively significant stakeholders, as the authors were generally one or two people away from the final decisionmaker.

The evidence contained in these strategy documents is consistent—**Meta's** subjective motivations to enter the relevant market were primarily to (1) better develop VR fitness hardware or (2) ensure the continued existence of a high-quality VR fitness app in the market. The Court notes that these incentives would apply to both entry by acquisition and entry *de novo*, though perhaps not with equal force.

First, this subjective evidence corroborates the objective evidence that **Meta** primarily wanted to be a first-party firm in the VR dedicated fitness market so it could improve its VR fitness hardware (*e.g.*, headsets, heart monitor, wrist straps). *See* PX0492, at 2 ("Deep integration with hardware and software to create best in class experience that other devs can follow"); PX0127, at 7 ([Redacted]); PX0146 ("1P content is not a goal in itself – *it is only in the service of broader platform objectives* (e.g., help accelerate progress of market phases).") (emphasis added). The importance of this incentive is supported by internal **Meta** communications. *See* PX0179, at 2 (noting that "strategic rationale already exists" to pursue VR fitness, which was to "[c]reate option value for [**Meta's** device], software platform and hand tracking"), Mar. 11, 2021.

Second, the evidence also indicates that **Meta** would want to enter the VR dedicated fitness app market if the availability of ***933** VR fitness apps was at risk of becoming constrained and, therefore, **Meta** could ensure that at least one high-quality VR fitness app remained in the market. Specifically, as early as March 2021, **Meta** employees were expecting Apple to "lock in" VR fitness content to be exclusive with Apple's VR hardware. *See* PX0492, at 2 [Redacted] Mar. 9, 2021; PX0127, at 6 [Redacted], Mar. 10, 2021. This incentive was also corroborated by contemporaneous communications. DX1012, at 1 [Redacted], May 26, 2021. The evidence also suggests that this incentive was the primary animating factor that ultimately compelled **Meta** to pursue Within as an acquisition. *See, e.g.*, PX0117 [Redacted].

Meta's prior ventures into other VR app markets also do not support a subjective intention or proclivity to build its own apps as opposed to an acquisition. Courts have considered a potential entrant's history of acquisitions and expansions in determining its likelihood of *de novo* entry. *See* *Black & Decker*, 430 F. Supp. at 756 (potential entrant had previously "diversified almost exclusively through internal expansion [and] had a definite, if unwritten, policy known to its employees of discouraging growth by acquisition"); *Phillips Petroleum*, 367 F. Supp. at 1240 ("At no time prior to the [ ] acquisition did [the potential entrant] ever enter a new marketing area by acquiring a major company in that market."). The evidence indicates that **Meta** has tended to build its own VR app where the experience did not call for specialized or substantive content, *e.g.*, Horizon Worlds (a world-building app where other users can create worlds in VR), Horizon Workrooms (a productivity app), Horizon Venues (a live-events app), Horizon Home (social networking app). **Meta's** Answer and Affirmative Defenses ¶ 35; *see also* PX0056 ("Carmack Dep.") 101:15–23 (indicating **Meta** does not have "anything internally developed that was a hit outside of our browser application"). Meanwhile, **Meta** has acquired other VR developers where the experience requires content creation from the developer, such as VR video games, as opposed to an app that hosts content created by others. Stojsavljevic Hr'g Tr. 87:5–88:2. With respect to fitness, the Court finds that VR dedicated fitness is more akin to a gaming app—where the emphasis is on the content created or provided by the developer—than a browser or world-building app, where the value is derived from the users' own creativity rather than the developers'. Accordingly, based on **Meta's** past entries into VR app markets, the evidence would suggest an interest in entry by acquisition instead of entry *de novo.*

But even more pertinent than the record of **Meta's** past entries into VR app markets is the evidence that **Meta**

had consciously considered and appeared doubtful of the proposition to build its own independent VR fitness app. The pre-read strategy document prepared for Mark Rabkin's attention contains a separate section that "[i]t will be hard to build Fitness from scratch." PX0127, at 7. Specifically, a VR fitness app would require **Meta** to [Redacted] *Id.* The document also recognized that **Meta** would have to "build new kinds of expertise at the intersection of software, instructor-led fitness, music, media." *Id.* The decision not to build **Meta's** own VR fitness app is corroborated by the lack of any other contemporaneous discussion on the topic. The record does, however, indicate that **Meta** attempted to gauge whether it could expand Beat Saber together with a fitness partner, a prospect the Court delves into further below.

In sum, the subjective evidence indicates that **Meta** was subjectively interested in entering the VR dedicated fitness app market itself, either for hardware development or defensive market purposes. However, the Court again notes that these ***934** incentives would support both market entry by acquisition and *de novo*, but the Court's inquiry is only concerned with the feasibility of *de novo* entry. For instance, even though **Meta's** concern about [Redacted] was an incentive to acquire Within, that incentive does not apply with equal force [Redacted] PX0127, at 1. And, as the Court elaborates below, the evidence shows that all these factors—**Meta's** capabilities and incentives, both objective and subjective—did not result in **Meta** ever seriously contemplating a *de novo* entry, *i.e.*, building its own VR fitness app.

4. Identified Means of Entry

Up to this point, the Court has only addressed **Meta's** capabilities, incentives, and intent to enter the VR dedicated fitness app market in the abstract. However, an assessment of the probability and feasibility of a hypothetical *de novo* entry would not be complete without addressing the *actual* means of entry that **Meta** considered. *See* *Black & Decker*, 430 F. Supp. at 757 ("Three avenues of entry into the gas lawn mower field were explored...."); *Siemens*, 621 F.2d at 502–03 (summarizing multiple possibilities that other acquiring company had considered); *Phillips Petroleum*, 367 F. Supp. at 1243–44 (same).

Nevertheless, the **FTC** has implied that the Court may infer that **Meta** would have entered the market *de novo*—irrespective of its actual plans for entry—using "available feasible means" unbeknownst to the parties or the Court. *See* **FTC** Closing Hr'g Tr. 1494:16–18 ("We don't have to show that **Meta** actually had a subjective intention to enter the market."). To the extent the **FTC** implies that—based solely on the objective evidence of **Meta's** resources and its excitement for VR fitness—it would have inevitably found and implemented some unspecified means to enter the market, the Court finds such a theory to be impermissibly speculative.

The **FTC** made a similar argument in *BOC International*, where it argued that "[s]imply because no entry had been effectuated at the time the [acquisition] presented itself did not mean that BOC would not have *eventually realized* its 'long-term objectives' of entering the [relevant] market by growth rather than by this major acquisition." *BOC Int'l, Ltd. v. **FTC***, 557 F.2d 24, 29 (2d Cir. 1977) (emphasis added). The Second Circuit rejected this "eventual entry" theory as "uncabined speculation," holding that "it seems necessary under Section 7 that the finding of probable entry at least contain some reasonable temporal estimate related to the near future." *Id.* The **FTC** recently reaffirmed this holding in *Altria Group, Inc.*, 2022 WL 622476, at *70 ("Complaint Counsel is arguing that due to Altria's resources as a large company, and economic incentives to participate in the e-cigarette market, Altria would have eventually had a product competing in that market. *This is precisely the position rejected by the court in* BOC.") (emphasis added). Additionally, insofar as the **FTC** implies **Meta** could overcome its lack of fitness experience and content creation by hiring experts or partnering with a fitness brand, the suggestion reflects "the kind of unsupported speculation" rejected in *Tenneco*, 689 F.2d at 354 (rejecting the **FTC's** "conclusion that [potential entrant] would have entered the market de novo with the aid of a license" for the necessary technology).

[47] The Court here does not hold that every case of actual potential competition will require consideration of a potential entrant's actual and subjective plans for entry. *See* *Falstaff Brewing*, 410 U.S. at 565, 93 S.Ct. 1096 ("We have certainly never suggested that subjective evidence of likely future entry is required to make out a § 7 case.") (Marshall, J., concurring). Nor does the Court suggest that a particular ***935** entry strategy can only be "reasonably probable" and "feasible" if it has reached a certain inflection point in the firm's decision-making process. Such a conclusion

would incentivize corporate gamesmanship and reward decisionmakers for reaching merger decisions hastily without exploring non-merger alternatives. *See generally* *id.* at 563–71, 93 S.Ct. 1096 (Marshall, J., concurring). However, where the objective evidence is "weak or inconclusive" and does not "strongly point[ ] to the feasibility of entry de novo," *id.* at 570, 93 S.Ct. 1096, it is incumbent on the Court to consider the potential entrant's actual plans of entry for the purposes of ensuring that Section 7 enforcement does not veer into the realm of ephemeral possibilities. As applied here, the Court holds that the **FTC** may not rest solely on evidence of **Meta's** considerable resources and the company's clear zeal for the VR dedicated fitness app market as a whole; the evidence must show that **Meta** had *some* feasible and reasonably probable path to *de novo* entry.

Turning then to the evidence, the record indicates that **Meta** would only have entered by acquisition or a Beat Saber collaboration with a fitness content creator; the Court is unaware of any evidence that **Meta** considered building a VR fitness app on its own. In the strategy document that was prepared for the meeting with Mark Rabkin, **Meta** personnel had outlined and analyzed five options for investing in VR fitness: (1) acquire Within and Supernatural; (2) acquire [Redacted]; (3) expand Beat Saber into deliberate fitness, likely by partnering with Peloton; (4) increase funding for development of third-party VR fitness apps; and (5) do nothing and maintain the status quo. PX0127, at 2–4. The record reflects that, although **Meta** initially pursued the first three options in parallel, the frontrunner was the [Redacted] acquisition until approximately June 2021 when **Meta** pivoted to acquire Within. *See, e.g.*, PX0179, at 1–2 (indicating that action items included pursuing due diligence for both Supernatural and [Redacted] and having Stojsavljevic "present a proposal to Rabkin on expanding Beat Saber to deliberate fitness"), Mar. 11, 2021; PX0284, at 1 (drafting email to Michael Verdu summarizing the "pros/cons of [Redacted] vs. Supernatural"), Mar. 18, 2021; DX1012, at 1, 3 ("[Zuckerberg] asked if we were engaged with [Within].... [Bosworth] responded that our focus has been on [Redacted]."), May 26, 2021. Notably, even though **Meta** personnel had considered the option to increase third-party funding without entering the market and an option to do nothing as comparison, there was never an option for **Meta** to build its own VR dedicated fitness app to enter the market *de novo.*

Given the degree of analysis evident from these strategy documents, the Court finds that **Meta** had only considered the acquisition of Within, the acquisition of [Redacted], and the partnership of Beat Saber with Peloton as feasible means to enter the relevant market. These three options, therefore, comprise the universe of "available feasible means" that the Court will consider for the purposes of the **FTC's** actual potential competition claim.

a. Entry by Acquisition

Meta's first two means of entry into the relevant market were both entries by acquisitions, either [Redacted]. The evidentiary record indicates that these two options were both among the earliest proposals presented to Mark Zuckerberg, as well as the last two considered before **Meta** decided to acquire Within. *See, e.g., supra* Section I.D.

The evidence supports a finding that, but for its pursuit of Within as an acquisition, there was a reasonably probability that [Redacted] However, the inquiry before the Court is not whether it was reasonably probable that **Meta** [Redacted] ***936** The **FTC** has argued almost exclusively that **Meta's** "available feasible means" of entering the relevant market is by *de novo* entry, not acquisition. The **FTC** also does not take the position [Redacted] that could have also conceivably had procompetitive effects. *See, e.g.*, Mot. 21 (noting that **Meta's** entry into the market would have "introduc[ed] a strong, well-established new rival to Supernatural and FitXR"); *see also* *Marine Bancorporation*, 418 U.S. at 625, 94 S.Ct. 2856 (defining a toehold acquisition as a "small existing entrant").

Accordingly, the Court does not consider the "reasonable probability" that **Meta** could have entered the VR dedicated fitness market [Redacted] as an "available feasible means" for the purposes of the actual potential competition analysis.

b. Entry by Beat Saber–Peloton Partnership

[48] This brings us to the final means—and the **FTC's** main theory—by which **Meta** could have entered the VR dedicated fitness market: expanding its existing rhythm game app Beat Saber into dedicated fitness and partnering with a fitness brand. The **FTC** claims that **Meta** scrapped this Beat Saber proposal once it learned that Within was at risk of being acquired by Apple. Mot. 10, 20–21. However, this theory is

neither supported by the contemporaneous remarks regarding the Beat Saber proposal nor the timing of the subsequent investigation into this proposal.

First, the evidentiary record is unclear as to what exactly the widely referenced Beat Saber–Peloton proposal would even look like. On some occasions, Stojsavljevic—the proposal's primary advocate—refers to it as a "brand licensing w/ Peloton" or a "co-branding ... Peloton mode inside Beat Saber." PX0144, at 1, Mar. 8, 2021; PX0407, at 1, Mar. 15, 2021. On other occasions, Stojsavljevic considers whether the proposal would be a separate Quest Store app. PX0407, at 2. Michael Verdu—another proponent of expanding Beat Saber into fitness—also recalled that the proposal never reached a point of "understanding what that partnership would look like." Verdu Dep. 201:14–23 ("[I]s it a Peloton-branded headset? Is it Peloton-branded content inside of our headset? Like we didn't even get to the point where we were exploring at that level of detail."). This uncertainty is consistent with the March 2021 "Beat Saber x Peloton Opportunity Identification" presentation that [Redacted] prepared at Stojsavljevic's request, which indicated that part of [Redacted] task would be to define the partnership opportunity and determine how to present the proposal to Peloton. PX0121, at 5–6, Mar. 25, 2021. Ultimately, Stojsavljevic did not even engage [Redacted] to proceed with her proposed research into the Beat Saber proposal. PX0052 ("Stojsavljevic Dep.") 219:23–220:1.

Second, the Beat Saber–Peloton proposal did not enjoy uniform or even widespread support among the **Meta** personnel who were researching VR fitness opportunities. *See* PX341, at 2 ("Jane and Anand were arguing with me [Stojsavljevic] when I was proposing Beat Saber x Peloton and thought we should buy [Redacted] or Supernatural instead."), June 11, 2021. Particularly, Jane Chiao had consistently and contemporaneously expressed doubts regarding the feasibility of repositioning Beat Saber to fitness. *See* PX0492, at 1, 7 ("Jane's quick thoughts" included a section titled "Why not Beat Saber?" setting forth reasons against pivoting Beat Saber to fitness), Mar. 9, 2021. In one exchange, Chiao commented that [Redacted]." PX0251, at 2, Mar. 4, 2021. Chiao's opinion was informed by the previous difficulties she had in attempting to reposition **Meta's** social functions for other uses. *Id.* at 2–3 ([Redacted]).

***937** Third, the timeline and dearth of contemporaneous internal discussions on the Beat Games–Peloton proposal is inconsistent with the **FTC's** narrative that the Within acquisition derailed an otherwise full-speed effort to explore the Beat Games proposal. *See generally* DDX07 (Defendants' timeline demonstrative), at 31. In short, the idea was raised and endorsed by Stojsavljevic on March 11, 2021 (PX0179); he solicited feedback from his peers a few days later (PX0407); and on March 25, 2021, he received a quote for a contractor to look into the proposal, but did not proceed with it (PX0121). After this initial scramble, the record reflects no further discussion about expanding Beat Saber into fitness before June 2021, when **Meta** began pursuing Within as an acquisition. Although the **FTC** argues that there is no direct evidence that **Meta** had deliberately dropped the Beat Saber proposal, the absence of active discussions could just as reasonably—and the Court finds that it does—support **Meta's** explanation that the Beat Saber proposal had lost momentum after March 2021. The proposal's main driver, Stojsavljevic, testified that he had already "slowed down before [**Meta's** decision to pursue Within]," because he was busy with another **Meta** acquisition. Stojsavljevic Hr'g Tr. 165:12–17. Although subjective corporate testimony is generally deemed self-serving and entitled to low weight, Stojsavljevic's lack of bandwidth is corroborated by his contemporaneous decision to outsource the research for the Beat Games proposal. *See* PX0121, at 1; *see also* Stojsavljevic Hr'g Tr. 163:25–165:11.

Moreover, when viewed alongside **Meta's** history with Beat Saber, these two months of inactivity between March and June 2021 appear to have been the norm rather than the exception. Although **Meta** employees like Verdu were excited about Beat Saber's potential as a vector into fitness, **Meta** has never been able to execute on that excitement in any of the years since they acquired Beat Saber. Verdu Dep. 178:12–20 ("[I]t was the perpetual white whale quest to get ... Beat Games to build a fitness version of Beat Saber, which was like pushing on a string. We tried and tried and tried, and they never picked it up."); *see* PX0123 ("[[Redacted]] was on the goal list for the [beat] saber acquisition.... But that goal was never followed up on."), Sept. 15, 2021.

Finally, the **FTC** cites two instances of contemporaneous **Meta** communications that suggest the Beat Saber proposal had not died on the vine when **Meta** pivoted to acquiring Within. *See* **FTC** Closing Hr'g Tr. 1495:10–24. The first is Verdu's comment on June 20, 2021, that **Meta** was "in the *midst of a strategy exercise to decide between our alternatives* when Supernatural became in play (supposedly pursued by Apple), which accelerated everything." PX0117, June 10, 2021 (emphasis added). The **FTC** asserts that the referenced "alternatives" included the Beat Saber–Peloton

proposal; however, this theory is inconsistent with the fact that there had been no internal discussion of the proposal in the preceding two months. The more likely interpretation is that "alternatives" referred to [Redacted] *See* PX0253, at 1.

The second communication arose in the context of [Redacted] requested a sale price of [Redacted]. PX0123, at 2, Sept. 15, 2021. In discussing alternatives to the Within acquisition, Jason Rubin suggested that another [Redacted] *Id.* He also suggested, "We might be able to buy [Redacted], rebrand and redesign to Beat aesthetics." *Id.* In assessing the weight of these statements, the Court makes a few contextual observations. At the time Rubin made his comments, he had only been in his role for about six weeks; Verdu (an employee with extensive knowledge of **Meta's** history with VR fitness) previously held the role. PX0066 ("Rubin Dep.") 28:8–15 ("On August ***938** 1st, I took or was handed the role that I have right now ... and inherited [the **Meta**–Within] acquisition in full swing."). Rubin also testified that, before switching roles, he "was not aware of anything having to do with fitness at all in the VR world" and had no knowledge of "how the company had come to its decision making to acquire [Within]." *Id.* 126:9–127:11. Perhaps on a record with more corroborating evidence, Rubin's remarks may warrant more substantial weight towards the **FTC's** theory that the Beat Saber fitness proposal remained a live proposition. However, given that Ruben's remarks appeared to have been made off the cuff, are inconsistent with the overall weight of the evidence, and were made at a time when he was likely still unfamiliar with VR fitness and **Meta's** history, the Court is disinclined to accord any significant weight to Rubin's comments.

For all these reasons, the Court finds that it was not "reasonably probable" that **Meta** would have repositioned their top-selling VR app, Beat Saber, into a dedicated fitness app, even assuming that it could have identified a partner willing to provide VR fitness content.

* * *

[49] After reviewing the evidentiary record and the parties' arguments, the Court concludes that it is not "reasonably probable" that **Meta** would enter the market for VR dedicated fitness apps if it could not consummate the Acquisition. Though **Meta** boasts considerable financial and VR engineering resources, it did not possess the capabilities unique to VR dedicated fitness apps, specifically fitness content creation and studio production facilities. As a VR platform developer, **Meta** can enjoy many of the promising benefits of VR fitness growth without itself intervening in the VR fitness app market. Finally, the proposal for **Meta** to expand Beat Saber into fitness was not "reasonably probable" for a whole host of reasons, in addition to the aforementioned obstacles to **Meta's** *de novo* entry.

Accordingly, the Court finds that **Meta** did not have the "available feasible means" to enter the relevant market other than by acquisition. Because the **FTC** has not met its burden on this element, the Court does not proceed to the issue of whether **Meta's** *de novo* entry was substantially likely to deconcentrate or result in other procompetitive effects in the relevant market.

In so finding, the Court concludes that the **FTC** has failed to establish a likelihood that it would ultimately succeed on the merits as to its Section 7 claim based on the actual potential competition theory.

E. Perceived Potential Competition

In addition to its claim that the Acquisition would lessen competition pursuant to the actual potential competition theory, the **FTC** also claims that the Acquisition violates Section 7 under the perceived potential competition theory. FAC ¶¶ 97–102. Under this theory, the **FTC** argues that the Acquisition would eliminate the competitive influence that **Meta** exerts on firms within the relevant market by virtue of its presence on the fringes of the market. *See, e.g., United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 559–60, 93 S.Ct. 1096, 35 L.Ed.2d 475 (1973).

[50] **[51]** To prevail on a claim that the Acquisition would have eliminate perceived potential competition, the **FTC** must establish—in addition to showing a highly concentrated market, *see* Section III.C—the following: (1) **Meta** possessed the "characteristics, capabilities, and economic incentive to render it a perceived potential de novo entrant"; and (2) **Meta's** "premerger presence on the fringe of the target market in fact tempered oligopolistic behavior on the part of existing participants in that market." ***939** *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 625, 94 S.Ct. 2856, 41 L.Ed.2d 978 (1974). The same objective facts regarding **Meta's** capability of entering the market under an actual potential competition theory are also "probative of violation of § 7 through loss of a procompetitive on-the-fringe influence." *Falstaff Brewing*, 410 U.S. at 534 n.13, 93

S.Ct. 1096; *see also* *Black & Decker*, 430 F. Supp. at 770. However, whereas a claim for actual potential competition may consider the potential entrant's intent to enter the market, a perceived potential competition claim ignores the potential entrant's subjective intent to enter the market and instead focuses on the subjective perceptions of the in-market firms. *See* *Falstaff Brewing*, 410 U.S. at 533–36, 93 S.Ct. 1096.

1. Potential Entrant Characteristics

[52] In evaluating the **FTC's** perceived potential competition claim, the Court considers the same objective evidence regarding **Meta's** capabilities and incentives to enter the relevant market. Unsurprisingly, and for the same reasons explained above, the objective evidence in the record is insufficient to support a finding that it was "reasonably probable" **Meta** would enter the relevant market for purposes of the perceived potential competition doctrine. *See supra*, Section III.D.2.

Nor does the subjective evidence of the in-market firms' perceptions move the needle on this point. Although the **FTC** produced some evidence that Within co-founders and employees had expressed concern that Beat Saber or its fans could create a fitness version to compete with Supernatural, these statements are mostly stale with some significantly preceding the relevant time period. The **FTC's** strongest evidence that [Redacted] were statements made [Redacted] before Supernatural even entered the VR market in April 2020. *See, e.g.*, PX0627, at 2 [Redacted] The **FTC** has only produced one document that post-dates Supernatural's launch, which is a June 2020 "Supernatural Product Strategy" presentation that noted [Redacted] PX0615, at 8. However, even this document's weight is undercut by the fact that it was created nearly a year before **Meta** began pursuing Within as an acquisition target. [14]

Furthermore, subsequent but still contemporaneous evidence indicated that Within eventually came to [Redacted]" DX1083, at 10, Sept. 22, 2020. In a September 2020 text conversation with a Within investor, Within's co-founder Chris Milk explained that [Redacted] *Id.* at 7. In the same conversation, Milk [Redacted] *Id.* at 67–68.

In summary, the evidentiary record indicates that [Redacted] This finding, in addition to the overall absence of testimony from other in-market firms, would suggest that the **FTC** has failed to demonstrate that it was "reasonably probable" that **Meta** was perceived as a potential competitor into the relevant market. However, even if the **FTC** had prevailed on this element, the Court is convinced that it did not satisfy the second required showing for a perceived potential competition claim.

2. Tempering Effect

[53] Under the second element of the perceived potential competition claim, the ***940** **FTC** must establish that **Meta's** "premerger presence on the fringe of the target market *in fact* tempered oligopolistic behavior on the part of existing participants in that market." *Marine Bancorporation*, 418 U.S. at 624–25, 94 S.Ct. 2856 (emphasis added). In other words, the **FTC** must present evidence that it was "reasonably probable" that **Meta's** presence as a potential competitor had a direct effect on the firms in the VR Dedicated Fitness market.

In setting forth this standard, the Court rejects the **FTC's** suggestion that it need only provide "[p]robabilistic proof of 'likely influence' on existing competitors." Mot. 21. This interpretation arises from the language used by the Supreme Court in a footnote from *Falstaff Brewing*, specifically "[t]he Government did not produce *direct evidence* of how members of the [relevant] market reacted to potential competition from [the potential entrant], but *circumstantial evidence* is the lifeblood of antitrust law." 410 U.S. at 534 n.13, 93 S.Ct. 1096 (emphasis added). The Court reads this language to mean the **FTC** need not provide *direct evidence* of Within adopting its conduct to account for **Meta's** presence (*e.g.*, a hypothetical internal email at Within expressly communicating fear of **Meta's** imminent entry and taking actions in anticipation). Direct evidence, however, is distinguishable from evidence of a *direct effect* experienced within the relevant market (*e.g.*, circumstantial evidence that Within reduced prices shortly after **Meta's** hypothetical public announcement that it was looking into the VR Dedicated Fitness market). This interpretation is supported by the Supreme Court's statement of the law in *Marine Bancorporation*, 418 U.S. at 624–25, 94 S.Ct. 2856 (requiring "presence ... in fact tempered oligopolistic behavior") and the Second Circuit's interpretation in *Tenneco, Inc. v. **FTC***, 689 F.2d 346, at 358 ("The Commission is correct that it need not produce direct evidence that [acquired company] altered its actions in response to a perception of [potential entrant] 'in

the wings.' However, it must produce at least circumstantial evidence that [potential entrant's] presence probably *directly affected* competitive activity in the market.") (emphasis added). Accordingly, the **FTC** must produce *some* evidence —direct or circumstantial—that **Meta's** presence had a direct effect on the firms in the relevant market.

Under this standard, the **FTC's** evidence on this element is insufficient. The only evidence that suggests any kind of effect in the relevant market is that Within cited, as reasons not to reduce headcount at Within shortly before launching Supernatural, [Redacted] PX0620, at 36, Mar. 8, 2020. As noted above, Within and Supernatural had not even entered the relevant market at the time of this presentation. Consequently, this cannot be evidence of a direct effect within the VR dedicated fitness app market; rather, they are the preemptive considerations of a firm contemplating entry into the market. Moreover, the evidence indicates that Within had [Redacted]. *See supra* Section III.E.1. Other than this presentation, the **FTC** suggests that [Redacted]" PX0621, at 2, Dec. 8, 2020. Although this is circumstantial evidence that Within was concerned about hypothetical potential entrants, absent further evidence, this email is no basis to infer the critical nexus, *i.e.*, that **Meta** was one such potential entrant.

The Court recognizes that its interpretation of the "effect" requirement sides with Defendants' position set forth in their Motion to Dismiss. ECF No. 108, at 15–16; ECF No. 162, at 10–12. Although the Court ultimately determines that the **FTC's** evidence has not established that **Meta's** presence had a direct effect on Within's behavior, it finds that the **FTC's** *pleadings* are sufficient. The **FTC** had alleged ***941** that Within was "concerned about making any moves that would hurt its ability to compete against **Meta** as a potential entrant" and provided an example. FAC ¶ 101. At the pleadings stage, this satisfies their burden. Accordingly, the Court DENIES Defendants' motion to dismiss the perceived potential competition claim.

[54] In summary, the Court finds that the objective evidence does not support a reasonable probability that firms in the relevant market perceived **Meta** as a potential entrant. Even if it did, the Court finds that there is no direct or circumstantial evidence to suggest that **Meta's** presence did in fact temper oligopolistic behavior or result in any other procompetitive benefits. Accordingly, the **FTC** has not demonstrated a likelihood of ultimate success as to its Section 7 claim arising from perceived potential competition.

F. Balancing of Equities

Because the **FTC** has not demonstrated a likelihood of ultimate success on the merits per the first § 13(b) element, the Court need not proceed to the balance the equities in the second portion of the § 13(b) inquiry.

IV. CONCLUSION

Based on the foregoing reasons, the Court ORDERS as follows:

1. Defendants' Motion to Dismiss is DENIED;

2. Defendants' Motion to Strike is DENIED AS MOOT; and

3. Plaintiff's Motion for Preliminary Injunction is DENIED.

IT IS SO ORDERED.

All Citations

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Footnotes

1 The Court understands "XR" to refer generally to virtual reality, augmented reality, and mixed reality.

2 Apple does not currently offer a VR headset. *See, e.g.*, Bosworth Hr'g Tr. 1022:13–16.

3 Dr. Vickey later testified that he had not used a Hydrow, and that he "would have" evaluated the machine by reviewing the company's website and watching its videos. Vickey Hr'g Tr. 1202:8–18.

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4 The Court is not persuaded by Defendants' argument that the Peloton Guide is similarly portable to a VR headset. *See* Opp. 10. [Redacted] Vickey Report ¶ 43 ("[T]he Peloton Guide uses augmented reality features to track the user's motions and a camera to position the user visually near an on-screen instructor.").

5 This supply-side analysis of whether other firms would be able to switch production to VR dedicated fitness apps is independent of the demand-side inquiry (and main focus of the market definition analysis) of whether users would switch consumption to other products in the event of a price increase in VR dedicated fitness apps.

6 Some VR dedicated fitness apps charge a one-time price over $18.99, and another VR dedicated fitness app has a free version as well as a premium version priced equally to Supernatural at $18.99 per month. All other VR dedicated fitness apps charge subscriptions lower than $18.99 per month, and one is free. Singer Report ¶ 39.

7 Having independently reached the same conclusion as Dr. Singer regarding the relevant product market definition, the Court will rely on his subsequent analyses regarding the structure and characteristics of the defined market, which Defendants do not challenge. *See* ECF No. 470.

8 Indeed, the many novel questions of law presented by this case may signal an ill fit between these long-standing antitrust doctrines and the structures of modern technology markets.

9 As noted above, because the **FTC** has not argued that **Meta** could have entered the relevant market through a toehold acquisition, the Court considers only the question of *de novo* entry.

10 The Court can imagine more scenarios, *e.g.*, where **Meta** contracts independent fitness instructors or employs a team of regular fitness instructions, but they would require further speculation.

11 To clarify, the Court cites this internal **Meta** strategy document for its identification of functions that are *objectively* absent from **Meta's** capabilities, and not for any probative value in determining **Meta's** *subjective* intention, such as whether those absences are sufficient to deter it from entering the VR dedicated fitness app market de novo.

12 To be sure, there is incentive for any company to enter a market that has stable consumers and is experiencing high growth, and the Court considers these incentives in assessing reasonable probability of **Meta's** entry. However, those incentives are of a different type and on a different scale from **Meta's** interest in VR dedicated fitness apps as a VR platform developer.

13 As discussed in the "Users and Growth" analysis above, the record reflects that **Meta's** interest in the VR dedicated fitness market stems from the market's potential contribution to broader VR adoption and corresponding headset sales. The Court recognizes that a thriving VR fitness market may contribute to **Meta's** future profitability in headset sales. But that potential profitability in a different market is both too divorced from the likelihood of **Meta's** *de novo* entry in the relevant market, and too speculative to evaluate under this factor.

14 The **FTC** also produces an April 2021 internal communication from ***Meta***, where a **Meta** employee remarked that Within "very much worry that [**Meta**] will create a fitness first app internally that takes their market share." PX0514, at 2, Apr. 23, 2021. The Court is doubtful of the probative value of this hearsay statement, and the **FTC** has not produced any evidence to corroborate this statement. **FTC** Closing Hr'g Tr. 1498:2–9 ("[W]e heard from Ms. Brown, and you may recall that she did not remember much, if anything at all, about this document.... It's up to this court to judge her credibility on that store. But she did say that she was being truthful when she wrote this.").

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Declined to Extend by Illumina, Incorporated v. Federal Trade Commission, 5th Cir., December 15, 2023

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United States District Court, N.D. California.

FEDERAL TRADE COMMISSION, Plaintiff,
v.
MICROSOFT CORPORATION, et al., Defendants.

Case No. 23-cv-02880-JSC
|
Signed July 10, 2023

Synopsis
Background: Federal Trade Commission brought action against software company and video game company seeking preliminary injunction to enjoin proposed merger between companies pending administrative trial to determine if merger violated Clayton Act.

Holdings: The District Court, Jacqueline Scott Corley, J., held that:

[1] portable console was not in relevant market for high-performance video game consoles;

[2] personal computers were not in relevant market for high-performance video game consoles;

[3] geographic market for high-performance video game consoles was the United States;

[4] merging software company and video game company did not have incentive to foreclose particular video game from competitors;

[5] Federal Trade Commission was not likely to succeed on merits of its claim that exclusivity of particular video game on software company's game library subscription service would probably substantially lessen competition in subscription services market;

[6] Commission was not likely to succeed on merits of its claim that merger between software company and video game company would probably lessen competition in cloud gaming market; and

[7] balance of equities did not weigh in favor of granting preliminary injunction.

Motion denied.

Procedural Posture(s): Motion for Preliminary Injunction.

West Headnotes (40)

[1] **Antitrust and Trade Regulation** Mergers and Acquisitions

Because the Clayton Act bars mergers whose effect may be substantially to lessen competition, or to tend to create a monopoly, judicial analysis necessarily focuses on probabilities, not certainties; this requires not merely an appraisal of the immediate impact of the merger upon competition, but a prediction of its impact upon competitive conditions in the future. Clayton Act § 7, 15 U.S.C.A. § 18.

[2] **Antitrust and Trade Regulation** Mergers and Acquisitions

A violation of Section 7 of the Clayton Act is proven upon a showing of reasonable probability of anticompetitive effect. Clayton Act § 7, 15 U.S.C.A. § 18.

[3] **Antitrust and Trade Regulation** Presumptions and burden of proof

Claims challenging horizontal mergers under Section 7 of the Clayton Act are generally analyzed under a burden-shifting framework; the plaintiff must first establish a prima facie case that a merger is anticompetitive, and the burden then shifts to the defendant to rebut the prima facie case. Clayton Act § 7, 15 U.S.C.A. § 18.

[4] **Antitrust and Trade Regulation** Presumptions and burden of proof

In vertical merger cases under Section 7 of the Clayton Act, the government must make a fact-specific showing that the proposed merger is likely to be anticompetitive; once the prima facie case is established, the burden shifts to the defendant to present evidence that the prima facie case inaccurately predicts the relevant transaction's probable effect on future competition, or to sufficiently discredit the evidence underlying the prima facie case. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[5] **Antitrust and Trade Regulation** Preliminary

In determining whether to grant preliminary injunction under Federal Trade Commission Act, court must determine likelihood that Commission will ultimately succeed on merits and balance equities. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

1 Case that cites this headnote

[6] **Antitrust and Trade Regulation** Preliminary

To satisfy the likelihood of success prong of test for whether to grant preliminary injunction under Federal Trade Commission Act, the Commission must raise questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the Commission in the first instance and ultimately by the Court of Appeals.

Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

1 Case that cites this headnote

[7] **Antitrust and Trade Regulation** Preliminary

In evaluating likelihood of success on the merits, as required to issue preliminary injunction under Federal Trade Commission Act, the court must exercise its independent judgment and evaluate the Commission's case and evidence on the merits. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

[8] **Antitrust and Trade Regulation** Preliminary

The issuance of a preliminary injunction under the Federal Trade Commission Act prior to a full trial on the merits is an extraordinary and drastic remedy; this is particularly true in the acquisition and merger context, because, as a result of the short life-span of most tender offers, the issuance of a preliminary injunction blocking an acquisition or merger may prevent the transaction from ever being consummated.

Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

[9] **Antitrust and Trade Regulation** Preliminary

When determining likelihood of success on the merits, as required to issue preliminary injunction under the Federal Trade Commission Act, the district court does not resolve conflicts in the evidence—the question is simply whether the Commission has met its burden of showing a likelihood of success on the merits. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

[10] **Antitrust and Trade Regulation** Preliminary

The relevant forum for the question of likelihood of success, as required to grant preliminary injunction under Federal Trade Commission Act, is before the administrative law judge (ALJ) in the administrative proceedings. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

2 Cases that cite this headnote

[11] **Antitrust and Trade Regulation** Relevant market in general

The first step in analyzing a merger challenge under Section 7 of the Clayton Act is to determine the relevant market. Clayton Act § 7, 15 U.S.C.A. § 18.

[12] **Antitrust and Trade Regulation** Geographical market; section of country

Antitrust and Trade Regulation Product market; line of commerce

The relevant market for merger challenges brought under Section 7 of the Clayton Act is determined by (1) the relevant product market and (2) the relevant geographic market. Clayton Act § 7, 15 U.S.C.A. § 18.

[13] **Antitrust and Trade Regulation** Product market; line of commerce

The outer boundaries of a product market are determined, for Clayton Act purposes, by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it; that is, when one product is a reasonable substitute for the other, it is to be included in the same relevant product market even though the products themselves are not the same. Clayton Act § 7, 15 U.S.C.A. § 18.

[14] **Antitrust and Trade Regulation** Product market; line of commerce

For purposes of determining product markets under Clayton Act. a product is construed to be a reasonable substitute for another when the demand for it increases in response to an increase in the price for the other. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[15] **Antitrust and Trade Regulation** Questions of law and fact

The definition of the relevant market, for Clayton Act purposes, is basically a fact question dependent upon the special characteristics of the industry involved. Clayton Act § 7, 15 U.S.C.A. § 18.

[16] **Antitrust and Trade Regulation** Relevant market in general

For purposes of proceedings under the Clayton Act, the overarching goal of market definition is to recognize competition where, in fact, competition exists. Clayton Act § 7, 15 U.S.C.A. § 18.

[17] **Antitrust and Trade Regulation** Presumptions and burden of proof

The Federal Trade Commission bears the burden of proof and persuasion in defining the relevant market, for purposes of the Clayton Act. Clayton Act § 7, 15 U.S.C.A. § 18.

[18] **Antitrust and Trade Regulation** Relevant market in general

There is no requirement to use any specific methodology in defining relevant market in antitrust action under the Clayton Act. Clayton Act § 7, 15 U.S.C.A. § 18.

[19] **Antitrust and Trade Regulation** Product market; line of commerce

Factors for determining product market in proceedings under the Clayton Act are practical indicia such as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors. Clayton Act § 7, 15 U.S.C.A. § 18.

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[20] **Antitrust and Trade Regulation** Preliminary

Portable console was not in relevant market for high-performance video game consoles, for purposes of whether preliminary injunction was warranted in Federal Trade Commission's action against software company and video game company for violation of Clayton Act, based on portable console's price and features, including its portability, screen, and less powerful hardware, and plethora of internal industry documents. Clayton Act § 7, 15 U.S.C.A. § 18; Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

[21] **Antitrust and Trade Regulation** Elasticity of supply and demand

It does not matter whether a defendant's products are fully interchangeable with those of its competitors because perfect fungibility is not required; instead, products must be reasonably interchangeable, such that there is cross-elasticity of demand.

[22] **Antitrust and Trade Regulation** Relevant market in general

The goal of market definition in proceedings under the Clayton Act is to define the boundaries of the competition within which foreclosure or disadvantaging of a participant is likely to reduce innovation, delay rivals' entry, and raise price or reduce variety or quality of the ensuing goods. Clayton Act § 7, 15 U.S.C.A. § 18.

[23] **Antitrust and Trade Regulation** Relevant market in general

The relevant market will encompass those firms whose presence drives this competition and whose foreclosure or disadvantaging may thwart it, for purposes of the Clayton Act. Clayton Act § 7, 15 U.S.C.A. § 18.

[24] **Antitrust and Trade Regulation** Computer and internet

Antitrust and Trade Regulation Preliminary

Personal computers were not in relevant market for high-performance video game consoles, for purposes of preliminary injunction motion in Federal Trade Commission's action against software company and video game company for violation of Clayton Act, although video game customers could "cross-shop" between high-performance consoles and personal computers; there was not reasonable interchangeability of use or cross-elasticity of demand between high-performance consoles and personal computers as substitute. Clayton Act § 7, 15 U.S.C.A. § 18; Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

[25] **Antitrust and Trade Regulation** Geographical market; section of country

For purposes of the Clayton Act, the relevant geographic market must correspond to the commercial realities of the industry and be economically significant. Clayton Act § 7, 15 U.S.C.A. § 18.

[26] **Antitrust and Trade Regulation** Geographical market; section of country

For purposes of the Clayton Act, the "geographic market" encompasses the area to which consumers can practically turn for alternative sources of the product and in which the antitrust defendants face competition. Clayton Act § 7, 15 U.S.C.A. § 18.

[27] **Antitrust and Trade Regulation** Computer and internet

Antitrust and Trade Regulation Preliminary

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The geographic market for high-performance video game consoles was the United States, for purposes of preliminary injunction motion in Federal Trade Commission's action against software company and video game company for violation of Clayton Act, although video game consoles were sold in markets outside of the United States; there was no evidence to suggest that consumers in the United States that sought to purchase a console were looking outside of the United States to do so. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b); Clayton Act § 7, 15 U.S.C.A. § 18.

[28] **Antitrust and Trade Regulation** Geographical market; section of country

For purposes of the Clayton Act, the geographic market is both the area in which the seller operates, and to which the purchaser can practically turn for supplies. Clayton Act § 7, 15 U.S.C.A. § 18.

[29] **Antitrust and Trade Regulation** Presumptions and burden of proof

In a horizontal merger case under the Clayton Act, the government can establish its prima facie case that the merger is anticompetitive simply by showing that the merger would produce a firm controlling an undue percentage share of the relevant market, and would result in a significant increase in the concentration of firms in that market, typically by presenting market-share statistics, which triggers a presumption that the merger will substantially lessen competition. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[30] **Antitrust and Trade Regulation** Presumptions and burden of proof

With challenges to proposed vertical mergers under the Clayton Act, the outcome of whether the government has established its prima facie case that the merger is anticompetitive turns on whether, notwithstanding the proposed merger's conceded procompetitive effects, the government has met its burden of establishing, through case-specific evidence, that the merger is likely to substantially lessen competition in the manner it predicts. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[31] **Antitrust and Trade Regulation** Presumptions and burden of proof

Once the prima facie case is established that a proposed merger violates the Clayton Act, the burden shifts to the defendant to present evidence that the prima facie case inaccurately predicts the relevant transaction's probable effect on future competition, or to sufficiently discredit the evidence underlying the prima facie case; upon such rebuttal, the burden of producing additional evidence of anticompetitive effects shifts to the government, and merges with the ultimate burden of persuasion, which remains with the government at all times. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[32] **Antitrust and Trade Regulation** Mergers and Acquisitions

In assessing the government's case under Section 7 of the Clayton Act, the court must engage in a comprehensive inquiry into the future competitive conditions in a given market, keeping in mind that the Clayton Act protects competition, rather than any particular competitor. Clayton Act § 7, 15 U.S.C.A. § 18.

[33] **Antitrust and Trade Regulation** Preliminary

To establish a likelihood of success, as required for preliminary injunction under Federal Trade Commission Act, on its ability and incentive foreclosure theory of violation of the Clayton Act, the Commission must show the combined

firm (1) has the ability to withhold a product, (2) has the incentive to withhold that product from its rivals, and (3) competition would probably be substantially lessened as a result of the withholding. Clayton Act § 7, 15 U.S.C.A. § 18; Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

[34] **Antitrust and Trade Regulation** Computer and internet

Antitrust and Trade Regulation Preliminary

Merging software company and video game company did not have incentive to foreclose particular video game from competitors, for purposes of determining whether Federal Trade Commission was likely to succeed for preliminary injunction in Commission's action against companies for violation of Clayton Act; software company committed to maintain game on existing platforms and to expand its availability, merger evaluation presented to software company's board of directors included sales of game through competitors post-merger, witnesses consistently testified that there were no plans to make game exclusive to software company's console, game's cross-platform play was critical to its financial success, and software company anticipated irreparable reputational harm if it made game exclusive. Clayton Act § 7, 15 U.S.C.A. § 18; Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

[35] **Antitrust and Trade Regulation** Mergers and acquisitions

Antitrust and Trade Regulation Preliminary

Evidence was insufficient to show that merging software company and video game company had incentive to foreclose particular video game from competitors, for purposes of determining whether preliminary injunction was warranted in Federal Trade Commission's action against companies for violation of Clayton Act; Commission's expert economist assumed 20% conversion rate of gamers who used competitor's console to software company's console was not supported by record, expert did not consider software company's agreement with several competitors to provide ongoing access to game, software company's conduct after acquisition of another game company did not dispute evidence that software company did not have incentive to foreclose game, and there was no evidence that there was incentive for partial foreclosure. Clayton Act § 7, 15 U.S.C.A. § 18; Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b).

[36] **Antitrust and Trade Regulation** Mergers and Acquisitions

The question in proceedings under the Clayton Act is whether the proposed merger is likely to substantially lessen competition, which encompasses a concept of reasonable probability. Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[37] **Antitrust and Trade Regulation** Computer and internet

Antitrust and Trade Regulation Preliminary

Federal Trade Commission was not likely to succeed on merits of its claim that exclusivity of particular video game on software company's game library subscription service would probably substantially lessen competition in subscription services market, for purposes of determining whether preliminary injunction was warranted in Commission's action against merging software company and video game company for violation of Clayton Act; merger had procompetitive effect of expanding access to game through lower cost of subscription service as compared to cost of buying game itself, which would increase number of users of subscription service, incentivizing software company to invest in other games, and video game company did not plan to put its other games on subscription service. Federal Trade

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Commission Act § 13, 15 U.S.C.A. § 53(b); Clayton Act § 7, 15 U.S.C.A. § 18.

1 Case that cites this headnote

[38] **Antitrust and Trade Regulation** Computer and internet

Antitrust and Trade Regulation Preliminary

Federal Trade Commission was not likely to succeed on merits of its claim that merger between software company and video game company would probably lessen competition in cloud gaming market, for purposes of determining whether preliminary injunction was warranted in Commission's action against companies for violation of Clayton Act; software company made agreements with five cloud-streaming providers to provide access to video game company's content, which, prior to merger, was not on any cloud-streaming service, and there was no evidence that video game company would have agreed to put its content on cloud-streaming services if it remained independent. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b); Clayton Act § 7, 15 U.S.C.A. § 18.

[39] **Antitrust and Trade Regulation** Computer and internet

Antitrust and Trade Regulation Preliminary

Federal Trade Commission was not likely to succeed on merits of its claim that purpose of merger between software company and video game company was anticompetitive, for purposes of determining whether preliminary injunction was warranted in Commission's action against companies for violation of Clayton Act; Commission's argument that purpose of merger was to transform independent supply of video games into captive supply controlled exclusively by software company did not explain why it demonstrated anticompetitive purpose, software company's investment in game developers and publishers allowed for increased innovation in content, and software company prioritized a "content pipeline". Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b); Clayton Act § 7, 15 U.S.C.A. § 18.

[40] **Antitrust and Trade Regulation** Computer and internet

Antitrust and Trade Regulation Preliminary

Balance of equities did not weigh in favor of granting preliminary injunction, in Federal Trade Commission's action against merging software company and video game company for violation of Clayton Act, although Commission argued that difficulty in ordering post-acquisition divestiture was public equity that prevailed; record contained conflicting evidence on anticompetitive effects of proposed merger, there would be no foreclosure of video game to competitors pending decision in administrative trial, and merger was vertical acquisition with no planned dismantling of operations that would make post-acquisition divestiture difficult to order. Federal Trade Commission Act § 13, 15 U.S.C.A. § 53(b); Clayton Act § 7, 15 U.S.C.A. § 18.

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PRELIMINARY INJUNCTION OPINION

REDACTED VERSION

JACQUELINE SCOTT CORLEY

***1** In December 2022, the **FTC** initiated an administrative action to block **Microsoft's** proposed acquisition of **Activision**—publisher of the first-person shooter video-game franchise *Call of Duty*, among other popular video games. The gist of the **FTC's** complaint is *Call of Duty* is so popular, and such an important supply for any video game platform, that the combined firm is probably going to foreclose it from its rivals for its own economic benefit to consumers' detriment. Discovery in the administrative action has closed, and trial before an **FTC** judge is scheduled to commence on August 2, 2023.

Four weeks ago, the **FTC** filed this action to preliminarily enjoin the merger pending completion of the **FTC** administrative action. Because the merger has a July 18 termination date, expedited proceedings were commenced. After considering the parties' voluminous pre-and-post hearing writing submissions, and having held a five-day evidentiary hearing, the Court DENIES the motion for preliminary injunction. The **FTC** has not shown it is likely to succeed on its assertion the combined firm will probably pull *Call of Duty* from Sony PlayStation, or that its ownership of **Activision** content will substantially lessen competition in the video game library subscription and cloud gaming markets.

BACKGROUND

The video gaming industry represents the fastest growing form of media and entertainment with revenues larger than the film, music, and print industries. The industry consists of several components. The three billion worldwide gamers. The videogame developers who create the games. The videogame publishers who release the games. And the companies that make the devices on which gamers play the games. This action involves a merger between **Activision**—the developer of the *Call of Duty* video game franchise—and **Microsoft**—a game developer, publisher, and the manufacturer of the Xbox game console.

A. The Parties

Microsoft made $198 billion in revenue in 2022. (PX9050-043. [1]) Gaming is part of **Microsoft's** More Personal Computing division. (PX9050-014.) Its gaming business includes Xbox, Xbox Game Pass (a gaming subscription service), and Xbox Cloud Gaming. (PX9050-014.) **Microsoft** publishes video games through Xbox Game Studios, comprising 23 game development studios, including nine studios that were included in **Microsoft's** acquisition of ZeniMax Media Inc., announced in September 2020 and finalized in March 2021. (Dkt. No. 226-2, Lee Decl. at ¶ 14; PX0003 at 086-087 (detailing **Microsoft** acquisitions of gaming studios); PX1527-002.)

Activision, a publicly traded corporation, earned $7.5 billion in revenue in 2022. (PX9388-040 (**Activision** 10-K 2022).) "**Activision** develops and publishes video games for consoles, PCs and mobile devices. **Microsoft** often refers to **Activision**, along with EA [Electronic Arts], Take-Two Interactive Software, Inc., and Ubisoft, as one of the 'Big 4' independent video game publishers." (Dkt. No. 226-2, Lee Decl. at ¶ 19.) "**Activision's** most successful video game franchise is *Call*

of Duty, a first-person shooter video game series playable on video game consoles and PCs. "Activision also produces other popular video games for consoles, including games from the *Diablo, Overwatch, Crash Bandicoot*, and *Tony Hawk* franchises, as well as video games for other devices, including games from the *Candy Crush* (for mobile devices) and *Warcraft* (for PC) franchises." (Dkt. No. 226-2, Lee Decl. at ¶ 21.)

B. The Proposed Merger

***2** On January 18, 2022, Microsoft announced an agreement to acquire Activision for $68.7 billion—one of the largest, if not the largest, tech industry mergers. The agreement provides, among other things, either party may terminate the merger agreement if the transaction has not closed by July 18, 2023. (PX0083-088.) If the agreement is terminated because it has not closed, Microsoft may have to pay Activision a $3 billion termination fee. (PX0083-091, Sec. 8(c).) Following the merger, "[Activision Blizzard] will continue as the surviving corporation of the Merger and a Subsidiary of Parent [Microsoft]." (PX00083-024); *see also* RX5058 (Hood Decl.) at ¶ 6 (discussing Microsoft's plan to maintain Activision as a limited-integration studio).

C. The Video Game Industry

Video gaming generates hundreds of billions of dollars of revenue a year and is projected to grow substantially in the future. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 404:12–16; Dkt. No. 285, 6/28/23 Tr. (Kotick) at 710:16–17 ("[T]he business has evolved to be what's today probably a $130 billion-a-year industry.").) Gaming grew to record high levels during the global pandemic, with people seeking at-home entertainment options more than ever before. (RX3136; Dkt. No. 285, 6/28/23 Tr. (Bailey) at 789:16–22.)

1. Gaming Platforms

Video games are available to play across a wide range of platforms, including mobile, PC, and console. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 404:6–405:3 (discussing RX3166-003); *see also* Dkt. No. 284, 6/27/23 Tr. (Bailey) at 661:3–23.) Games can be played on general purpose PCs or gaming PCs, but gaming PCs typically have more advanced hardware to allow them to play more computationally demanding games. (PX8001 (Ryan Decl.) at ¶ 15.) Conversely, games played on mobile have lower graphics and are less sophisticated than games played on consoles or gaming PCs. (PX0003-073.) The three primary console makers are Microsoft (Xbox Series X|S), Sony (PlayStation 5), and Nintendo (Switch). (PX1777-008; Dkt. No. 226-2, Lee Decl. at ¶ 13.)

a. Console Gaming

Video game consoles are consumer devices designed for, and whose primary use is, to play video games. (PX8001 (Ryan Decl.) at ¶ 10.)[Redacted]

[Redacted]

[Redacted]

[Redacted]

While consoles were once the predominant form of home gaming, they now represent a smaller share of video game revenue than either mobile or PC. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 127:16-128:1; RX3166-003.)

b. Mobile Gaming

Most gamers today play on mobile devices, which is also the fastest growing segment as the technical capabilities of mobile devices increase. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 127:24–128:1; Dkt. No. 283, 6/23/23 Tr. (Spencer) at 392:5–6, 392:10–12, 404:11, 404:21-22; Dkt. No. 285, 6/28/23 Tr. (Kotick) at 712:1-12, 732:4-20; *id.* at 712:8-9 ("And so today the bulk of games are played on phones ...."); Dkt. No. 284, 6/27/23 Tr. (Bailey) at 661:6–23; *see also* RX5058 (Hood Decl.) at ¶ 14 ("$113 billion of the game industry's total revenues of $210 billion came from mobile gaming in 2020").) Growth in mobile gaming is expected to continue, as microprocessors equivalent to those used in past video game consoles are increasingly becoming more powerful and incorporated into phones. (*See, e.g.*, Dkt. No. 285, 6/28/23 Tr. (Kotick) at 720:7-11 (explaining mobile is "the biggest part of the market").)

c. PC Gaming

After mobile, PC gaming is the next largest source of video game revenue. (Dkt. No. 284, 6/27/23 Tr. (Bailey) at 661:11-12.) [Redacted]

d. Cross-Platform Play

Games can be single-player or multi-player. Single-player games are normally story-driven, and other characters in the game are computations in the game rather than real people. In multiplayer games, players are matched with other people of similar skill level, and players interact in real time. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 134:5-19.) Gamers can now play certain multiplayer games across platforms. For example, a gamer on PlayStation can now play many games with other gamers playing on another platform, like Nintendo or Xbox or PC. That mode of play is referred to as "cross-platform" gaming or "cross-play." (Dkt. No. 282, 6/22/23 Tr. (Bond) at 135:7-17.) In most multiplayer games, a gamer selects multiplayer game mode, the game matches the gamer with other gamers, and the gamers are then placed in a lobby and either enter the game or are placed in teams. (*See* Dkt. No. 282, 6/22/23 Tr. (Bond), at 134:5-19; Dkt. No. 284, 6/27/23 Tr. (Bailey) at 669:24-670:4, 672:2-7.) Cross-play makes games more valuable to consumers because they can play the game with friends and access larger lobbies of players. (*See, e.g.*, Dkt. No. 284, 6/27/23 Tr. (Bailey) at 669:22-670:4; Dkt. No. 285, 6/28/23 Tr. (Kotick), at 716:5–8; *see also id.* at 713:23-714:10 ("[T]he big evolution of the industry has been this transformation to the social experience."), 715:18-24.) Many of the most popular multiplayer titles (*e.g., Fortnite, PUBG, Call of Duty*, and *Minecraft*) allow gamers to cross-play between at least PC and console. (*See, e.g.*, Dkt. No. 282, 6/22/23 Tr. (Bond) at 152:18-153:2 (*Call of Duty*).)

2. Gaming Content

***3** A game publisher brings games to market and sometimes provides funding to the game developer to do so. (PX7014 (Booty Investigational Hearing "IH" Tr. at 28:5-15.) A developer creates the assets for a game, including writing the code and designing the art. (Dkt. No. 282, 6/22/23 Tr. (Booty) at 50:14-19; PX7014 (Booty IH Tr.) at 28:5-15.) First-party content is created and developed by a console manufacturer at an in-house studio. (Dkt. No. 282, 6/22/23 Tr. (Booty) at 50:25-51:2; Dkt. No. 226-2, Lee Decl. at ¶ 15; PX7014 (Booty IH Tr.) at 58:20–59:9.) **Microsoft's** first-party content is created at Xbox Game Studios. (PX9050-015; PX0003-016.) Some of **Microsoft's** first-party franchises include *DOOM, Forza, Gears of War, Halo, Minecraft*, and *The Elder Scrolls.* (PX9252-001.)

Third-party content refers to games independently developed and published by a third-party publisher. (Dkt. No. 282, 6/22/23 Tr. (Booty) at 51:6-8; Dkt. No. 226-2, Lee Decl. at ¶ 15; PX8001 (Ryan Decl.) at ¶ 5; PX0003-016.) Occasionally, console manufacturers will publish titles developed by a third-party development studio, known as second-party games. (PX8001 (Ryan Decl.) at ¶ 5; PX7003 (Bond IH Tr.) at 152:2-10; PX0003-016.) Console manufacturers typically negotiate publisher license agreements with game publishers setting the terms for any titles the console manufacturer ships from the publisher. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 420:11-421:2.) For second-or third-party developers, console manufacturers create development kits for those second-or -third-party developers to use to ensure the game will run on the console. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 156:7-17.)

Both consumers and industry participants acknowledge content drives sales. [Redacted]

[Redacted]

a. AAA Content

"AAA" content is an industry term and can be synonymous with "a tentpole title, a marquee title, a big blockbuster title" that has a high development budget and high expectations for sales. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 147:20-148:2) ("[AAA] tends to imply a game of a certain size and scope, a certain level of investment put into the game"); [Redacted]

[Redacted] **Activision** CEO Bobby Kotick concluded sustaining AAA games requires broad and deep capabilities, and even then, a AAA title is not guaranteed (though Mr. Kotick admits **Activision** has the capability to release a AAA game every single year). (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 43:14-22.)

b. Exclusive Content

Each of the three major console companies is also a vertically integrated first-party game developer and publisher. And while each has a collection of platform-exclusive titles, "the Nintendo Switch, the PlayStation, they both have significantly higher number of exclusive games on their platform than Xbox does." (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 346:25–347:2; *see also id.*, 6/23/23 Tr. (Spencer)

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at 440:24-441:4 (exclusives are "an established part of the console business, the video game business, and Sony and Nintendo are very strong with their exclusive games.").)

[Redacted]

[Redacted]

[Redacted]

In addition to exclusivity, Sony also uses its market power to extract other preferential treatment from third-party game developers, including earlier release dates, exclusive marketing agreements, and exclusive in-game content. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 162:1–4, 186:5–8.) [Redacted]

[Redacted]

c. Activision Content

[Redacted]

i. Call of Duty

The *Call of Duty* games are first-person shooter games based on "military conflict through history." (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 712:21-713:9; Dkt. No. 282, 6/22/23 Tr. (Bond) at 152:18-23; Dkt. No. 282, 6/22/23 Tr. (Hines) at 112:10-20.) [Redacted]

***4** *Call of Duty* games have been continuously available on both PlayStation and Xbox consoles since 2003. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 714:12-715:12, 720:1-6.) Activision typically releases a new buy-to-play *Call of Duty* game every year. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 736:12-18 (*Call of Duty* released every year); Dkt. No. 282, Tr. (Bond) at 128:23-25 (games cost $70).) [Redacted]

The latest annual *Call of Duty* titles are playable across platforms via a cross-play feature. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 152:18-153:2.) The introduction of cross-play to *Call of Duty* has significantly improved players' experience; the game's online multiplayer functionality thrives on a large and active player base, and cross-play has increased the number of available players. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 716:5-8 (explaining cross-play "expands the market and also makes you -- let's say you have a group of friends, not everybody's going to have the same device so it gives you the opportunity to be able to play with your friends").).

Activision also develops and publishes free-to-play versions of *Call of Duty* called *Call of Duty: Warzone*—available on PlayStation, Xbox, and Windows PC—and *Call of Duty: Mobile* ("*COD: Mobile*")—available on iOS and Android mobile devices—which it monetizes through optional in-game microtransactions. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 153:3-15; *see also* Dkt. No. 285, 6/28/23 Tr. (Kotick) at 720:3-11.) "Half of [the *Call of Duty* franchise's] monthly active players play on phones." (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 716:17-21; *see also id.* at 719:2-6 ("[T]he bulk of players [in the *Call of Duty* franchise] are playing on phones.").) Recently, *COD: Mobile* reached 150 million monthly annual users. (Dkt. No. 286, 6/29/23 Tr. (Stuart) at 1033:3-6.) Cross-play also exists in the free-to-play *Call of Duty: Warzone.* (*See* Dkt. No. 285, 6/28/23 Tr. (Kotick) at 719:7-720:2 (noting the free-to-play Warzone is playable on PlayStation, PC, and Xbox).) *Call of Duty: Warzone* will be available on mobile this fall, and like the console and PC versions, it will be available as a multiplayer game across mobile devices. (*See* Dkt. No. 285, 6/28/23 Tr. (Kotick) at 720:1-10; 721:9-13.)

Call of Duty is not currently available on the Nintendo Switch. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 768:8-13.) It is also not currently available on any cloud gaming services or multigame game subscription libraries upon release. (Dkt. No. 285, 6/28/23, Tr. (Kotick) at 734:2-5, 731:12-14.)

ii. Other Activision Content

King's *Candy Crush* franchise consists of casual, free-to-play puzzle games made for mobile devices. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 725:25-726:6.) [Redacted] King primarily monetizes *Candy Crush* through optional in-game microtransactions, and also generates revenue through in-game advertising placements. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 726:24-727:4.)

Blizzard's popular *World of Warcraft* franchise principally consists of a massively-multiplayer-online fantasy role-playing game, and related expansions and content released over the course of the past 20 years. (*See* Dkt. No. 285, 6/28/23 Tr. (Kotick) at 730:1-18.) Blizzard makes *World of Warcraft* available for PCs on a subscription-based model.

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(*See, e.g.*, Dkt. No. 285, 6/28/23 Tr. (Kotick) at 730:1-7.) [Redacted]

***5** [Redacted]

Indeed, the only **Activision** titles made available on multigame subscription services have been back-catalog games offered for a limited period of time, often for promotional purposes, rather than new games made available day and date. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 774:9-24; *see also* Dkt. No. 285, 6/28/23 Tr. (Kotick) at 747:3-10, 750:10-13 (acknowledging occasional placement of "a very old catalog title for a short period of time" on subscription services).)

3. Access to Gaming Content

Gamers can access games through a growing variety of payment and distribution models. The diversity of payment and distribution models has increased the accessibility of games and expanded gamer choice. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 392:24-393:10.) Most gamers obtain entitlements to access and play console games via the "buy-to-play" model of purchasing the games in the form of a cartridge, DVD or Blu-Ray disc, or digital download for an upfront price (*e.g.*, $70) and adding them to their own libraries. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 128:23-25, 138:2-20.) [Redacted]

a. Multi-Game Content Subscription Services

With multigame subscription offerings, gamers pay a flat monthly fee to access a library of games. In the case of most subscription offerings, subscribers download the games they want to play to their devices (just as they would a buy-to-play game), and then play them using those devices. With some services, gamers can stream games while waiting for the game to download or try out a game before downloading. (Dkt. No. 282, 6/22/23 Tr. (Hines) at 92:23-93:5; Dkt. No. 282, 6/22/23 Tr. (Bond) at 145:12-146:7; *see also* Dkt. No. 285, 6/28/23 Tr. (Bailey) at 790:21-791:9 (telemetry data show xCloud is "largely [used to] play[ ] one game they never played before and not playing it ever again," which is "exactly consistent with" gamers using xCloud while the game downloads).)

In 2017, Xbox launched Game Pass, one of the first multigame subscription offerings. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 140:15-23.) Subscribers can access a broad catalog of games for a set monthly fee of $9.99 (or $14.99 for the Game Pass Ultimate tier) instead of purchasing the games outright (for $70 per game). (Dkt. No. 282, 6/22/23 Tr. (Bond) at 137:23-138:1; RX5044-001.) [Redacted] To make Game Pass more attractive, Xbox includes all games developed by its studios (first-party games) in Game Pass the day of release ("day-and-date"). (Dkt. No. 286, 6/29/23 Tr. (Stuart) at 1047:6-15); Dkt. No. 282, 6/22/23 Tr. (Bond) at 139:6-7; [Redacted]

Aside from Game Pass, **Microsoft** also offers Xbox Live Gold, which provides subscribers with access to online, multiplayer games and a limited selection of downloadable games each month among other benefits, such as audio and visual communications and certain discounts. (PX0003-018; Dkt. No. 282, 6/22/23 Tr. (Bond) at 136:18-24.) Xbox Live Gold does not provide subscribers with access to the vast library of games subscribers of Xbox Game Pass for PC or Console and Game Pass Ultimate receive. (PX0003-018.)

***6** [Redacted]

[Redacted]

[Redacted]

[Redacted] For example, **Activision** does not allow, and has no plans to allow, its games in multigame subscription libraries upon release. (*See* Dkt. No. 285, 6/28/23 Tr. (Kotick), at 731:12-14) ("In our current long-range plan, we don't have any revenues that are being generated from a multigame subscription service"); Dkt. No. 285, 6/28/23 Tr. (Kotick) at 746:19-21 ("I would say it's just not something that we do have any plans to do or have ever done ...."). This "philosophical aversion" to subscription services arises from concerns that multigame subscriptions would "degrade the economics" of **Activision's** buy-to-play business model, are "inconsistent with the idea of starting out with free-to-play as the way that you build game universes and franchises," and possibly could lead to substantial cannibalization. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 729:3-16, 743:22-24; *see also id.* at 744:8-11 (explaining "cannibalization would play a role" in a decision not to place games in a multigame subscription).)

Activision only rarely allows even its older back-catalog titles to be included in subscription services for brief periods of time. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 747:3-10, 750:10-13) (acknowledging occasional placement of "a very

old catalog title for a short period of time" on subscription services); [Redacted]

b. Cloud Gaming Subscription Services

Cloud gaming (also known as cloud game "streaming") is a potential alternative delivery mechanism to downloading native games for play onto hardware. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 131:20-132:5; PX7060 (Eisler Dep. Tr.) at 29:12-19.) [Redacted] It enables gamers to begin playing a game in seconds, rather than waiting for games to download or update, and streaming rather than downloading avoids burdening the storage limits on a gaming device. (https://support.xbox.com/en-US/help/games-apps/cloud-gaming/playing-console-game-from-cloud-versus-installing ("You can start playing a game in seconds. There's no waiting for games to finish installing or updating ... download times or storage limits aren't a factor."); PX8000 (Eisler Decl.) at ¶ 17.) However, the technology and economics of cloud gaming remain challenging, particularly for latency-sensitive multiplayer games. Due to those latency issues, users sometimes experience a stuttering effect or lags in gameplay. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 145:6-11; Dkt. No. 283, 6/23/23 Tr. (Spencer) at 395:10-16; PX7060 (Eisler Dep. Tr.) at 47:05-47:23.) Cloud gaming is also limited in its ability to replicate controller functions for console games streamed to mobile devices. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 395:23-396:7; Dkt. No. 285, 6/28/23 Tr. (Kotick) at 733:15-21.)

In 2020, **Microsoft** added cloud gaming to its top-tier multi-game content library subscription service offering, Xbox Game Pass Ultimate. (PX9091 at 001-006.) Xbox Cloud Gaming (also referred to as xCloud) enables Xbox Game Pass Ultimate subscribers to stream certain games, as opposed to downloading games locally, and then to play those games on the device most convenient to them, including consoles, Windows PCs, tablets, and mobile phones. (PX0003 at 018.) **Microsoft** also offers free access to Xbox Cloud Gaming for Epic Games' *Fortnite.* (PX0003 at 019.) [Redacted]

***7** As **Microsoft** Gaming CEO Phil Spencer testified, **Microsoft's** xCloud strategy is to allow those who want to play **Microsoft** games on their mobile phones to "have access to those through streaming," allowing **Microsoft** to "find a significant number of customers given the installed base of people playing games on mobile phones." (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 393:16-394:6.) However, as a result of technical limitations, a large majority of Xbox Cloud Gaming users report relying on the service primarily to play a game while it is being downloaded to play natively on Xbox. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 145:12-146:7; Dkt. No. 283, 6/23/23 Tr. (Spencer) at 394:23-396:7; *see also* Dkt. No. 285, 6/28/23 Tr. (Bailey) at 790:4-791:9 (telemetry data show xCloud is "largely [used to] play[ ] one game they never played before and not playing it ever again," which is "exactly consistent with" gamers using xCloud while the game downloads).)

[Redacted]

D. Microsoft's Post-Complaint Agreements

Two months after the **FTC** filed its complaint, Xbox and Nintendo entered a ten-year agreement to bring future *Call of Duty* titles to Switch (and any successor Nintendo consoles) after the merger closes. [Redacted]

[Redacted]

[Redacted] **Microsoft** executives have nonetheless committed publicly and under oath in court to continue to sell *Call of Duty* to Sony. (Dkt. No. 285, 6/28/23 Tr. (Nadella) at 853:9-11 (Q: "Let me ask you here today, Mr. Nadella, will you commit to continuing to ship *Call of Duty* on the Sony PlayStation?" ... A: "A hundred percent."); Dkt. No. 283, 6/23/23 Tr. (Spencer) at 367:18-24, 368:4-10, 429:21-22, 429:25-430:1 ("my commitment is and my testimony is, to use that word, that we will continue to ship Call of -- future versions of *Call of Duty* on Sony's PlayStation platform").)

PROCEDURAL HISTORY

On February 1, 2022, **Microsoft** reported the planned merger to the **FTC**, as required by the Hart-Scott-Rodino Antitrust Improvements Act ("HSR Act"). The **FTC** thereafter commenced an 11-month investigation, requiring **Microsoft** and **Activision** to produce nearly 3 million documents and sit for 15 investigational hearings. The waiting period under the HSR Act which prevents the parties from closing the transaction was extended by agreement with the **FTC** until November 21, 2022, and the parties thereafter agreed voluntarily to delay closing until December 12, 2022.

On December 8, 2022, the **FTC** filed an administrative complaint against the merger, alleging it violates Section 7

of the Clayton Act, 15 U.S.C. § 18, and Section 5 of the **FTC** Act, 15 U.S.C. § 45. *See* Part 3 Complaint, In the Matter of **Microsoft**/**Activision**, No. 9412 (F.T.C. Dec. 8, 2022). Fact discovery in the **FTC** administrative proceeding, which included production of nearly 1 million documents and 30 depositions, closed on April 7, 2023, followed by expert discovery. An evidentiary hearing before an administrative law judge (ALJ) is scheduled to begin on August 2, 2023. (Dkt. No. 1, Complaint at ¶ 16.)

Although the Agreement allows either party to terminate the merger agreement if the transaction has not closed by July 18, 2023, and appears to obligate **Microsoft** to pay **Activision** a termination fee of $3 billion, the **FTC** did not file this action to preliminarily enjoin the merger until June 12, 2023 —less than six weeks before the termination date. [2] (Dkt. Nos. 1, 7; PX0083091, Sec. 8(c).) The Court related this action to a pending private antitrust action seeking to stop the merger. (Dkt. No. 21; *see Demartini et al. v.* ***Microsoft*** *Corp.*, No. 22-08991-JSC, ––– F.Supp.3d ––––, 2023 WL 2588173 (N.D.Cal. 2023). [3]) The **FTC** filed an emergency motion for a temporary restraining order (TRO) with their Complaint, arguing **Microsoft** intended to proceed with the merger as soon as June 16, 2023, and would not stipulate to a TRO unless the **FTC** filed in the United States District Court for the District of Columbia, rather than the Northern District of California where the **FTC** indicated it intended to file because this Court was already overseeing the *Demartini* action. (Dkt. No. 12-3 at 10-11.) The Court granted the **FTC's** motion for a temporary restraining order and set an evidentiary hearing on the preliminary injunction motion to commence the following week. (Dkt. No. 37.) The five-day evidentiary hearing commenced on June 22, 2023 and was completed on June 29, 2023. The action proceeded on an expedited basis given the Agreement's impending termination date. *See* ***FTC*** *v. Warner Commc'ns Inc.*, 742 F.2d 1156, 1165 (9th Cir. 1984) (ordering expedited proceedings "[b]ecause undue delay could force the parties to abandon the proposed merger").

LEGAL FRAMEWORK

***8** **[1]** **[2]** Section 7 of the Clayton Act prohibits mergers and acquisitions "where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." 15 U.S.C. § 18. "Because § 7 of the Clayton Act bars mergers whose effect 'may be substantially to lessen competition, or to tend to create a monopoly,' 15 U.S.C. § 18, judicial analysis necessarily focuses on 'probabilities, not certainties. This 'requires not merely an appraisal of the immediate impact of the merger upon competition, but a prediction of its impact upon competitive conditions in the future; this is what is meant when it is said that the amended § 7 was intended to arrest anticompetitive tendencies in their incipiency.' " *Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd.*, 778 F.3d 775, 783 (9th Cir. 2015) (citations omitted). Thus, "[i]t is well established that a section 7 violation is proven upon a showing of reasonable probability of anticompetitive effect." *Warner*, 742 F.2d at 1160.

[3] **[4]** Section 7 claims challenging horizonal mergers are generally analyzed under a " 'burden-shifting framework.' The plaintiff must first establish a prima facie case that a merger is anticompetitive. The burden then shifts to the defendant to rebut the prima facie case." *Saint Alphonsus*, 778 F.3d at 783 (citations omitted). The Ninth Circuit Court of Appeals has not addressed whether this burden shifting framework applies in vertical merger cases such as this. Indeed, "[t]here is a dearth of modern judicial precedent on vertical mergers and a multiplicity of contemporary viewpoints about how they might optimally be adjudicated and enforced. [4]" *United States v. AT&T, Inc.*, 916 F.3d 1029, 1037 (D.C. Cir. 2019). In *AT&T*, the only court of appeals decision addressing a vertical merger in decades, the court found the burden-shifting framework applied, but "unlike horizontal mergers, the government cannot use a short cut to establish a presumption of anticompetitive effect through statistics about the change in market concentration, because vertical mergers produce no immediate change in the relevant market share." *Id.* at 1032. In vertical merger cases, "the government must make a fact-specific showing that the proposed merger is likely to be anticompetitive. Once the prima facie case is established, the burden shifts to the defendant to present evidence that the prima facie case inaccurately predicts the relevant transaction's probable effect on future competition, or to sufficiently discredit the evidence underlying the prima facie case." *Id.* (cleaned up).

PRELIMINARY INJUNCTION

[5] Section 13(b) of the Federal Trade Commission Act provides "[u]pon a proper showing that, weighing the equities

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and considering the Commission's likelihood of ultimate success, such action would be in the public interest ... a preliminary injunction may be granted ....” 15 U.S.C. § 53(b). “In determining whether to grant a preliminary injunction under section 13(b), a court must 1) determine the likelihood that the Commission will ultimately succeed on the merits and 2) balance the equities.” *Warner*, 742 F.2d at 1160 (citing ***FTC** v. Simeon Management Corp.*, 532 F.2d 708, 713–14 (9th Cir. 1976)).

[6] **[7]** **[8]** **[9]** To satisfy the first prong, the **FTC** must “raise questions going to the merits so serious, substantial, difficult and doubtful as to make them fair ground for thorough investigation, study, deliberation and determination by the **FTC** in the first instance and ultimately by the Court of Appeals.” *Warner*, 742 F.2d at 1162 (citations omitted). In evaluating likelihood of success on the merits, the court must exercise its “ ‘independent judgment’ and evaluat[e] the **FTC's** case and evidence on the merits.” *See **FTC** v. Meta Platforms Inc.*, No. 5:22-CV-04325-EJD, 2022 WL 16637996, at *5 (N.D. Cal. Nov. 2, 2022). Courts require such a rigorous analysis because “the issuance of a preliminary injunction prior to a full trial on the merits is an extraordinary and drastic remedy. This is particularly true in the acquisition and merger context, because, as a result of the short life-span of most tender offers, the issuance of a preliminary injunction blocking an acquisition or merger may prevent the transaction from ever being consummated.” ***FTC** v. Exxon Corp.*, 636 F.2d 1336, 1343 (D.C. Cir. 1980) (cleaned up); *see also* *Warner*, 742 F.2d at 1165 (9th Cir. 1984) (ordering expedited proceedings “[b]ecause undue delay could force the parties to abandon the proposed merger.”). However, the Court does not resolve conflicts in the evidence—the question is simply whether the **FTC** “has met its burden of showing a likelihood of success on the merits.” *Warner*, 742 F.2d at 1164.

***9** **[10]** The parties sharply dispute in which forum “the Commission's likelihood of ultimate success,” 15 U.S.C. § 53(b), should be measured. This question appears not to have been squarely addressed by any court other than in *Meta*, 2022 WL 16637996, at *4-6. In *Meta*, the court held “Section 13(b)'s ‘likelihood of ultimate success’ inquiry to mean the likelihood of the **FTC's** success on the merits in the underlying administrative proceedings, as opposed to success following a Commission hearing, the development of an administrative record, and appeal before an unspecified Court of Appeals.” *Id.* at *6. The Court is persuaded by the *Meta* court's analysis of this issue and adopts it here—the relevant forum for the question of likelihood of success is before the ALJ in the administrative proceedings.

ANALYSIS

I. RELEVANT MARKET

[11] **[12]** The first step in analyzing a Section 7 merger challenge is to determine the relevant market. *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 619, 94 S.Ct. 2856, 41 L.Ed.2d 978 (1974) (citing *United States v. E.I. du Pont de Nemours & Co.*, 353 U.S. 586, 593, 77 S.Ct. 872, 1 L.Ed.2d 1057 (1957)); *see also* ***FTC** v. Qualcomm Inc.*, 969 F.3d 974, 992 (9th Cir. 2020) (“A threshold step in any antitrust case is to accurately define the relevant market, which refers to ‘the area of effective competition.’ ”). The relevant market for antitrust purposes is determined by (1) the relevant product market and (2) the relevant geographic market. *Brown Shoe Co. v. United States*, 370 U.S. 294, 324, 82 S.Ct. 1502, 8 L.Ed.2d 510 (1962).

A. Product Market

[13] **[14]** **[15]** **[16]** **[17]** “The outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it.” *Id.* at 325, 82 S.Ct. 1502. That is, “when one product is a reasonable substitute for the other, it is to be included in the same relevant product market even though the products themselves are not the same. A product is construed to be a ‘reasonable substitute’ for another when the demand for it increases in response to an increase in the price for the other.” ***FTC** v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 46 (D.D.C. 1998); *see also* *Newcal Indus., Inc. v. Ikon Office Sol.*, 513 F.3d 1038, 1045 (9th Cir. 2008). The definition of the relevant market is “basically a fact question dependent upon the special characteristics of the industry involved.” *Twin City Sportservice, Inc. v. Charles O. Finley & Co.*, 676 F.2d 1291, 1299 (9th Cir. 1982). The overarching goal of market definition is to “recognize competition where, in fact, competition exists.” *Brown Shoe*, 370 U.S. at 326, 82 S.Ct.

1502; *see also* *Cardinal Health*, 12 F. Supp. 2d at 46 ("Because the ability of customers to turn to other suppliers restrains a firm from raising prices above the competitive level, the definition of the "relevant market" rests on a determination of available substitutes."). "The **FTC** bears the burden of proof and persuasion in defining the relevant market." ***FTC*** *v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 119 (D.D.C. 2004), *appeal dismissed*, No. 04-5291, 2004 WL 2066879 (D.C. Cir. Sept. 15, 2004).

[18] **[19]** There is "no requirement to use any specific methodology in defining the relevant market." *Optronic Techs., Inc. v. Ningbo Sunny Elec. Co., Ltd.*, 20 F.4th 466, 482 (9th Cir. 2021). "[C]ourts have determined relevant antitrust markets using, for example, only the *Brown Shoe* factors, or a combination of the *Brown Shoe* factors and the HMT. [5]" *Federal Trade Commission v. Meta Platforms Inc.*, 2023 WL 2346238, at *9 (N.D.Cal. 2023) (collecting cases). *Brown Shoe* factors are "practical indicia [such] as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors." 370 U.S. at 325, 82 S.Ct. 1502.

***10** The **FTC** contends the *Brown Shoe* factors establish four relevant antitrust markets: (1) high performance consoles (Xbox and Sony PlayStation); (2) multigame content library subscription services; (3) cloud gaming; and (4) a combined library subscription services and cloud gaming market.

1. The Console Market

The **FTC's** primary market is the "high-performance console market" which it defines as Xbox and PlayStation Generation 9 (Gen 9) consoles.

a. The Console Market and Nintendo Switch

[20] The **FTC** seeks to limit the console market to Gen 9 consoles Xbox XIS and the PlayStation 5, and exclude the Nintendo Switch. [Redacted]

[Redacted]

[Redacted]

The **FTC** insists the Nintendo Switch's pricing, performance, and content make it an improper substitute at least for purposes of its preliminary injunction motion. As to pricing, yes, the Xbox Series X and PlayStation 5 are priced the same and a couple of hundred dollars higher than the Switch; however, Xbox set the price of its entry-level Series S to compete with the Switch. (Dkt. No. 286, 6/29/23 Tr. (Stuart) at 1030:5-1031:5 (Q. "And do you look at Switch pricing when you're considering the pricing of Xbox Series S?" A. "Yes." Q. "And is that one of the reasons you set the price where you guys did?" A. "Yes.").)

And, there are functionality differences between the Switch and the PlayStation and Xbox consoles—the Switch is portable, and it has its own screen and less powerful hardware. However, neither the **FTC** nor its expert consider the extent to which the Switch's differentiated features including its price, portability, and battery are factors the customer balances when deciding which console to purchase. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 436:6-437:4 (describing how Nintendo made "technical decisions to enable an experience that they thought their customers would want to have, and it's the best selling console right now in the market. So when I—when people try to tell me it's not competition—competitive, for any number of reasons, I don't believe that because I just look at what's selling.").)

Finally, yes, there are content differences between the Switch and PlayStation, but many of the most popular games on PlayStation and Xbox consoles are also available on the Switch, including *Fortnite, Minecraft, Rocket League, Lego Star Wars, Fall Guys*, and the *FIFA, MLB The Show*, and *NBA 2K franchises.* (Dkt. No. 285, 6/28/23 Tr. (Bailey) at 782:5-783:10; *see* RX5055-074 (Bailey Report) at ¶ 88.) Although some popular Xbox and PlayStation games are not available on the Switch, many of those titles are platform exclusives [Redacted]

[21] **[22]** **[23]** "It doesn't matter whether [Nintendo's] products are fully interchangeable with those of its competitors because perfect fungibility isn't required." *Gorlick Distrib. Ctrs., LLC v. Car Sound Exhaust Sys., Inc.*, 723 F.3d 1019, 1025 (9th Cir. 2013) (citing *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 394, 76 S.Ct. 994, 100 L.Ed. 1264 (1956)). If this were the

requirement, "only physically identical products would be a part of the market." *E.I. du Pont*, 351 U.S. at 394, 76 S.Ct. 994. "Instead, products must be reasonably interchangeable, such that there is cross-elasticity of demand." *Gorlick*, 723 F.3d at 1025 (citing *Brown Shoe*, 370 U.S. at 325, 82 S.Ct. 1502). "The goal of market definition here is to define the boundaries of the competition within which foreclosure or disadvantaging of a participant is likely to reduce innovation, delay rivals' entry, and raise price or reduce variety or quality of the ensuing goods. The relevant market will encompass those firms whose presence drives this competition and whose foreclosure or disadvantaging may thwart it." In the Matter of Illumina, Inc. and Grail, Inc., No. 9401, 2023 WL 2823393, at *20 (F.T.C. Mar. 31, 2023).

***11** If the Court was the final decisionmaker on the merits, it would likely find Nintendo Switch part of the relevant market. But it is not. Instead, on a 13(b) preliminary injunction, the **FTC** need only make a "tenable showing that the relevant market" is Gen 9 consoles. *See* *Warner*, 742 F.2d at 1164. Given the plethora of internal industry documents and the acknowledged differences, the **FTC** has met its preliminary injunction burden to show the Switch is not included in the relevant market.

b. The Console Market does not include PCs

[24] The **FTC** insists, and the Court agrees, the console market does not include PCs. [Redacted] That customers may "cross-shop" between consoles and PCs does not demonstrate "reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it." ***FTC*** *v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1040, 1043 (D.C. Cir. 2008).

2. Multigame Content Library Subscription Services and Cloud Gaming Markets

As to the **FTC's** additional markets of the multigame content library subscription services and cloud gaming, while the Court questions whether—as Defendants posit—these are simply alternative ways of playing console, PC, and mobile games, the Court assumes without deciding they are each their own product market when considered singly or in combination.

B. Geographic Market

[25] **[26]** The product market, the relevant geographic market must "correspond to the commercial realities of the industry and be economically significant." *Brown Shoe*, 370 U.S. at 336, 82 S.Ct. 1502. The geographic market encompasses the "area to which consumers can practically turn for alternative sources of the product and in which the antitrust defendants face competition." ***FTC*** *v. Cardinal Health, Inc.*, 12 F.Supp.2d 34, 49 (D.D.C. 1998).

1. The Console Market

[27] The **FTC**, relying largely on Dr. Lee's analysis, insists the relevant market is the United States because (1) game prices and releases vary country-by-country; and (2) gamer preferences and behavior vary country-by-country and inform market participants' strategic decision. [Redacted] Cumulatively, this evidence suggests the relevant market for competition is the United States.

Defendants' arguments in favor of a geographic market beyond the United States are unpersuasive. [Redacted]

[28] The geographic market is both the area "in which the seller operates, *and* to which the purchaser can practically turn for supplies." ***FTC*** *v. RAG-Stiftung*, 436 F. Supp. 3d 278, 308 (D.D.C. 2020) (emphasis added). While there is no dispute consoles are sold in markets outside the United States, there is no evidence to suggest US consumers seeking to purchase a console would look outside the United States to do so.

2. Multigame Content Library Subscription Services and Cloud Gaming Markets

The market for multigame content library subscription services and cloud gaming is a closer question; however, the Court will assume without deciding the geographic market is the United States for these markets as well.

II. EFFECT ON COMPETITION

[29] Section 7 vests courts with the "uncertain task" of making a prediction about the future. *See* *United States*

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v. Baker Hughes, Inc., 908 F.2d 981, 991 (D.C. Cir. 1990). For this reason, the "allocation of the burdens of proof" assumes particular importance. *Id.* In a horizontal merger case, "the government can establish its prima facie case simply by showing that the merger would produce a firm controlling an undue percentage share of the relevant market, and would result in a significant increase in the concentration of firms in that market," typically "by presenting market-share statistics," *United States v. UnitedHealth Grp. Inc.*, 630 F. Supp. 3d 118, 130 (D.D.C. 2022), *appeal dismissed*, No. 22-5301, 2023 WL 2717667 (D.C. Cir. Mar. 27, 2023) (cleaned up), which "triggers a presumption that the merger will substantially lessen competition," *AT&T*, 310 F. Supp. 3d at 192 (cleaned up). For a vertical merger, such as the **Microsoft**/**Activision** merger, "there is no short-cut way to establish anticompetitive effects, as there is with horizontal mergers." *Id.* at 192 (cleaned up). This is in part because "many vertical mergers create vertical integration efficiencies between purchasers and sellers." *Id.* at 193; *see also* *Nat'l Fuel Gas Supply Corp. v. FERC*, 468 F.3d 831, 840 (D.C. Cir. 2006) ("vertical integration creates efficiencies for consumers"); Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application*, ¶ 755c (online ed. May 2023) ("Vertical integration is ubiquitous in our economy and virtually never poses a threat to competition when undertaken unilaterally and in competitive markets."); Dkt. No. 226-2, Lee Decl. at ¶ 58 ("Unlike in an analysis of a horizontal merger, there is no established screen or presumption of harm based on market shares or concentration for the purposes of evaluating the competitive effects of a vertical merger.").

***12** **[30]** **[31]** **[32]** So, with this proposed vertical merger, the outcome "turn[s] on whether, notwithstanding the proposed merger's conceded procompetitive effects, the [g]overnment has met its burden of establishing, through 'case-specific evidence,' that the merger of [**Microsoft**] and [**Activision**], at this time and in this remarkably dynamic industry, is likely to substantially lessen competition in the manner it predicts." *See* *AT&T*, 916 F.3d at 1037. "Once the prima facie case is established, the burden shifts to the defendant to present evidence that the prima facie case inaccurately predicts the relevant transaction's probable effect on future competition, or to sufficiently discredit the evidence underlying the prima facie case. Upon such rebuttal, the burden of producing additional evidence of anticompetitive effects shifts to the government, and merges with the ultimate burden of persuasion, which remains with the government at all times." *Id.* at 1032 (cleaned up). "In assessing the Government's Section 7 case, the court must engage in a comprehensive inquiry into the 'future competitive conditions in a given market, keeping in mind that the Clayton Act protects competition, rather than any particular competitor.' " *AT&T*, 310 F. Supp. 3d at 190 (cleaned up) (citation omitted).

A. The FTC's Theory

"The primary vice of a vertical merger or other arrangement tying a customer to a supplier is that, by foreclosing the competitors of either party from a segment of the market otherwise open to them, the arrangement may act as a 'clog on competition which deprives rivals of a fair opportunity to compete.' " *Brown Shoe*, 370 U.S. at 323-24, 82 S.Ct. 1502. The **FTC** insists the combined firm may deprive rivals —primarily Sony—of a fair opportunity to compete in the above-defined markets by foreclosing an essential supply —*Call of Duty.* In other words, *Call of Duty* is so popular, and has such a loyal and dedicated following, competition will be substantially lessened in the console, content library subscription, and cloud gaming markets unless **Microsoft's** rivals have at least equal access to this particular video game.

The **FTC** argues it can establish this potential anticompetitive effect of the merger through two alternative, but overlapping tests. First, by showing the transaction is likely to give the merged firm the ability and incentive to foreclose *Call of Duty* from its rivals. (Dkt. No. 291-2, **FTC's** Final Proposed Findings of Fact and Conclusions of Law (**FTC's** Findings and Conclusions) at p. 180 ¶ 87.) Second, through examining the *Brown Shoe* factors, such as share of the market foreclosed, the nature and purpose of the transaction, barriers to entry, whether the merger will eliminate potential competition by one of the merging parties, and the degree of market power that would be possessed by the merged enterprise as shown by the number and strength of competing suppliers and purchasers. (*Id.* at ¶ 88 (quoting *Brown Shoe*, 370 U.S. at 328-34, 82 S.Ct. 1502); *see Illumina*, 2023 WL 2823393, at *32.)

B. Ability and Incentive to Foreclose

As a threshold matter, the **FTC** contends it need only show the transaction is "likely to increase the ability and/or incentive of the merged firm to foreclose rivals." (Dkt. No. 291-2, **FTC's** Findings and Conclusions at p. 181 ¶ 90.) For support, it cites

its own March 2023 decision in *Illumina*, 2023 WL 2823393, at *33. *Illumina* reasons:

> [t]o harm competition, a merger need only create or augment either the combined firm's ability or its incentive to harm competition. ***It need not do both.*** Requiring a plaintiff to show an increase to both the ability and the incentive to foreclose would per se exempt from the Clayton Act's purview any transaction that involves the acquisition of a monopoly provider of inputs to adjacent markets.

2023 WL 2823393, at *38 (cleaned up) (emphasis added). *Illumina*, however, provides no authority for this proposition, nor could it. Under Section 7, the government must show a "reasonable *probability* of anticompetitive effect." *Warner*, 742 F.2d at 1160 (emphasis added). If there is no incentive to foreclose, then there is no probability of foreclosure and the alleged concomitant anticompetitive effect. Likewise, if there is no ability, then a party's incentive to foreclose is irrelevant. Indeed, the **FTC's** expert, Dr. Lee, analyzed the anticompetitive effects of the merger based on ability *and* incentive. (Dkt. No. 226-2, Lee Decl. at ¶ 87) ("I evaluate whether the Merged Entity would have the *ability* and *economic incentive* to foreclose **Microsoft's** rivals from **Activision** content in the two Consoles Markets").

***13** The **FTC** also appears to contend it need only show the combined firm would have a greater ability and incentive to foreclose *Call of Duty* from its rivals than an independent **Activision**. (Dkt. No. 291-2, **FTC's** Findings and Conclusions at p. 181 ¶ 90.) This assertion, however, ignores the text of Section 7 which forbids mergers which may "substantially ... lessen competition." 15 U.S.C. § 18. It is not enough that a merger might lessen competition—the **FTC** must show the merger will probably *substantially* lessen competition. That the combined firm has more of an incentive than an independent **Activision** says nothing about whether the combination will "substantially" lessen competition. *See UnitedHealth Grp.*, 630 F. Supp. 3d at 133 ("By requiring that [the defendant] prove that the divestiture would preserve exactly the same level of competition that existed before the merger, the Government's proposed standard would effectively erase the word 'substantially' from Section 7").

[33] Thus, to establish a likelihood of success on its ability and incentive foreclosure theory, the **FTC** must show the combined firm (1) has the ability to withhold *Call of Duty*, (2) has the incentive to withhold *Call of Duty* from its rivals, and (3) competition would probably be substantially lessened as a result of the withholding.

1. Ability to Foreclose

The Court accepts the combined firm would have the ability to foreclose because it would own the *Call of Duty* franchise.

2. Incentive to Foreclose and the Resulting Lessening of Competition

a. High Performance Console Market

The Court finds the **FTC** has not shown a likelihood of success on its claim the combined firm would have an incentive to, and thus probably would, foreclose *Call of Duty* from Sony PlayStation.

i. No Incentive to Foreclose *Call of Duty*

[34] ***First***, immediately upon the merger's announcement, **Microsoft** committed to maintain *Call of Duty* on its existing platforms and even expand its availability. The day after the merger announcement, **Microsoft's** Satya Nadella and Phil Spencer spoke with Sony CEO Kenichiro Yoshida to emphasize **Microsoft's** commitment to enter a new agreement to extend **Activision's** obligation to ship *Call of Duty* at parity on PlayStation. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 418:16-419:16, 443:18-20; RX2172; Dkt. No. 285, 6/28/23 Tr. (Nadella) at 852:23-853:8.) The next day, Sony PlayStation CEO Jim Ryan wrote his mentor about the proposed merger: "It's not an xbox exclusivity play at all. they're thinking bigger than that, and they have the cash to make moves like this. I've spent a fair bit of time with both Phil and Bobby over the past day. I'm pretty sure we will continue to see COD on PS for many years to come." (RX2064-001.) [Redacted]

Microsoft also contacted its competitor Valve—the company that runs the leading PC game store, Steam. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 172:18-19, 173:16-19.) Xbox sent Valve a signed letter agreement committing to make *Call of Duty* available on Steam for ten years. (RX1184.) Valve did not sign the deal because they "believe strongly that they should earn the business of their—the developers who put on their platform day in and day out, and so they told us that they had had no need to sign that agreement and that they believed us when we said that we would continue to provide [*Call of Duty*] on Steam." (Dkt. No. 282, 6/22/23 Tr. (Bond) at 175:16-20.)

Microsoft even took steps to expand *Call of Duty* to non-Microsoft platforms. On the day of the merger's announcement, Microsoft called the head of Nintendo North America, Doug Bowser, and Nintendo's lead for partnerships, Steve Singer, to discuss a partnership to bring *Call of Duty* to the Switch. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 167:24-169:18.) Those discussions led to an inked deal to bring *Call of Duty* to the Switch. All of this conduct is inconsistent with an intent to foreclose.

Second, the deal plan evaluation model presented to the Microsoft Board of Directors to justify the Activision purchase price relies on PlayStation sales and other non-Microsoft platforms post-acquisition. [Redacted] This valuation is also inconsistent with an incentive to foreclose.

14** ***Third, the deal plan evaluation model reflects access to mobile content was a critical factor weighing in favor of the deal. [Redacted] Microsoft's keen interest in Activision's mobile content suggests the combined firm is not incentivized to withhold *Call of Duty* merely to aid the shrinking console market.

Fourth, Microsoft witnesses consistently testified there are no plans to make *Call of Duty* exclusive to the Xbox. Mr. Nadella testified he would "[a] hundred percent" "commit to continuing to ship *Call of Duty* on the Sony PlayStation." (Dkt.No. 285, 6/28/23 Tr. (Nadella) 853:9-11.) Mr. Spencer testified "my commitment is and my testimony is, to use that word, that we will continue to ship Call of -- future versions of *Call of Duty* on Sony's PlayStation platform." (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 367:18-24, 368:4-10, 429:21-22, 429:25-430:1.)

Fifth, there are no internal documents, emails, or chats contradicting Microsoft's stated intent not to make *Call of Duty* exclusive to Xbox consoles. Despite the completion of extensive discovery in the FTC administrative proceeding, including production of nearly 1 million documents and 30 depositions, the FTC has not identified a single document which contradicts Microsoft's publicly-stated commitment to make *Call of Duty* available on PlayStation (and Nintendo Switch). (RX5056 (Carlton Report at ¶ 127.) The public commitment to keep *Call of Duty* multiplatform, and the absence of any documents contradicting those words, strongly suggests the combined firm probably will not withhold *Call of Duty* from PlayStation.

Sixth, *Call of Duty's* cross-platform play is critical to its financial success. (Dkt. No. 286, 6/29/23 Tr. (Stuart) at 1039 ("Q. And is it also profitable for Xbox to continue to have games like *Minecraft* be multiplatform and cross platform? A. Absolutely. The strength of a game like *Minecraft* comes from that cross-network play. If you, you know, removed one of those platforms and one of those big user bases, not only – not only would you have a massive brand impact, you would lose a significant revenue stream that you just couldn't make up for."); Dkt. No. 285, 6/28/23 Tr. (Kotick) at 715:18-24 ("Well, if you think about like from a business perspective and from a consumer perspective, one of the most important things is building communities of players, especially now that you have the ability to compete and socialize. And so our view has always been that you want to create your content for as many platforms as possible and build your audiences to be as big as possible.").) Cross-play thus creates an incentive to leave *Call of Duty* on PlayStation.

Seventh, Microsoft anticipates irreparable reputational harm if it forecloses *Call of Duty* from PlayStation. Mr. Spencer testified: "[u]s pulling *Call of Duty* from PlayStation in my view would create irreparable harm to the Xbox brand after me in so many public places, including here, talking about and committing to us not pulling Call of Duty from PlayStation." (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 367:11–15). Activision CEO Bobby Kotick confirmed Microsoft's concerns are not unfounded: "if we were to remove *Call of Duty* from PlayStation, it would have very serious reputational – it would cause reputational damage to the company." (Dkt. No. 285, 6/28/23 Tr. (Kotick), at 725:4-7); *see also id.* at 715:18-24 ("Well, you would alienate" gamers "and you would have a revolt if you were to remove the game from one platform."); *id.* at 727:17-22 (explaining if a degraded *Call of Duty* experience were offered on other platforms "you would have vitriol from gamers that would be well deserved, and ... that would be very

vocal and also cause reputational damage to the company"). "[I]n assessing [**Microsoft's**] post-merger incentives, the Court must consider the financial and reputational costs to [**Microsoft**] if it were to breach or water down its firewall policies." *See* *UnitedHealth Grp.*, 630 F. Supp. 3d 118; *see also* *AT&T*, 916 F.3d at 1040 (D.C. Cir. 2019) ("Turner [Broadcasting] would not be willing to accept the 'catastrophic' affiliate fee and advertising losses associated with a long-term blackout."). Why would **Microsoft** risk that brand reputational harm? Especially since the video game console market is shrinking—not growing; it is not the future of video gaming. (RX 5055-010.)

15** ***Eighth, the **FTC** has not identified any instance in which an established multiplayer, multi-platform game with cross-play, that is, a game that shares *Call of Duty's* characteristics, has been withdrawn from millions of gamers and made exclusive. (RX5056 (Carlton Report) at ¶ 15.) To the contrary, **Microsoft's** 2014 acquisition of Mojang, the developer of the hugely popular *Minecraft* franchise, exemplifies how a console seller (and **Microsoft** in particular) behaves when acquiring a hugely popular multiplayer cross-platform game. *Minecraft* is one of the most successful games of all time, and is **Microsoft's** largest game by revenue. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 362:24-25; RX5058-005 (Hood Decl.) at ¶ 11.) It includes a popular multiplayer mode and has produced a large community across platforms. (Dkt. No. 282, 6/22/23 Tr. (Booty) 77:23–78:1.) At the time of the Mojang acquisition, *Minecraft* was available on Xbox, PlayStation, and PC. (*Id.* at 78:2–7.) While **Microsoft** had the ability to make *Minecraft* exclusive, it continued to ship *Minecraft* on all those same platforms post-acquisition and made subsequent games in the franchise (*e.g., Minecraft: Dungeons* and *Minecraft: Legends*) available for Nintendo consoles and even Sony's subscription service, PlayStation Plus. (*Id.* at 78:11-79:4; 6/23/2023 (Spencer) at 421:8-423:1; RX3156.) Xbox CFO Tim Stuart explained the decision to ship *Minecraft* on "all platforms" enabled "its mass, mass, mass market" appeal. (Dkt. No. 286, 6/29/23 Tr. (Stuart) at 976:13-977:5.) The decision was dictated by the economics and the desire not to break up existing gamer communities. (Dkt. No. 283, 6/23/23 Tr. (Spencer) at 365:13-15 ("[I]f we were to acquire something that has found customer love, users, business on another platform, we want to nurture and grow that for the games that we're building"); *id.* at 362:24-363:5 (*Minecraft* "has reached a financial level of success where it's – it's a significant profit driver for us given that it's shipping on all the platforms. So if you can get a game that's at that level of hit and that level of business, the size of the business, our job is to maintain and grow that."); RX1137.)

All of the above evidence points to no incentive to foreclose *Call of Duty*—a 20-year multi-platform franchise—from Sony PlayStation.

[Redacted]

The **FTC** disputes this written offer has any relevance to its *prima facie* burden. It contends **Microsoft's** binding offer is a "proposed remedy" that may not be considered until the remedy phase, that is, after a Section 7 liability finding. As support, it again relies on its own 2023 *Illumina* decision. There, relying on *U.S. v. E.I. du Pont de Nemours & Co.*, 366 U.S. 316, 334, 81 S.Ct. 1243, 6 L.Ed.2d 318 (1961), the Commission held such agreements are "proposed remedies," and that the defendants bear the burden of proving "the offered remedy would actually be effective." So, the **FTC** claims it does not have to account for any agreements in its *prima facie* showing. Illumina, Inc. & Grail, Inc., 2023 WL 2823393, at *49-50. But *E.I. du Pont* does not support the Commission's holding. It involved a remedy proposed *after* a finding of a Section 7 violation. The Court held: "once the Government has successfully borne the considerable burden of establishing a violation of law, all doubts as to the remedy are to be resolved in its favor." *E.I. du Pont*, 366 U.S. at 334, 81 S.Ct. 1243. *E.I. du Pont* says nothing about whether the merger-challenging plaintiff must address offered and executed agreements made before any liability trial, let alone liability finding; that is, whether the **FTC** must address the circumstances surrounding the merger as they actually exist. The caselaw that directly addresses the issue contradicts the **FTC's** position. *See* *AT&T*, 916 F.3d at 1041; *UnitedHealth Grp.*, 630 F.Supp.3d at 139–51; ***FTC*** *v. Arch Coal, Inc.*, No. 04-00534, Dkt. No. 67 (D.D.C. July 7, 2004).

Next, the **FTC** insists **Microsoft's** offer is simply insufficient. In so arguing, it relies exclusively on PlayStation CEO Ryan's testimony. (Dkt. No. 291-2, **FTC's** Findings of Fact and Conclusions of Law at pp. 159-160 ¶¶ 787-796.) The **FTC's** heavy reliance on Mr. Ryan's testimony is unpersuasive. Sony opposes the merger; its opposition is understandable. Before the merger Sony paid **Activision** for exclusive marketing rights that allowed Sony to market *Call of Duty* on PlayStation, but restricted Xbox's ability to do the same. (Dkt. No. 282, 6/22/23 Tr. (Bond) at 162:19-165:8.) After the merger, the combined firm presumably will not agree to such

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restrictions. Before the merger, a consumer wanting to play a *Call of Duty* console game had to buy a PlayStation or an Xbox. After the merger, consumers can utilize the cloud to play on the device of choice, including, it is intended, on the Nintendo Switch. Perhaps bad for Sony. But good for *Call of Duty* gamers and future gamers.

[Redacted]

ii. The FTC's Incentive Evidence is Insufficient

[35] Notwithstanding the overwhelming evidence of the combined firm's lack of incentive to pull *Call of Duty* from PlayStation, the FTC insists it is probable the combined firm will do so because it is in its financial interests.

a. Professor Lee's Opinion

***16** The lynchpin of the FTC's argument is the expert opinion of Professor Robin Lee, an economist. Prof. Lee opines the economic benefits of making *Call of Duty* exclusive to Xbox outweigh the costs. In particular, he concludes removing *Call of Duty* from PlayStation would result in a 5.5% increase in Xbox's share of the Gen 9 console market. (Dkt. No. 226-2, Lee Decl. ¶ 106.) [Redacted]

Prof. Lee's opinion does not dispute the evidence of Microsoft's lack of an economic incentive. His Vertical Foreclosure model depends on two key quantitative inputs: "the customer lifetime value ('LTV') of purchasers of Xbox consoles and the 'Xbox conversion rate.' " (*Id.* at ¶ 103.) Looking at the conversion rate, Prof. Lee uses projected sales data to calculate the number of expected PlayStation purchasers of *Call of Duty* (2025 version) who would instead choose to play *Call of Duty* 2025 on Xbox consoles if not available on PlayStation. From this number he excludes PlayStation owners (1) who already own an Xbox, or (2) would choose to play *Call of Duty* 2025 on PC if not available on PlayStation. The conversion rate is the fraction of remaining purchasers—"affected users"—that would purchase an Xbox console to play *Call of Duty* 2025 if it was not available on PlayStation. (Dkt. No. 226-2, Lee Decl. at ¶¶ 101, 103, 106.)

Prof. Lee's Vertical Foreclosure model *assumes* a conversion rate of 20%. (Dkt. No. 284, 6/27/23 Tr. (Lee) at 559:2-14 ("So with that subset of users I'm assuming 20 percent of them would purchase a new Xbox[ ]."); *id.* at 560:2-4 (agrees the 20% rate was not computed but instead was just inputted into the model).) So, the 20% figure is not based on evidence—it is an assumed input. Accepting Prof. Lee's LTV of 40%, even lowering the conversion rate just a bit, to say 17.5%, means Prof. Lee's model estimates it would **not** be profitable to withhold *Call of Duty* from PlayStation; that is, the costs in lost PlayStation *Call of Duty* sales outweigh the benefits of more Xbox console sales. This relationship is reflected in Figure 11 from Prof. Lee's report reproduced below:

[Redacted]

[Redacted]

Prof. Lee attempts to defend the reasonableness of his 20% assumption by identifying evidence he contends supports his model's output—the 5.5% share shift. In other words, the 20% assumption must be correct because other evidence supports the model's result. In his direct testimony Prof. Lee identified two pieces of support: (1) an internal 2019 Microsoft strategy memo regarding a potential acquisition, and (2) his share model output. (Dkt. No. 226-2 ¶ 106.) Neither supports his 20% conversion rate assumption.

First, the Microsoft memo states in a parenthetical: "an exclusive AAA release accounts for a 2-4% console share shift in the US and a 1-3% shift worldwide." (PX1136-004). Prof. Lee's reliance on this memo snippet is misplaced. What —if any—data is behind the statement? Who came up with those figures? How were they measuring share shift? Shift from what console(s) to what console(s)? And, were those numbers addressing a new first-party game being released exclusively? Or was the author discussing taking a long-standing multiplatform cross-play game, like *Call of Duty*, exclusive. Prof. Lee does not know. Further, only the global share shift matters in Prof. Lee's model. The memo snippet, for whatever it is worth, posits a 1% to 3% share shift globally. Prof. Lee testified a 2% share shift would **not** make it economically beneficial to make *Call of Duty* exclusive to Xbox consoles; thus, the slide does not support Prof. Lee's 20% conversion rate input. (Dkt. No. 284, 6/27/23 Tr. (Lee) at 581:1-7.) [6]

***17** Second, Prof. Lee points to his share model. (Dkt. No. 226-2, Lee Decl. at ¶ 106.) He says this model results in an 8.6% share shift; therefore, the more conservative 5.5% share shift output from his Vertical Foreclosure model is reasonable. But the share model output is also flawed. As a preliminary matter, it is based on Gen 8 console data from only the United

States, rather than global Gen 9 data. But putting that aside, as Dr. Carlton observed, Prof. Lee's share model "ignores the presence of non-exclusive games in influencing console choice" even though Prof. Lee acknowledges non-exclusive games do influence console choice. (Dkt. No. 294-2, Carlton Decl. at ¶¶ 26-27.) Prof. Lee's reply report's attempt to fix this error fails because he again accords no value to non-exclusive games in consumer choice. (*Id.* at ¶¶ 29-30.) Further, Dr. Carlton also contends Prof. Lee's share model assumes every lost PlayStation 4 results in an additional Xbox sale, even though consumers may choose a different device to play *Call of Duty* (PC, mobile, cloud) or to not play *Call of Duty* on any device at all. (*Id.* at ¶¶ 32-34.) When Dr. Carlton corrects for this error, Prof. Lee's share model is between 1% and 54% of what Prof. Lee predicts and thus does not support his critical 20% conversion rate. (*Id.* at ¶ 35.)

And what does Prof. Lee say about Dr. Carlton's criticism? Nothing in his direct testimony. (*See* Dkt. No. 262-2, Lee Decl.) At the evidentiary hearing on re-direct? Nothing. (Dkt. No. 284, 6/27/23 Tr. (Lee) at 615:9-651:22.) And when the **FTC** cross-examined Dr. Carlton on his written direct testimony? Again, nothing. (Dkt. No. 285, 6/28/23 Tr. (Carlton) at 855:6-898:1.) The **FTC** chose not to challenge, or even address, Dr. Carlton's identification of material flaws in Prof. Lee's share model. The criticism thus stands unscathed —and persuasive. So, the share model does not justify Prof. Lee's reliance on the strategy memo snippet reporting console shares move 1% to 3% globally with exclusive AAA content.

[Redacted]

[Redacted] But Prof. Lee's assumption as to what was being measured was wrong. The slide does not support his conversion rate. In any event, before Prof. Lee could persuasively opine the "pivotal" conversion rate is supported by a survey result, he would need to be familiar with the survey and its design. As his testimony showed, he was not.

Dr. Lee's opinion suffers from several additional weaknesses. It fails to consider **Microsoft's** agreement with Nintendo and the cloud streaming services to provide ongoing access to *Call of Duty*—all of which will increase access. It also fails to consider **Microsoft's** offer to Sony. Nor did he consider any reputational harm to **Microsoft** from pulling *Call of Duty* from millions of players. Regardless, for the reasons explained, his opinion does not show the combined firm will probably have an economic incentive to withhold *Call of Duty* from PlayStation. He simply assumed a concession rate for his model that would make exclusivity profitable, but there is no evidence to support that assumption.

b. ZeniMax

While the **FTC** asserts **Microsoft's** 2014 *Minecraft* acquisition is not relevant to how it will treat *Call of Duty*, it insists **Microsoft's** 2021 acquisition of ZeniMax is predictive of how the combined firm will behave. Specifically, although **Microsoft's** deal valuation shared with the Board of Directors contemplated keeping ZeniMax content multiplatform, it later decided to make two new ZeniMax titles—*Starfield* and *Redfall*—exclusive. Agreed this evidence shows **Microsoft's** deal valuation for the **Activision** acquisition is not dispositive of the incentive question. But it does not dispute the evidence that **Microsoft** does not have an incentive to withdraw *Call of Duty* from PlayStation. Neither *Starfield* nor *Redfall* are remotely similar to *Call of Duty. Starfield* is a role-playing game that has not been released. *Redfall* is a first-person shooter game that was only released in May 2023.

The question is whether it makes financial sense to wrest *Call of Duty* from PlayStation. [Redacted]

c. Effect on Innovation

The **FTC** also insists the merger will decrease innovation because game developers and publishers will not want to work with **Microsoft**. But the only evidence the **FTC** identifies is Sony's reluctance to share its intellectual property with **Microsoft** and provide development kits for its consoles. But this is not merger-specific and it fails to account for all the other developers who might now be incentivized to collaborate with Xbox or one of its studios like **Activision** or Bethesda. *Cf. UnitedHealth Grp.*, 630 F. Supp. 3d at 151 ("The Government did not call a single rival payer to offer corporate testimony that it would innovate less or compete less aggressively if the proposed merger goes through. Nor did any of the rival payer employees who did testify support the Government's theory.") Protecting Sony's decision to delay collaboration with **Microsoft** and therefore PlayStation users' access to **Microsoft's** content is not pro-competitive.

d. Partial Foreclosure

***18** Finally, in its reply brief in support of its preliminary injunction motion (but not its original moving papers), and throughout the evidentiary hearing, the **FTC** alluded to the possibility of partial foreclosure. Partial foreclosure might involve releasing *Call of Duty* later on PlayStation than Xbox, or having a *Call of Duty* Christmas character in the Xbox version, but not the PlayStation version. (*See* Dkt. No. 286, 6/29/23 Tr. (Closing) at 1100:2-4, 1100:17-23.) Or it could be technologically degrading the players' experience on one console versus another. (PX5000-181 (Lee Report) at ¶ 477.)

But the **FTC** has no expert testimony to support a finding the combined firm would have the incentive to engage in such conduct. Prof. Lee did not engage in any quantitative analysis of partial foreclosure. Anyway, under the **FTC's** theory, the goals of full and partial foreclosure are the same: move enough PlayStation users to Xbox such that the benefits to the combined firm outweigh the costs. If the **FTC** has not shown a financial incentive to engage in full foreclosure, then it has not shown a financial incentive to engage in partial foreclosure.

Moreover, Mr. Kotick testified he was unaware of a developer intentionally developing a "subpar game for one platform versus another." (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 728:2–6.) Such conduct would obviously draw "vitriol from gamers that would be well deserved," and would "cause reputational damage to the company." (*Id.* at 727:20–22.) Consistent with that testimony, the record does not include any evidence **Microsoft** has engaged in such conduct in the past—even with Sony. [Redacted] The **FTC's** partial foreclosure theory fails.

***

In sum, the **FTC** has not shown a likelihood of success on its theory the merger may substantially lessen competition in the Gen 9 console market because the combined firm will have the ability and incentive to foreclose *Call of Duty* from PlayStation. While it is possible, *Call of Duty's* long history as a highly popular, multiplatform cross-play game make that result not probable. The Court has focused on *Call of Duty*, rather than other **Activision** AAA content, because the **FTC's** evidence focused on this one game. While other games, such as *Diablo*, are certainly popular, the **FTC** did not offer evidence that if *Call of Duty* remains multiplatform in the console market, making *Diablo* or other **Activision** titles exclusive to Xbox would probably substantially lessen competition in that market.

b. The Remaining Markets

For purposes of the library subscriptions services market and the cloud streaming market, which Dr. Lee refers to collectively as the "Gaming Services Market," the **FTC** contends the merger will probably have anticompetitive effects because **Microsoft** would (1) have a greater economic incentive to engage in foreclosure than an independent **Activision**; and (2) "would likely have the economic incentive to engage in foreclosure." (Dkt. No. 226-2 at ¶¶ 7, 189).

[36] As a threshold matter, the question is not whether **Microsoft** following the merger is more likely to engage in foreclosure than an independent **Activision**. The question is whether "the proposed merger is likely to substantially lessen competition, which encompasses a concept of 'reasonable probability.' " *AT&T*, 916 F.3d at 1032. As **Microsoft** notes, "a vertically integrated firm's incentives are *always* more complex in that respect than the standalone incentives of its components. In other words, if this merger could be condemned simply because the combined company would derive *some* economic benefit from withholding, *any* vertical merger could be condemned on the same ground, despite the indisputable pro-competitive effects of many vertical mergers." (Dkt. No. 292-2, COL at ¶ 152 (emphasis in original).) Accordingly, to prevail on its preliminary injunction motion, the **FTC** must demonstrate a likelihood of success on its assertion there is a reasonable probability the proposed merger will substantially lessen competition in the library subscription services market and cloud streaming market.

(i) Library Subscription Services Market

***19** **[37]** The **FTC** argues Xbox will include *Call of Duty* in its Game Pass library subscription service, but refuse to include it in rival services. This exclusion, it contends, will lessen competition in that market and make it likely Xbox will increase the Game Pass price. (Dkt. No. 291-2, **FTC's** Findings and Conclusions at p. 138 ¶¶ 659, 661.)

It is undisputed the combined firm has significant financial incentives to include *Call of Duty* in Game Pass. (*See* PX1763-013; PX2138-001.) The Court accepts for preliminary injunction purposes it is likely *Call of Duty*

will be offered exclusively on Game Pass, and not offered on rival subscription services. The countervailing incentives that exist in the console market—longstanding multiplatform availability, cross-play, historically high revenue from games sold—do not apply to the subscription market since *Call of Duty* is not and never has been offered (in any significant sense) on a multigame library subscription service. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 731:5-7.) But the record does not support a finding of a serious question as to whether *Call of Duty* Game Pass exclusivity will probably substantially lessen competition in the subscription services market.

First, the merger has the procompetitive effect of expanding access to *Call of Duty.* Adding *Call of Duty* to Game Pass gives consumers a new, lower cost way to play the game day and date. (RX3166-016.) Further, Dr. Carlton explains how adding *Call of Duty*, and **Activision** content in general, will actually lower costs for many game consumers and harm none. (RX5056 (Carlton Report) at ¶¶ 141-142.) Dr. Carlton also opines "the merger can be expected to result in an increased incentive to invest in game development than would occur otherwise" because "adding [*Call of Duty*] to Game Pass will result in an increase in the number of Game Pass users, [and] that increase gives **Microsoft** more incentive to invest in other games, not just **Activision** games." (*Id.* at ¶ 144); *see* *Chi. Pro. Sports Ltd. P'ship v. NBA*, 95 F.3d 593, 597 (7th Cir. 1996) ("The core question in antitrust is output."); ***FTC*** *v. Univ. Health, Inc.*, 938 F.2d 1206, 1222 (11th Cir. 1991) ("[W]hether an acquisition would yield significant efficiencies is an important consideration in predicting whether the acquisition would substantially lessen competition.").

Second, the **FTC** does not identify evidence that disputes these procompetitive effects. Prof. Lee admits "Exclusivity can have both pro and anticompetitive effects." (Dkt. No. 284, 6/27/23 Tr. (Lee) at 603:8; *see* Dkt. No. 226-2, Lee Decl. at ¶¶ 113, 132.) Yet he did not perform any quantitative analysis to estimate whether adding *Call of Duty* to Game Pass, and not other subscription services, will injure competition. Will some people subscribe to Game Pass because of *Call of Duty*? Yes. But there is no analysis of how many, or how it will affect competition with Game Pass competitors such as Amazon, Electronic Arts, Ubisoft and Sony. (Dkt. No. 284, 6/27/23 Tr. (Lee) at 638:11–15 (Lee testifying cloud gaming and content library services are "both relatively nascent and new compared to consoles, and the lack of really good data for these services made it very difficult to perform something that I would view as reliable that's quantitative for those markets."); RX5056 (Carlton Report) at ¶ 138.)

***20** The **FTC's** primary argument appears to be that even without the merger, **Activision** will contract to put its content, including *Call of Duty*, on subscription services. The record evidence is to the contrary. **Activision** believes it is not in its financial interest to do so because it would cannibalize individual sales. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 744:10-11.) Kotick cannot imagine a subscription service agreeing to the financial terms **Activision** would require to make it a financial win for **Activision**. (*Id.* at 752:17-19, 752:8-11.) [Redacted]

Consistent with Mr. Kotick's testimony, in 2020 Xbox attempted to negotiate placing certain **Activision** titles on Game Pass. **Activision** refused. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 751:1-8.) [Redacted] And **Activision** has no plans to put its content on a game library subscription service. (Dkt. No. 285, 6/28/23 Tr. (Kotick) at 729:3-7, 746:19-21.) The **FTC** does not offer any explanation, let alone evidence, as to why it would be financially beneficial for **Activision** to change its long-held stance on subscription services.

In sum, the **FTC** has not raised serious questions on whether the merger will probably substantially lessen competition in the game library subscription services market.

(ii) Cloud Streaming Market

[38] The **FTC** has also failed to show a likelihood of success on its claim the merger will probably lessen competition in the cloud gaming market because the combined firm will foreclose **Activision's** content, including *Call of Duty*, from cloud-gaming competitors. This argument is foreclosed by **Microsoft's** post-**FTC** complaint agreements with five cloud-streaming providers. Before the merger, there is no access to **Activision's** content on cloud-streaming services. After the merger, *several* of **Microsoft's** cloud-streaming competitors will—for the first time—have access to this content. The merger will enhance, not lessen, competition in the cloud-streaming market.

At trial the **FTC** argued that the cloud-streaming competitors based outside the United States should not be considered because their servers are likely outside the United States and thus their cloud services are not effective for United States consumers. But the **FTC** is merely guessing; **Microsoft** has

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offered evidence that "Boosteroid (a Ukrainian company) has gaming servers in Pennsylvania, North Carolina, Texas, Illinois, Florida, Washington." (Dkt. No. 292-2, Defendants' Findings of Fact and Conclusions of Law (Defs' Findings and Conclusions) p. 138 ¶ 163.) [Redacted]

The **FTC's** response, again, is that an independent **Activision** would agree to put its content on cloud-gaming services. But, again, it offers no quantitative evidence to support this bald assertion; Prof. Lee did not model the cloud gaming market. And, the fact is, **Activision** content is not currently on any cloud-streaming service. And it is not likely to be available absent the merger. (*See* Dkt. No. 285, 6/28/23 Tr. (Kotick) at 731:15–18; *id.* at 753:13–15.) **Activision** previously pulled *Call of Duty* from GeForce NOW following beta testing. (*Id.* at 754:1-5.) And it has not been on a cloud-streaming service since. The **FTC** has not shown it is likely an independent **Activision** would do what **Microsoft** has agreed to do by contract *See* *Tenneco, Inc. v. **FTC***, 689 F.2d 346, 354 (2d Cir. 1982) (rejecting the **FTC's** "unsupported speculation" "Tenneco would have entered the market ... absent its acquisition of Monroe"); *Fruehauf Corp. v. **FTC***, 603 F.2d 345, 355 (2d Cir. 1979) (rejecting the **FTC's** theory of anticompetitive effects as "based on speculation rather than fact").

***21** Finally, the **FTC** argues the cloud-streaming agreements are irrelevant to its *prima facie* showing as they are mere "proposed remedies." The Court's analysis as to the Sony proposal, *infra* at Section II.B.2.a.i, applies equally to the cloud-streaming agreements. Indeed, it has even more force here where the competitor—Nvidia and others—have actually entered into the agreements. The Court cannot ignore this factual reality. The combined firm will probably not have an incentive to breach these agreements and make **Activision** content exclusive to xCloud.

3. FTC's *Brown Shoe* Foreclosure Theory

[39] Alternatively, the **FTC** argues that it has established a likelihood of success on its theory that under "the *Brown Shoe* functional liability factors," the proposed merger's "very nature and purpose" is anticompetitive, there is a "trend toward concentration in the industry," and the merger would "increase entry barriers in the Relevant Markets." (Dkt. No. 291-2), **FTC's** Findings and Conclusions at pp. 181-182 ¶¶ 95-99 (citing *Brown Shoe*, 370 U.S. 294 at 329–30, 82 S.Ct. 1502.) As an initial matter, the **FTC** made no reference to this theory in its opening statement or closing argument. Nor is it discussed by Dr. Lee's expert report; he addressed only **Microsoft's** ability and incentive to foreclose.

As to the theory's merits, the **FTC** does not make any new arguments not considered above. The **FTC** maintains the "[p]roposed Acquisition's purpose is to transform an independent, 'platform-agnostic' source of supply into a captive one controlled exclusively by **Microsoft**," (*Id.* at pp. 181-182 ¶ 95), but this would be true in any vertical merger and does not explain why it demonstrates an anticompetitive purpose. Likewise, while the **FTC** argues **Microsoft's** "past conduct following similar transactions also demonstrates its likely anticompetitive nature," presumably referring to the ZeniMax acquisition, this ignores the Mojang/*Minecraft* acquisition. (*Id.*) To the extent the **FTC** relies on a "trend toward further concentration in the industry" (*Id.* at p. 182 ¶ 96), it fails to explain how this trend is anticompetitive here —**Microsoft's** investment in game developers and publishers allows for increased innovation in content and **Microsoft** has prioritized a "content pipeline." (PX1154-001.)

***

In sum, the **FTC** has not raised serious questions regarding whether the proposed merger is likely to substantially lessen competition in the console, library subscription services, or cloud gaming markets. As such, the **FTC** has not demonstrated a likelihood of ultimate success as to its Section 7 claim based on a vertical foreclosure theory.

III. BALANCING OF THE EQUITIES

[40] Because the **FTC** has not demonstrated a likelihood of ultimate success on the merits, the Court need not proceed to the balance of equities question. *See* *United States v. Siemens Corp.*, 621 F.2d 499, 506 (2d Cir. 1980). The Court finds, however, that even if the **FTC** had met its burden, the balance of equities do not fall in its favor. The **FTC** correctly notes private equities, such as the potential skuttling of the merger if it does not close by July 18, "cannot on its own overcome the public equities that favor the **FTC**." ***FTC** v. Wilh. Wilhelmsen Holding ASA*, 341 F. Supp. 3d 27, 73-74 (D.D.C. 2018); *see also* *Warner*, 742 F.2d at 1165 ("When the Commission demonstrates a likelihood of ultimate success,

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a countershowing of private equities alone does not justify denial of a preliminary injunction”).

But the balancing of equities is not a pointless exercise. In *Warner*, for example, the Ninth Circuit observed “public equities may include beneficial economic effects and pro-competitive advantages for consumers.” *Id.* at 1165 (cleaned up). Because in that case the record contained “conflicting evidence on the anticompetitive effects of the merger,” the Ninth Circuit held it was unclear whether those public equities supported the grant or denial of the preliminary injunction. *Id.* It nonetheless held the public equities outweighed the private because the Commission would be denied effective relief if it ultimately prevailed and ordered divestiture. The court reasoned: “Since the proposed joint venture calls for Polygram to dismantle its distribution operations, it would be exceedingly difficult for Polygram to revive the operations to comply with a divestiture order.” *Id.*

***22** Here, at best “the record contains conflicting evidence on the anticompetitive effects of the merger”; thus, the **FTC** cannot point to beneficial economic effects as a public equity. *Id.* Moreover, the administrative trial before the ALJ commences on August 2, in just a few weeks. By pre-existing contract, *Call of Duty* will remain on PlayStation through the end of 2024. There will be no foreclosure of *Call of Duty* pending the ALJ's decision. Gamers will be able to play just as they always have.

The **FTC** insists the difficulty in ordering post-acquisition divestiture is the public equity that prevails. (Dkt. No. 291-2, **FTC's** Findings and Conclusions at p. 194-195 ¶ 153.) But it does not cite anything specific about this merger to support that assertion. It is a vertical acquisition. **Microsoft** and **Activision** will act as parent and subsidiary. There is no planned dismantling of operations, as in *Warner.* What exactly about the merger would make it difficult to order an effective divestiture? The **FTC** does not say. Its argument, at bottom, is the equities always weigh in favor of a preliminary injunction. But that argument ignores the law. So, the balance of equities is a separate, independent reason the **FTC's** motion must be denied.

CONCLUSION

Microsoft's acquisition of **Activision** has been described as the largest in tech history. It deserves scrutiny. That scrutiny has paid off: **Microsoft** has committed in writing, in public, and in court to keep *Call of Duty* on PlayStation for 10 years on parity with Xbox. It made an agreement with Nintendo to bring *Call of Duty* to Switch. And it entered several agreements to for the first time bring **Activision's** content to several cloud gaming services.

This Court's responsibility in this case is narrow. It is to decide if, notwithstanding these current circumstances, the merger should be halted—perhaps even terminated—pending resolution of the **FTC** administrative action. For the reasons explained, the Court finds the **FTC** has not shown a likelihood it will prevail on its claim this particular vertical merger in this specific industry may substantially lessen competition. To the contrary, the record evidence points to more consumer access to *Call of Duty* and other **Activision** content. The motion for a preliminary injunction is therefore DENIED.

This Opinion constitutes the findings of fact and conclusions of law required by Federal Rule of Civil Procedure 52. Given the compressed time the Court had to issue a written opinion in light of the impending termination date, there will likely be errors in the citations. And, for the same reason, the Opinion does not address every argument the **FTC** makes in its 196-page post-trial submission, nor cite every piece of evidence supporting the Court's findings. Because the decision on the **FTC's** request for a preliminary injunction “effectively terminate[s] the litigation and constitute[s] a final order,” this case is DISMISSED. *See **FTC** v. Hackensack Meridian Health, Inc.*, 30 F.4th 160, 165 n.2 (3d Cir. 2022). The Court **MODIFIES** its temporary restraining order such that the temporary restraining order will **dissolve at 11:59 p.m. on July 14, 2023** unless the **FTC** obtains a stay pending appeal from the Ninth Circuit Court of Appeals.

This Opinion is filed under seal. At the same time it is filed, the Court will file a redacted version under seal. In an abundance of caution, it is overly redacted. The parties shall meet and confer with the non-parties, and on or before July 18, 2023, submit a new proposed redacted version of this Opinion.

***23 IT IS SO ORDERED.**

All Citations

--- F.Supp.3d ----, 2023 WL 4443412

Footnotes

1 Exhibit citations are to the exhibit number and the page number associated with the exhibit number. For hearing testimony, the Court has endeavored to include citations to the associated docket number. Other record citations are to material in the Electronic Case File ("ECF") with pinpoint citations to the ECF-generated page numbers at the top of the documents.

2 [footnote text missing]

3 Shortly after the **FTC** filed its administrative complaint, a group of *Call of Duty* players filed their own action in this Court to stop the merger pursuant to Clayton Act, Sections 7 and 16. *Demartini et al. v.* ***Microsoft*** *Corp.*, No. 22-08991-JSC. In that action, **Microsoft** stipulated on the record that the acquisition would not close before May 22, 2023. (Dkt. No. 193 at 87:2-12.)

4 "[A] dearth of authority that is unsurprising, considering that the Antitrust Division apparently has not tried a vertical merger case to decision in *four* decades!" *United States v. AT&T Inc.*, 310 F. Supp. 3d 161, 193–94 (D.D.C. 2018), *aff'd*, 916 F.3d 1029 (D.C. Cir. 2019) (emphasis in original).

5 The HMT is a common quantitative metric used by parties and courts to determine relevant markets. *See* U.S. Dep't of Justice & **FTC**, Horizontal Merger Guidelines ("2010 Merger Guidelines") § 4 (2010); *see also* *United States v. H & R Block, Inc.*, 833 F. Supp. 2d 36, 51 (D.D.C. 2011) ("An analytical method often used by courts to define a relevant market is to ask hypothetically whether it would be profitable to have a monopoly over a given set of substitutable products. If so, those products may constitute a relevant market."). Defendants insist the HMT does not apply to vertical mergers. The Court need not decide this issue as it accepts, without deciding, the **FTC's** definition of the relevant markets here.

6 Undaunted, Prof. Lee insists even the 2-3% share shift is consistent with his 5.5% estimate because *Call of Duty* has such high sales compared to other AAA titles, so *Call of Duty's* share shift will be higher. (Dkt. No.226-2, Lee Decl. at ¶¶ 32, 104; Dkt. No. 291-2, **FTC's** Findings and Conclusions at pp. 100-101 ¶ 499.) That circular assertion, however, relies upon his share model which, discussed next, is flawed.

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UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION

COMMISSIONERS: **Lina M. Khan, Chair**
Noah Joshua Phillips
Rebecca Kelly Slaughter
Christine S. Wilson

In the Matter of

Nvidia Corporation,

a corporation,

Softbank Group Corporation,

a corporation,

and

Arm, Ltd.,

a corporation.

Docket No. 9404

REDACTED-PUBLIC VERSION

COMPLAINT

Pursuant to the provisions of the Federal Trade Commission Act ("FTC Act"), and by virtue of the authority vested in it by the FTC Act, the Federal Trade Commission ("Commission"), having reason to believe that Respondents Nvidia Corporation ("Nvidia"), Softbank Group Corporation ("Softbank"), and Arm Ltd. ("Arm") have executed a merger agreement in violation of Section 5 of the FTC Act, 15 U.S.C. § 45, which if consummated would violate Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and Section 5 of the FTC Act, and it appearing to the Commission that a proceeding by it in respect thereof would be in the public interest, hereby issues its complaint pursuant to Section 5(b) of the FTC Act, 15 U.S.C. § 45(b), and Section 11(b) of the Clayton Act, 15 U.S.C. § 21(b), stating its charges as follows:

NATURE OF THE CASE

1. Nvidia is one of the world's largest and most valuable computing companies. Nvidia proposes to acquire Arm, the world's largest and most significant licensor of designs and architectures for computer processors, in a deal valued at more than $40 billion (the "Proposed Acquisition"). If consummated, the Proposed Acquisition would allow the combined firm to use its control of Arm to harm Nvidia's rivals in ways that substantially lessen competition—including innovation, price, and feature competition—in multiple markets.

2. Arm develops and licenses central processing unit ("CPU") designs and architectures ("Arm Processor Technology"). Arm Processor Technology consists of specific designs for CPUs that Arm develops and licenses to others and a CPU instruction set architecture that Arm licenses to others who want to develop their own specific CPU designs. As part of the Arm Processor Technology business, Arm also provides customers with corresponding services, support, and ancillary products. Through the combination of its advanced technology and neutral licensing business model, Arm has become a de facto industry standard for CPU processor technology contained in billions of computer chips worldwide. According to Nvidia's CEO, Arm is "the world's most popular computing platform."

3. Arm Processor Technology is at the foundation of many innovative products of our modern digital age, including nearly every smartphone on the market, advanced driver assistance features in recent and upcoming cars, web servers that can provide significantly better cost performance over the most comparable non-Arm servers, and many other examples. In these products, Arm Processor Technology is a critical input. The wide deployment of Arm's Processor Technology has fostered a vibrant ecosystem of software and hardware developers, software, and devices.

4. Arm does not make or sell computer chips ("chips") or chip-based devices. Rather, Arm licenses Arm Processor Technology, also referred to in the industry as CPU intellectual property or "IP," using an industry-described neutral, open licensing approach. Arm is often dubbed the "Switzerland" of the semiconductor industry for this approach. Arm partners with its licensees to promote and support Arm's technologies, even as those partners compete with each other to sell chips and devices relying on Arm Processor Technology in downstream markets (the "Downstream Markets"). Arm's partnerships with its licensees regularly result in Arm receiving sensitive business information from its licensees. The fact that Arm does not itself compete in the Downstream Markets gives its partners a high level of trust in Arm as a critical input supplier that will not exploit its control over those inputs to gain a competitive advantage against its partners.

5. Unlike Arm, Nvidia supplies and markets finished chips and devices. Nvidia is best known as the dominant supplier of standalone graphics processing units ("GPUs") for personal computers ("PCs") and datacenters, which are computing facilities with large numbers of server computers. GPUs are widely used for artificial intelligence ("AI") processing and graphics processing, among other computational tasks.

6. For years, Nvidia has licensed Arm's Processor Technology to create a wide range of computing products, many of which compete with products of other Arm licensees. For

example, Nvidia and its competitors alike use Arm Processor Technology to create chips for advanced driver assistance systems for passenger cars. Nvidia and other companies also develop additional categories of Arm-based products, including advanced networking products and datacenter CPUs, among other products. While Nvidia's designs for standalone GPUs do not incorporate Arm Processor Technology, Nvidia integrates or plans to integrate its GPU technology with Arm Processor Technology in certain products, such as its chips for advanced driver assistance systems for passenger cars.

7. The Proposed Acquisition will substantially lessen competition in multiple markets because it will create a combined firm that has both the ability and the incentive to use its control of Arm to diminish competition by undermining Nvidia's rivals.

8. Post-Acquisition, Nvidia will have the ability to disadvantage its rivals through its control of Arm through various mechanisms, including by manipulating levers such as Arm's pricing, the terms and timing of access to Arm's Processor Technology (including withholding or delaying access), Arm's technological developments and features, and Arm's provision of service and support, among other mechanisms.

9. Post-Acquisition, Nvidia will have strong incentives to harm its Arm-reliant rivals. In markets in which Nvidia competes using Arm Processor Technology, the profits on additional sales that Nvidia would earn as a chip supplier are generally higher than the profits that Arm would earn from licensing its Processor Technology to Nvidia's rivals. Here, this relationship gives Nvidia a strong economic incentive to preference winning business for its own downstream products over licensing Arm Processor Technology or providing the same level of support, access, and investment to its own rivals after the Proposed Acquisition.

10. In addition to the harm Nvidia can directly inflict on its rivals, aligning Arm with Nvidia will likely result in further harms due to a critical loss of trust in Arm by its own licensees, and overall investment and innovation in the Arm ecosystem will likely be reduced. Today, for example, Arm's licensees—including Nvidia's rivals—share competitively sensitive information with Arm. Recognizing that Nvidia would be able to misuse this information for Nvidia's own competitive purposes, Nvidia's rivals will be less likely to share competitively sensitive information with Arm if the Proposed Acquisition closes. Innovation and other procompetitive actions that otherwise would have occurred through the open sharing of information with Arm will be chilled.

11. The Proposed Acquisition also will likely further harm innovation because, today, Arm regularly receives innovative ideas from its licensees across the semiconductor industry and pursues new technological developments that it believes will yield the most benefit to its business. But Nvidia would be less likely to dedicate Arm's resources toward otherwise beneficial innovative developments of Arm Processor Technology that would harm Nvidia.

12. These effects are likely to be felt throughout the computing industry. Among the markets affected, the Proposed Acquisition is likely to substantially lessen competition in key emerging and quickly-developing markets for products used in datacenters, including for networking and central processing, and in advanced driver assistance systems that are increasingly used in the automotive industry.

JURISDICTION

13. Respondents Nvidia, Arm, and Softbank are each "corporations" as defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44, and in Section 1 of the Clayton Act, 15 U.S.C. § 12.

14. Respondents are engaged in activities in or affecting "commerce" as defined in Section 4 of the Federal Trade Commission Act, 15 U.S.C. § 44, and in Section 1 of the Clayton Act, 15 U.S.C. § 12.

15. The Proposed Acquisition constitutes a merger subject to Section 7 of the Clayton Act, 15 U.S.C. § 18.

RESPONDENTS AND THE PROPOSED ACQUISITION

16. Respondent Nvidia is a publicly-traded Delaware corporation, headquartered in Santa Clara, California, and founded in 1993. Its total revenues in the fiscal year ended January 31, 2021 were $16.68 billion. Nvidia develops and markets microprocessor products and associated software. Nvidia is the leading global supplier of standalone GPUs and has consistently maintained its position as the dominant supplier of such products. Nvidia also develops and markets chips, devices, and associated software for other applications, including advanced networking products, advanced driver assistance systems, datacenter CPUs, and other product lines.

17. Respondent Arm is a corporation, headquartered in Cambridge, United Kingdom, and founded in 1990. Arm's total revenues in 2020 were $1.86 billion. Arm is currently owned by SoftBank, which acquired Arm in 2016. Arm develops semiconductor processor technology, licenses it to chip designers, and provides related service and support. Arm describes itself as [redacted] As of January 2020, Arm had over [redacted] licensees.

18. Respondent Softbank is a corporation, headquartered in Tokyo, Japan, and established in 1986. Softbank owns Arm. Softbank operates as a strategic investment holding company, aiming to invest in "a diverse group of companies with outstanding technologies or business models in their respective fields." As of March 31, 2021, Softbank counted 335 subsidiaries and affiliates among its group companies. Softbank's net sales in fiscal year 2020 were 5,204.4 billion yen (approximately $47 billion). Softbank began exploring the sale of Arm in [redacted] In June 2020, Arm's CEO described the company in an email to a Softbank board member as [redacted]

19. Ultimately, Softbank and affiliated entities entered into a Share Purchase Agreement to sell Arm to Nvidia on September 13, 2020. The deal was valued at $40 billion at signing. Due to increases in the value of Nvidia's stock since then, it is now valued at over $50 billion.

20. Before the merging parties entered into the Share Purchase Agreement, the merging parties and industry analysts recognized that the Proposed Acquisition was likely to face significant antitrust scrutiny. In recognition of this problem, Nvidia agreed to pay Arm's owner, Softbank, a $1.25 billion fee if the transaction terminates after a failure to obtain antitrust approvals.

BACKGROUND

21. This case is about Nvidia's proposed takeover of Arm. Arm Processor Technology is incorporated in billions of chips and devices sold today—including products from Nvidia's competitors as well as Nvidia itself. If the Proposed Acquisition were allowed to proceed, Nvidia would gain control of Arm's Processor Technology, a critical input that currently enables these competitors to compete vigorously with Nvidia. Nvidia will have the ability and incentive to use its control of Arm's Processor Technology to undermine its competitors, reducing competition and ultimately resulting in reduced product quality, reduced innovation, higher prices, and less choice, harming the millions of Americans who benefit from products that incorporate Arm's Processor Technology.

I. Arm and Its Neutral Licensing Model

22. Arm licenses Arm Processor Technology to more than a thousand licensees. These range from innovative startups who have yet to make their first sale to large, established technology companies. Many of Arm's licensees, including Nvidia, are "fabless" semiconductor companies. This means that they design and market computer chips (or products containing chips) but outsource the physical manufacturing of these chips to specialized manufacturers.

23. Arm achieved its status as a foundational technology for so many innovative products because of its neutral licensing business model that fosters trust, collaboration, and engagement between Arm and its licensees. As Arm's longtime chief architect has explained,

24. Arm's licensing model is based on upfront license fees and royalties. Arm offers two basic categories of technology licenses: architectural licenses and implementation licenses. Architectural licenses grant holders the right to create their own Arm-based CPU designs using Arm's instruction set architecture ("ISA"). Implementation licenses grant holders the right to use Arm's own specific CPU designs in their products. Arm's business model is based on its current commercial incentives and has contributed substantially to the growth, innovation, and success of Arm and the Arm ecosystem.

25. Arm typically profits when its licensees sell more units. Thus, Arm has an incentive to expand the usage of Arm Processor Technology under its royalty-based model. Arm therefore devotes considerable effort to enabling its licensees to succeed. According to Arm's president,

26. Arm actively solicits input from its licensees for enhancing Arm's ISA and implementation designs. Arm also collaborates with licensees on the development of major features. Licensees regularly suggest new features to Arm, expecting that if Arm agrees to implement their suggestion, Arm will incorporate the feature in a manner that permits the new feature's proponent to benefit, while also generally making the improvement available to other licensees. This joint innovation and research and development benefits the computing industry and, ultimately, consumers.

27. Licensees routinely share confidential and commercially sensitive information with Arm when collaborating. Licensees share information such as strategic plans, project timelines and development schedules, manufacturing process plans, use cases, customer requirements, and product bugs or challenges. This type of information sharing depends on trust, enables licensees to bring better products to market faster, and is critical to Arm's success and history of innovation.

28. Arm also collaborates and works with licensees to develop, produce, troubleshoot, and implement the licensees' Arm-based products. For instance, Arm may advise licensees that a particular technical decision is unlikely to succeed, thereby steering the licensee away from a costly error. Arm also helps its licensees by explaining aspects of the Arm architecture and resolving technical difficulties.

29. In tandem with collaborating with licensees on product innovation and development, Arm also dedicates time, effort, and resources to promoting the adoption of Arm-based products in Downstream Markets that include multiple licensees' products. Arm interacts with its licensees' customers to understand their markets, explain Arm's capabilities and benefits, and help sell licensees' products. Arm's actions to promote its licensees' Arm-based products today involve supporting and promoting the products of multiple licensees who themselves are competitors.

II. <u>Computer Processors</u>

30. There are different types of computer processors. According to Nvidia, three of the most important are central processing units ("CPUs"), graphics processing units ("GPUs"), and data processing units ("DPUs"). Nvidia's CEO has described the CPU, GPU, and DPU as "the three most important," "central," "fundamental" technologies in a computer.

31. CPUs are processors that execute the primary computing instructions for electronic computing devices such as laptops, smartphones, datacenter servers, and chips supporting advanced driver assistance features in a passenger vehicle. When one or more CPUs are combined on a single chip with additional circuitry for performing other functions of a computer system, such as memory or co-processors, the resulting chip is sometimes termed a "system-on-a-chip" or "SoC." CPUs may consist of one or more CPU "cores," which are the individual processing units within a CPU chip. Multiple cores may be combined into one multi-core "CPU" chip or SoC. At times, however, the terms "cores" and "CPUs" are used interchangeably in the industry.

32. CPUs are based on an instruction set architecture ("ISA"). CPU ISAs include the Arm ISA, the x86 ISA, the RISC-V ISA, and the MIPS ISA, among others.

33. Software written for use by CPUs based on one ISA is generally not natively compatible with CPUs based on a different ISA. Each ISA has its own ecosystem of associated and natively compatible software, hardware, developers, and users. An ecosystem is generally more attractive if it has more software, hardware, developers, and users for any given computing market.

34. The x86 ISA has predominantly been deployed in CPUs for laptops, desktops, and servers. Intel created the x86 ISA, and Intel and AMD are the only two suppliers of x86 CPUs. Historically, the x86 ISA has not been licensable, and Intel and AMD have designed and marketed their own chips based on the x86 ISA. In 2021, Intel indicated that it planned to make some x86 technology available for license by customers of its chip manufacturing plants under certain circumstances. [REDACTED] involves limitations, including the apparent requirement to use Intel manufacturing plants and relying on a potentially competing chip supplier, Intel, for a critical input.

35. RISC-V is a free, open-source ISA that researchers at the University of California, Berkeley first developed. RISC-V was released to the public in 2011. Development of the RISC-V ISA is managed by a nonprofit foundation. The RISC-V ISA has predominantly been deployed in less complex applications, such as for low-end, embedded processors that do not run external software applications—for instance, processors found in relatively simple 'Internet of Things' devices like 'smart' doorbells or other 'smart' appliances. Many Arm licensees view the RISC-V technology and software ecosystem as inferior to Arm Processor Technology and the Arm ecosystem for many applications.

36. MIPS is an ISA that MIPS Computer Systems developed and that Wave Computing owns today. The MIPS architecture is declining in relevance and Wave Computing has announced that it will no longer develop MIPS in the future.

37. CPUs based on the Arm ISA are found in billions of chips worldwide, making Arm "the world's most popular computing platform" and [REDACTED] according to Nvidia. Arm-based CPUs, which are known in particular for their low power consumption, are found in the vast majority of smartphones, tablets, and other low-powered computing devices.

38. Arm-based CPUs also are increasingly found in laptop and desktop personal computers (PCs), and in datacenter servers. For example, in 2020, Apple began switching its entire line of Mac laptops and desktops from Intel x86 CPUs to an Arm-based SoC that Apple designed (called the "M1"). When Apple launched the M1, it emphasized its high performance and low power consumption, describing it as "the world's best CPU performance per watt," enabling significant computing performance increases "all while enabling battery life up to 2x longer than previous-generation Macs." Arm-based CPUs from chip suppliers such as MediaTek and Qualcomm are also deployed in laptops, and [REDACTED] Similarly, large cloud service providers, such as [REDACTED] are now deploying or planning to deploy Arm-based CPUs in datacenter servers. Because cloud datacenters often consume large amounts of electricity, the lower power consumption of Arm-based CPUs is seen as particularly attractive.

39. Most of the chip suppliers competing to supply SoCs for high-level automotive advanced driver assistance systems (ADAS) use Arm-based chip designs, including Nvidia. High-Level ADAS systems for passenger vehicles offer computer-assisted driving functions, such as automated lane changing, lane keeping, highway entrance and exit, and collision prevention, as discussed below.

40. Some computing devices also contain one or more GPUs to assist in certain tasks. As the name suggests, GPUs were originally developed to perform specific graphics tasks in applications such as video games. However, because GPUs excel more generally at parallel processing tasks, GPUs are now deployed in many other applications including in datacenters for accelerating tasks like machine learning algorithms (a type of artificial intelligence processing). Nvidia also integrates or plans to integrate its GPUs into other devices, such as its ADAS SoCs. GPUs do not run on their own without a host CPU. Nvidia anticipates GPUs to be central in "modern AI — the next era of computing — with the GPU acting as the brain of computers, robots and self-driving cars that can perceive and understand the world."

41. DPUs or DPU SmartNICs (also referred to as infrastructure processing units ("IPUs")) are an important emerging category of networking devices designed for datacenters and other networked environments. As Nvidia describes it, "The DPU places a 'computer in front of the computer' for each server, delivering separate, secure infrastructure provisioning that is isolated from the server's application domain." More specifically, a DPU is a network interface device that incorporates software-programmable CPU cores for offloading and isolating networking, security, virtualization, and other datacenter support tasks from the server's main (or "host") CPU. By isolating these tasks away from the host CPU, DPUs provide added security and free up the host CPU to focus on running users' desired applications, rather than datacenter infrastructure functions. Nvidia, in its internal documents, refers to DPUs as one of the "three pillars" or the "holy trinity" of computing, along with CPUs and GPUs, and Nvidia believes that eventually every server will incorporate a DPU. Nvidia's DPUs rely on Arm Processor Technology, as do those of most other competitors.

III. Nvidia and Its Arm-Based Products Today

42. Nvidia is one of the largest and most valuable chip suppliers in the world. Nvidia competes in a wide range of computing markets today and expects to compete in more markets in the future.

43. Nvidia has been an Arm licensee for many years. During that time, Nvidia has successfully developed and sold chips that incorporate Arm-based designs that Nvidia developed itself using an architectural license from Arm as well as chips that incorporate Arm-based designs that Nvidia obtained from Arm via implementation licenses.

44. Nvidia can already receive the benefits of Arm Processor Technology without acquiring Arm. Nvidia has invested in the Arm ecosystem over many years and continually developed innovative, cutting-edge products by combining Arm Processor Technology with Nvidia's proprietary technology. For example:

a. Nvidia's Orin product is an Arm-based SoC for High-Level advanced driver assistance systems (ADAS) that is "the new mega brain of the software-defined

vehicle," capable of "power[ing] all the intelligent computing functions inside vehicles."

b. Nvidia's Grace product is an Arm-based CPU that Nvidia views as the "basic building block of the modern data center." According to Nvidia, this product is capable of "deliver[ing] 10x the performance of today's fastest servers on the most complex AI and high performance computing workloads."

c. Nvidia's Bluefield-3 product is an Arm-based DPU SmartNIC that "delivers the most powerful software-defined networking, storage and cybersecurity acceleration capabilities available for data centers," with processing equivalent to "up to 300 CPU cores, [thereby] freeing up valuable CPU cycles to run business-critical applications."

d. Nvidia makes other Arm-based computing products, including chips for video gaming consoles, high-performance "Internet of Things" industrial devices, and more.

45. Nvidia committed to developing a wide variety of Arm-based products long before pursuing this Proposed Acquisition. On September 14, 2020, Nvidia's CEO told investors (in a public investor call announcing the Proposed Acquisition) that "last year"—before Softbank had even offered Arm for sale—Nvidia had already "decided [for datacenters] that we would adopt and support the Arm architecture for the full NVIDIA stack, and that was a giant commitment." "The day we decided to do that," he continued, "we realized this is going to be for as long as we shall live. And the reason for that is because once you start supporting the ecosystem, you can't back out."

IV. The Proposed Acquisition Will Result in an Anticompetitive Change in Incentives

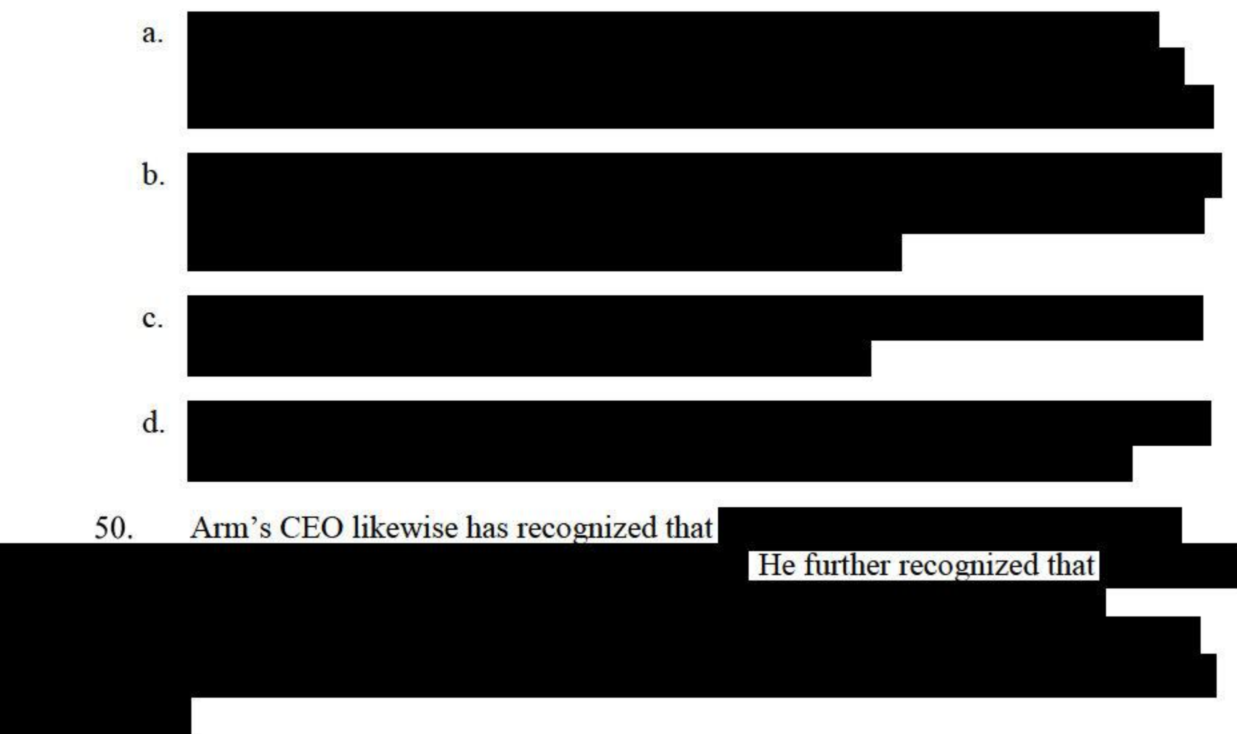
46. Prior to the Proposed Acquisition, Arm's incentive has been to expand broadly the use of Arm Processor Technology because Arm typically profits when its licensees sell more units. To that end, Arm partners with its licensees to develop competitive products. This collaboration includes development of major features of Arm Processor Technology, support for licensees' own efforts to innovate using Arm Processor Technology, and promotion (and other sales help) for its licensees as they compete to sell their products. In short, Arm's incentives as an independent firm cause it to encourage the success of Arm licensees in the Downstream Markets.

47. Nvidia's incentives are starkly different than Arm's. Nvidia competes to sell its products against many of Arm's other licensees. Nvidia makes profits when it makes a sale and loses profits when another Arm licensee makes a sale in its place.

48. After the Proposed Acquisition, the combined firm will not have Arm's same premerger incentive to enable its licensees' success in the Downstream Markets. Instead, the combined firm will have the incentive to engage in foreclosure strategies. Foreclosure strategies involve withholding a critical input from rivals, delaying or degrading access to the input (including delaying or degrading service and support), unfavorably changing the terms on which the input is made available to rivals, or otherwise using the critical input to raise their costs or

disadvantage them. In each relevant market at issue in this case, Nvidia already has a strategic imperative to win sales from its rivals, and Nvidia's profits on additional sales in the downstream market are likely to be larger than the profits from continuing to neutrally license Arm's Processor Technology or to provide the same level of support, access, and investment to licensees. Moreover, because of the evolving nature of computing markets, Nvidia's incentives to use Arm to harm its rivals are amplified by the benefits of preventing innovations in Arm Processor Technology that could lead to greater future competition against Nvidia, including competition with Nvidia's GPU business.

49. Arm employees recognize the problematic change in incentives that the Proposed Acquisition will cause. For example, in response to the Proposed Acquisition, Arm employees asked (or predicted licensees would ask) questions highlighting the basic conflicts of interest associated with Nvidia buying Arm, such as:



a.

b.

c.

d.

50. Arm's CEO likewise has recognized that He further recognized that

51. Nvidia insiders also recognized the anticompetitive change in incentives. For example, insiders asked:

a.

b.

c.

d.

e.

f.

52. Nvidia insiders also For example, a Bank of America Securities analyst noted "[a]ny potential deal could face intense and prolonged regulatory scrutiny given ARM's currently neutral position as a technology enabler for the entire semis industry including many of [Nvidia's] competitors." An analyst from another large investment firm wrote: "[T]here could be a myriad of conflict of interest issues whereby [Nvidia] could have access to competitor strategies/technologies in a variety of [Nvidia] markets, notably Auto and perhaps to an increasing extent, datacenter."

53. Post-Acquisition, the combined firm will also have the ability to harm Nvidia's Arm-reliant rivals. There are numerous full or partial foreclosure strategies that it can use to disadvantage its rivals—sometimes without the rival ever knowing the strategy was executed.

RELEVANT MARKETS AND ANTICOMPETITIVE EFFECTS

54. The Proposed Acquisition is likely to substantially lessen competition in multiple relevant antitrust markets, resulting in reduced innovation and more expensive or lower quality products.

55. The Proposed Acquisition will result in a combined firm with the ability and incentive to use foreclosure strategies involving a critical input to undermine its rivals in one or more relevant markets, and the Acquisition will not produce cognizable procompetitive effects.

56. The transaction is likely to substantially lessen competition in relevant antitrust markets for DPU SmartNICs, High-Level Automotive ADAS Central Compute SoCs, and Arm-Based Datacenter CPUs for Cloud Computing Service Providers.

57. In addition, the transaction is likely to harm competition by giving Nvidia access to the competitively sensitive information of Arm's licensees and by decreasing the incentive for Arm to pursue innovations in its Processor Technology that are perceived to conflict with Nvidia's business interests.

I. DPU SmartNICs are a Relevant Product Market

58. DPU SmartNICs are a relevant product market for evaluating the likely competitive effects of the Proposed Acquisition. The corresponding relevant geographic market is worldwide.

59. DPU SmartNICs are network interface devices that incorporate software-programmable CPU cores for offloading and isolating processing tasks related to networking, security, virtualization, and other datacenter support services from the server's main CPU (also called the "host" CPU). DPU SmartNICs increase server compute efficiency and security.

60. The DPU SmartNIC market is nascent but growing rapidly.

61. Nvidia is a significant, aggressive, and rapidly growing participant in this market with its Arm-based Bluefield product line.

62. Nvidia competes against several other companies currently vying to supply DPU SmartNIC solutions, including Pensando, [redacted] Xilinx, Broadcom, Marvell, and Intel. All of these suppliers use Arm-based designs for DPU SmartNIC products, including Intel, despite its unfettered access to the x86 architecture.

63. There are no commercially reasonable interchangeable substitutes for DPU SmartNICs. For example, Network Interface Controllers (NICs) that lack software-programmable CPU cores are not reasonably interchangeable substitutes. These products are part of a spectrum of network devices that range from "basic" NICs with no offload capabilities to more advanced NICs that also perform some networking acceleration processing tasks but lack software-programmable CPU cores. DPU SmartNICs have distinct features and functionality compared to such products. For instance, DPU SmartNICs allow valuable network security features by isolating computing workloads to protect applications running on the main server CPU from attacks. DPU SmartNICs also have distinct (and higher) prices compared to other NIC products.

II. The Proposed Acquisition is Likely to Harm Competition for DPU SmartNICs

64. The Proposed Acquisition would result in a combined firm with the ability and incentive to engage in foreclosure strategies targeting Nvidia's rivals in the market for DPU SmartNICs.

65. After the Proposed Acquisition, the combined firm would have the ability to harm Nvidia's rivals for DPU SmartNICs. Arm Processor Technology is a critical input for DPU SmartNIC products. Virtually all major DPU SmartNIC suppliers, including Nvidia and its direct competitors, incorporate Arm Processor Technology and rely on the Arm architecture as a critical component in their products. According to Nvidia's own definition, DPUs include "[a]n industry-standard, high-performance, software-programmable, multi-core CPU, ***typically based on the widely used Arm architecture***. . . ." (emphasis added).

66. DPU SmartNICs depend on Arm Processor Technology for multiple reasons, including, but not limited to:

a. Arm Processor Technology offers the ability to build high-performance CPU cores that are customizable and scalable.

b. Arm-based cores offer the necessary high performance without the cost of increased power usage. Efficient power usage is critical for DPU SmartNIC applications because these applications often have power constraints.

c. Significant investments have been made in Arm-compliant software, which would be costly and risky to reinvent. Arm has developed and delivered on a vibrant roadmap, which has sparked the development of a rich set of tools and applications comprising the Arm ecosystem.

d. Arm provides broad support for product development and improvement. Arm collaborates with and provides assistance to its partners on the development and deployment of DPU SmartNICs, including on design, features, production, testing, marketing, sales, and other activities.

67. There are no close substitutes for Arm Processor Technology for DPU SmartNICs. Even if there were a close alternative to Arm, switching, in and of itself, is a large cost to impose on Arm's customers. Such architectural switches are time and resource intensive and expensive.

68. Other CPU architectures are not close alternatives to Arm for DPU SmartNICs. MIPS is an ISA whose use in the computing industry has been declining and which lacks a vibrant ecosystem, especially compared to Arm. RISC-V lacks the performance, support, and advanced software ecosystem that characterize Arm. x86 CPUs are not well suited for DPU SmartNIC applications. Even Intel, the company that introduced and owns the x86 CPU ISA, is using Arm Processor Technology in certain Intel DPU SmartNIC products.

69. The Proposed Acquisition would give the combined firm the ability to use foreclosure strategies to disadvantage rivals in the market for DPU SmartNICs through a variety of mechanisms, including by controlling Arm's pricing, the terms and timing of access to its Processor Technology, its technological development and features, and its provision of services and support, among other mechanisms. Arm already has such abilities today, but it does not have the incentive to use such mechanisms to undermine Nvidia's rivals.

70. The Proposed Acquisition also would give the combined firm the incentive to use foreclosure strategies to harm Nvidia's DPU SmartNIC rivals. Nvidia already views winning the DPU SmartNIC market as a key strategic priority. As Nvidia's CEO put it in one email, [redacted]

71. Nvidia's dedication makes good sense. The DPU SmartNIC market is expected to grow rapidly into a multi-billion dollar market as the DPU SmartNIC takes its place as what Nvidia views as the third pillar in datacenters next to CPUs and GPUs.

72. Post-Acquisition, the combined firm would likely have a substantial incentive to engage in foreclosure strategies because profits from additional sales of DPU SmartNICs would

be higher than any foregone proceeds of licensing Arm Processor Technology to Nvidia's DPU SmartNIC rivals.

73. Current competition with Arm licensees has already forced Nvidia to lower its DPU SmartNIC prices and drives Nvidia to improve its product. [redacted] Internal business documents confirm Nvidia's Bluefield [redacted] Internal documents also show that [redacted]

74. The Proposed Acquisition will create a firm with the incentive and ability to harm rivals in the DPU SmartNIC market using foreclosure strategies. Consequently, the Proposed Acquisition is likely to result in a substantial lessening of competition in the DPU SmartNIC market leading to reduced innovation and more expensive or lower quality products.

75. DPU SmartNICs are a relevant antitrust market. The anticompetitive effects of the Proposed Acquisition alleged in the paragraphs above are also likely to occur in any relevant antitrust market that contains DPU SmartNICs.

III. High-Level Automotive Advanced Driver Assistance System Central Compute SoCs are a Relevant Product Market

76. High-Level Advanced Driver Assistance System ("ADAS") Central Compute SoCs ("High-Level ADAS market") are a relevant product market for evaluating the competitive effects of the Proposed Acquisition. The corresponding relevant geographic market is worldwide.

77. The level of automation in a given vehicle is generally categorized using an industry-wide standard set by SAE International, a professional standard setting organization in the mobility industry. SAE specifies six levels of automation for a given vehicle, ranging from L0 (minimal driver assistance such as lane departure and blind spot warnings) to L5 (a fully automated vehicle driving itself with no restrictions).

78. High-Level ADAS refers to SAE Levels 2 through Level 3, including the industry-recognized "L2+" or "advanced L2" level, which refers to the most advanced L2 capabilities. Within High-Level ADAS, L2+ and L3 are especially important for future competition, as automakers are now developing competing solutions incorporating L2+/L3 features for release in the coming years. High-Level ADAS provides advanced, computerized driving assistance along with various automated features that still require the driver to participate in driving the car (at L2) or to remain ready to take control of the car at a moment's notice (at L3). L2 ADAS typically incorporates features such as using automated lane centering, acceleration, and braking technologies simultaneously, while keeping a human driver in ultimate control of the vehicle. L3 ADAS typically incorporates L2 capabilities as well as higher-level functions capable of location-to-location routing monitored by the automated system when certain traffic conditions are met. While the car is in ultimate control at the L3 level, the driver must be ready to take back control on short notice. High-Level ADAS systems rely on SoCs that

provides the required performance, power efficiency, and programmability to enable the system to run features specific to High-Level ADAS. This complaint refers to SoCs that handle the compute workload necessary to enable the features of High-Level ADAS as "Central Compute SoCs." Market participants may refer to these high-performance ADAS SoCs by a number of names, including "central compute," "brain of the system," and "features" SoCs.

79. High-Level ADAS systems may also incorporate other chips besides the Central Compute SoC. Other chips within High-Level ADAS systems, such as those used for discrete sensor processing (e.g., the Front View Camera), generally do not have to be as high performing or as highly programmable as those used for Central Compute processing. As such, Central Compute SoCs have distinct competitive conditions compared to other chips used for other purposes within High-Level ADAS systems. Therefore, chips for other purposes within High-Level ADAS systems, such as discrete sensor processing, are not included in the relevant market.

80. The Entry-Level (L0/L1) ADAS category is generally characterized by more competitors, lower performance requirements, and lower prices. These Entry-Level systems generally require a lower level of chip performance than High-Level ADAS. Competition for supplying chips for Entry-Level ADAS systems is therefore not included in the relevant market.

81. The Fully Autonomous (L4/L5) category is at an earlier stage of development, and it is not yet technologically viable to implement Fully Autonomous private passenger vehicles on a commercial scale. The Fully Autonomous category is generally characterized by uncertain, though likely higher, performance requirements, additional competitors exclusively focused on developing Fully Autonomous solutions (rather than ADAS), and distinct opportunities wholly separate from High-Level ADAS opportunities. Additionally, the Fully Autonomous category is likely to initially focus on commercial vehicles, such as "robotaxis," rather than private passenger vehicles. In contrast, High-Level ADAS opportunities are generally for private passenger vehicles. Competition for supplying chips for Fully Autonomous (L4/L5) systems is therefore not included in the relevant market.

82. The market for High-Level ADAS Central Compute SoCs consists mainly of competitors selling Arm-based chips. Nvidia competes head-to-head against these other chipmakers who rely on Arm Processor Technology, including Qualcomm and Renesas. These companies all sell High-Level ADAS Central Compute SoCs to automakers or automotive suppliers. [redacted] The only significant chip supplier that Nvidia competes against for High-Level ADAS Central Compute SoCs that does not use Arm Processor Technology for the CPU function in its ADAS SoC is Mobileye, which uses chips based on the MIPS ISA.

IV. **The Proposed Acquisition is Likely to Harm Competition for High-Level Automotive Advanced Driver Assistance System Central Compute SoCs**

83. The Proposed Acquisition would result in a combined firm with the ability and incentive to engage in foreclosure strategies targeting Nvidia's rivals in the market for High-Level ADAS Central Compute SoCs.

84. After the Proposed Acquisition, the combined firm would have the ability to harm Nvidia's rivals for High-Level ADAS Central Compute SoCs. Arm Processor Technology is a critical input for most competitors in this market. Arm-based SoCs are well-suited to high-performance workloads, while consuming relatively little power, which is important given the limited available power in automobiles. In addition, Arm-based SoCs are highly programmable and support extensive third-party software ecosystems. These are features that many automakers require for their High-Level ADAS Central Compute SoCs.

85. Customers rely on Arm to such a degree that Arm considers itself the [redacted] for L2+ ADAS, and industry participants have acknowledged that the automotive industry is reliant on Arm for ADAS development. Arm has developed a product line of its Processor Technology targeted specifically for automotive end uses, including ADAS, under the "Automotive Enhanced" label, with the goal of [redacted]

86. Other ISAs are not close substitutes for Arm for automotive applications. x86-based CPUs are generally not used for High-Level ADAS. Not even Intel's automotive subsidiary, Mobileye, uses x86-based CPUs for High-Level ADAS. Nor does any significant competitor for High-Level ADAS today use RISC-V-based CPUs. RISC-V-based CPUs generally do not have the level of technical performance that High-Level ADAS system designers require, and, as a less mature architecture, they lack a comparable ecosystem and [redacted] Finally, MIPS, which Intel's Mobileye division uses, is not a viable future architecture for High-Level ADAS chips from other competitors. [redacted] And, the owner of MIPS is expected to phase out the MIPS architecture completely. Thus, while Mobileye currently competes for High Level ADAS Central Compute SoCs with a MIPS-based solution, MIPS is not a viable future architecture for High-Level ADAS for other competitors.

87. The Proposed Acquisition would give the combined firm the ability to foreclose, raise rivals' costs, or otherwise disadvantage rivals in the market for High-Level ADAS Central Compute SoCs through a variety of mechanisms, including by controlling Arm's Processor Technology with respect to its pricing, the terms and timing of access, technological development and features, and provision of services and support, among other mechanisms. Arm already has such abilities today, but it does not have the incentive to use such mechanisms to harm Nvidia's rivals.

88. The Proposed Acquisition would also give the combined firm the incentive to use foreclosure strategies to harm Nvidia's High-Level ADAS Central Compute SoC rivals.

89. Nvidia views winning this growing market as a strategic priority. The market is expected to grow exponentially over the next decade. Projections from a variety of sources, [redacted] indicate that the High-Level ADAS market, while currently small in terms of cars on the road, will grow significantly by 2030. Further, success in this market may provide an installed base that can facilitate successful chip vendors' transition into becoming preferred suppliers for Fully Autonomous vehicle solutions once those become technically feasible for deployment in passenger vehicles.

90. Post-Acquisition, the combined firm would likely have a substantial incentive to engage in foreclosure strategies because profits from additional sales of High-Level ADAS Central Compute SoCs would be higher than any foregone proceeds of licensing Arm Processor Technology to Nvidia's High-Level ADAS rivals.

91. Indeed, within the High-Level ADAS Central Compute SoC market, Nvidia has already competed closely against Arm-based competitors for valuable business opportunities at some of the world's largest automakers. Nvidia will have the incentive to harm Arm-reliant High-Level ADAS rivals as opposed to working collaboratively with them to help them succeed, as Arm does today, because Nvidia competes closely against these rivals for major business opportunities in High-Level ADAS.

92. The Proposed Acquisition will create a firm with the incentive and ability to harm rivals in the High-Level ADAS market using foreclosure strategies. Consequently, the Proposed Acquisition is likely to result in a substantial lessening of competition in the High-Level ADAS market leading to reduced innovation and more expensive or lower quality products.

93. High-Level ADAS Central Compute SoCs are a relevant antitrust market. However, the anticompetitive effects of the Proposed Acquisition alleged in the paragraphs above are likely to occur under any market definition that contains High-Level ADAS Central Compute SoCs.

V. Arm-Based Datacenter CPUs for Cloud Computing Service Providers is a Relevant Product Market

94. Arm-based datacenter CPUs for cloud computing service providers (including customized Arm CPU chips, or "ASICs") is a relevant product market for assessing the effects of the Proposed Transaction. The corresponding relevant geographic market is worldwide.

95. Datacenters consist of large numbers of server computers. Arm-based datacenter CPU technology is a new and emerging technology that leverages Arm's Processor Technology to meet the performance, power efficiency, and customizability needs of modern datacenters providing cloud computing services.

96. "Cloud computing" refers to the increasingly popular computing business model in which large datacenter operators provide computing services remotely and/or directly offer computing resources for rent, as well as provide other support services to customers who can then run applications, host websites, or perform other computing tasks on the leased remote servers—i.e., "the cloud." Cloud service providers ("CSPs") make their computers and associated services available for a price to many different types of computing customers in the general public, including individuals, businesses, and other organizations. CSPs are distinct from enterprise datacenter operators. Enterprise datacenters typically involve businesses, government agencies, or other organizations who operate their own on-premises server computers, while cloud computer service providers typically offer their customers off-premise, remote computing resources and services whose usage the customer can purchase incrementally. In general, cloud computing is growing, and datacenters overall are in transition from the

traditional computing model provided by on-premises enterprise servers to a model in which many computer services are cloud-based.

97. In the past, Arm-based CPUs were perceived as not having powerful enough performance to serve as datacenter server CPUs. As a result, datacenter CPUs have been historically dominated by x86-based products offered by Intel Corporation and AMD.

98. But after many years of research and development, innovation, and investment by Arm and Arm's licensees, datacenter CPUs using Arm Processor Technology have emerged as a distinct and highly attractive product offering capable of powering servers for CSPs. Arm-based CPUs now offer server-class compute performance, while also offering low costs per CPU core, high power efficiency, and a high degree of customizability. These attributes are particularly well-suited to the demands of cloud computing.

99. x86-based datacenter CPUs are more distant competitors to Arm-based datacenter CPUs and are thus properly excluded from the relevant product market. Arm-based datacenter CPUs are distinct from x86-based datacenter CPUs. Because the most fundamental "language" of the CPUs, the Instruction Set Architecture, differs between Arm-based CPUs and x86-based CPUs, these products cannot directly replace one another without significant costs, because they "speak" different "languages." As a result, they also have different associated ecosystems. Arm-based CPUs also typically have greater power efficiency and customizability. Power efficiency is an important product attribute for CSPs because electricity consumption is one of the largest costs for large datacenters and a better environmental footprint is also desirable. Greater customizability in chip design is also valuable to CSPs. Arm-based datacenters CPUs also have distinct prices, typically a significantly lower price per core than relevant x86-based CPUs.

100. Because there are numerous practical distinctions between the needs and capabilities of CSPs and operators of traditional on-premises datacenters at businesses or other organizations, the relevant product market is properly defined as Arm-based datacenter CPUs for CSPs. In particular, the large scale of CSPs' datacenters particularly benefit from the performance, power efficiency, and customizability advantages of Arm-based CPUs. And these CSPs' control over their large-scale datacenters and many computing workloads also makes them well-positioned to overcome the hurdle of ensuring that existing and new software is written to be both compatible and optimized for use with the Arm ISA. Further, Nvidia and other chip suppliers have the ability to easily identify CSP customers, and, through individual negotiations with CSPs, the combined firm would have the ability to engage in price discrimination for CSP customers.

101. Companies designing Arm-based datacenter CPUs today include Marvell, Ampere Computing, and Nvidia. Some CSPs, such as Amazon Web Services, also design their own Arm-based datacenter CPUs.

VI. The Proposed Acquisition Would Harm Competition for Arm-Based Datacenter CPUs for Cloud Computing Service Providers

102. The Proposed Acquisition would result in a combined firm with the ability and incentive to engage in foreclosure strategies targeting Nvidia's rivals in the market for Arm-based datacenter CPUs for CSPs.

103. The Proposed Acquisition would give the combined firm the ability to use foreclosure strategies to disadvantage rivals in the market for Arm-based datacenter CPUs for CSPs through a variety of mechanisms, including by controlling Arm's pricing, the terms and timing of access to its Arm Processor Technology, its technological development and features, and its provision of services and support, among other mechanisms. Arm already has such abilities today, but it does not have the incentive to use such mechanisms to undermine Nvidia's rivals.

104. Arm already has the ability to control whether licensees can produce Arm-based CPUs given its ownership of Arm Processor Technology. But, as with other markets, licensees rely on Arm as a trusted partner to develop and license Processor Technology on a neutral basis and to collaborate and provide support to bring new products to market. Indeed, Arm's support is so important that merely discontinuing it could result in licensees bringing inferior products to market, or licensees' products failing altogether.

105. The Proposed Acquisition would give the combined firm the incentive to use foreclosure strategies to impair the ability of Nvidia's rivals to compete in the market for Arm-based Datacenter CPUs for CSPs.

106. This market is a strategic priority for Nvidia. Nvidia views datacenters as core to its business and future, and espouses the importance of all three "pillars" of computing for datacenters—the CPU, the GPU, and DPU. In April 2021, Nvidia announced its plans to launch an Arm-based datacenter CPU product, called "Grace," which it has touted as the "basic building block of the modern datacenter." Nvidia also seeks to sell customized Arm-based datacenter CPUs to CSPs in the future. Nvidia's announcement of Grace came as multiple CSPs were deploying or planning to deploy Arm-based datacenter CPUs from other sources, [redacted]

107. Nvidia already can provide all three "pillars" of datacenter computing today because it has developed its own Arm-based datacenter CPU, "Grace," and it has the capability to design additional Arm-based CPUs, including custom and semi-custom designs, using its Arm license. Indeed, Nvidia told investors in 2021 that, "With Grace, NVIDIA has a 3-chip strategy with GPU, DPU and now CPU."

108. One of the rationales of the Proposed Acquisition was that the acquisition would [redacted] As Nvidia's CEO wrote to his Board of Directors regarding Arm, [redacted] Further emphasizing the relevance of Arm-based CPUs for CSPs to Nvidia's goals, Nvidia's CEO noted in a December 2020 email that [redacted] But as a

licensee of Arm, Nvidia can already supply such chips on equal footing with Arm's other licensees today.

109. Post-Acquisition, the combined firm would likely have a substantial incentive to engage in foreclosure strategies because profits from selling additional Arm-based CPUs to CSPs would be higher than any foregone proceeds of licensing Arm Processor Technology to Nvidia's CPU rivals.

110. The Proposed Acquisition will create a firm with the incentive and ability to harm rivals in the market for Arm-based datacenter CPUs used by CSPs through foreclosure strategies. Consequently, the Proposed Acquisition is likely to result in a substantial lessening of competition in the market for Arm-based datacenter CPUs for CSPs, leading to reduced innovation, and more expensive or lower quality products.

111. Arm-based datacenter CPUs for CSPs is a relevant antitrust market. The anticompetitive effects of the Proposed Acquisition alleged in the paragraphs above are likely to occur in any relevant antitrust market that contains Arm-based datacenter CPUs for CSPs.

VII. The Proposed Acquisition Will Harm Competition By Providing Nvidia with Access to Rivals' Competitively Sensitive Information

112. The Proposed Acquisition will result in an additional substantial lessening of competition due to a critical loss of trust in Arm and its ecosystem. Today, Arm's licensees—including Nvidia's rivals—routinely share competitively sensitive information with Arm. Licensees rely on Arm for support in developing, designing, testing, debugging, troubleshooting, maintaining, and improving their products. As part of this collaborative relationship, Nvidia's rivals routinely share a broad spectrum of competitively sensitive information with Arm. Indeed, effective collaboration between Arm and its licensees often depends on this information sharing because of the competitive importance of innovation, feature competition, and fast time-to-market in the technology industry. Arm licensees are willing to share their competitively sensitive information with Arm because Arm is a neutral partner, not a rival chipmaker.

113. Nvidia's ownership of Arm would fundamentally upend Arm's status as a neutral partner and, at the same time, enable Nvidia to obtain access to its rivals' competitively sensitive information. With the benefit of its rivals' secrets, Nvidia could adjust its activities to undermine competition and harm customers. Recognizing that Nvidia would be able to misuse this otherwise unobtainable information, Nvidia's rivals will likely curtail their highly productive information sharing with Arm and otherwise refrain from making the same procompetitive contributions that they would have absent Nvidia's access to their information. Nvidia's potential misuse of competitively sensitive information and the related chilling effect on collaboration among Arm and its licensees is a further anticompetitive effect of the Proposed Acquisition, and is likely to result in reduced innovation, and more expensive or lower quality products regardless of whether Arm engages in foreclosure strategies.

VIII. The Proposed Acquisition Will Further Harm Innovation By Skewing the Path of Arm Processor Technology Development

114. In addition to the harms to innovation that will result from the foreclosure strategies and the access to competitively sensitive information described above, the Proposed Acquisition is likely to lead to an additional substantial lessening of competition by eliminating innovations that Arm would have pursued but for a conflict with Nvidia's interests.

115. Today, Arm develops its Processor Technology based on input from its licensees and its analysis of the marketplace. Its roadmap for development thus reflects the input of the Arm ecosystem. Absent the transaction, innovation will continue in this direction.

116. But because the transaction would put Nvidia in charge of Arm's Processor Technology roadmap and future development, the merged firm would have less incentive to develop or enable otherwise beneficial new features or innovations if Nvidia determines they are likely to harm Nvidia. The innovation interests of Nvidia are not synonymous with the Arm ecosystem, but the transaction will inevitably skew innovation in the direction of Nvidia's interests. As one Arm executive observed about Nvidia's proposed takeover of Arm,

117. Nvidia would have the ability and incentive to ensure that Arm does not develop features or innovations that could threaten its downstream businesses, including its GPU business. For example, in some contexts, CPUs and GPUs compete with each other as alternative processors for handling evolving computing workloads, and Nvidia, for instance, actively markets its GPUs for AI inferencing workloads, which some CPUs, including Arm-based CPUs, also perform. In recent years, Arm expended substantial efforts to add certain built-in AI processing functionality directly into its CPU technology. The development of on-chip AI functions and innovations for CPUs and SoCs that are not tied to Nvidia's proprietary hardware or software is not likely to be in Nvidia's interest.

118. Consequently, innovation is likely to be harmed since Nvidia is unlikely to undertake or permit substantial efforts at attempting CPU innovations that could threaten demand for Nvidia's chips, including GPUs. Post-Acquisition, Nvidia would have the incentive to channel Arm's innovation activities in directions that ensure Arm's CPU technology does not pose any threats to its own chip businesses, including its GPU-centric computing business.

ABSENCE OF ADDITIONAL FACTORS

119. Respondents cannot demonstrate that entry or expansion of products in the Relevant Markets that do not incorporate Arm Processor Technology would be timely, likely, or sufficient to reverse the anticompetitive effects of the Proposed Acquisition.

120. Respondents cannot demonstrate that the Proposed Acquisition would likely generate verifiable, cognizable, merger-specific efficiencies that would reverse the likely competitive harm from the Proposed Acquisition. Thus, regardless

of the Proposed Acquisition, Nvidia has and will continue to have access to all Arm Processor Technology, and it can continue to innovate and develop Arm-based products, as it was already planning to do, and as many other companies, including Nvidia's competitors, also do. Indeed, as one Arm executive observed, in response to a report about the potential for the Proposed Acquisition by Nvidia,

VIOLATION

COUNT I – ILLEGAL ACQUISITION

121. The allegations above in paragraphs 1 to 120 are incorporated by reference as though fully set forth.

122. The Proposed Acquisition, if consummated, would be likely to lessen competition substantially in interstate trade and commerce in the Relevant Markets throughout the country. If the Proposed Acquisition were to proceed, it would result in substantial harm to competition, including as a result of the combined firm's ability and incentive to disadvantage rival suppliers of downstream products in the Relevant Markets, the chilling effect on innovation induced by the combined firm's access to its rivals' competitively sensitive information supplied to Arm, and the combined firm's ability and incentive to stifle innovations that are unfriendly to its business interests.

123. The Proposed Acquisition violates Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18 and is an unfair method of competition that violates Section 5 of the FTC Act, as amended, 15 U.S.C. § 45.

NOTICE

Notice is hereby given to the Respondents that the ninth day of August, 2022, at 10:00 a.m., is hereby fixed as the time, and the Federal Trade Commission offices at 600 Pennsylvania Avenue, N.W., Room 532, Washington, D.C. 20580, as the place, when and where an evidentiary hearing will be had before an Administrative Law Judge of the Federal Trade Commission, on the charges set forth in this complaint, at which time and place you will have the right under the Federal Trade Commission Act and the Clayton Act to appear and show cause why an order should not be entered requiring you to cease and desist from the violations of law charged in the complaint.

You are notified that the opportunity is afforded you to file with the Commission an answer to this complaint on or before the fourteenth (14th) day after service of it upon you. An answer in which the allegations of the complaint are contested shall contain a concise statement of the facts constituting each ground of defense; and specific admission, denial, or explanation of each fact alleged in the complaint or, if you are without knowledge thereof, a statement to that effect. Allegations of the complaint not thus answered shall be deemed to have been admitted.

If you elect not to contest the allegations of fact set forth in the complaint, the answer shall consist of a statement that you admit all of the material facts to be true. Such an answer shall constitute a waiver of hearings as to the facts alleged in the complaint and, together with the complaint, will provide a record basis on which the Commission shall issue a final decision containing appropriate findings and conclusions and a final order disposing of the proceeding. In such answer, you may, however, reserve the right to submit proposed findings and conclusions under Rule 3.46 of the Commission's Rules of Practice for Adjudicative Proceedings.

Failure to file an answer within the time above provided shall be deemed to constitute a waiver of your right to appear and to contest the allegations of the complaint and shall authorize the Commission, without further notice to you, to find the facts to be as alleged in the complaint and to enter a final decision containing appropriate findings and conclusions, and a final order disposing of the proceeding.

The Administrative Law Judge shall hold a prehearing scheduling conference not later than ten (10) days after the Respondents file their answers. Unless otherwise directed by the Administrative Law Judge, the scheduling conference and further proceedings will take place at the Federal Trade Commission, 600 Pennsylvania Avenue, N.W., Room 532, Washington, D.C. 20580. Rule 3.21(a) requires a meeting of the parties' counsel as early as practicable before the pre-hearing scheduling conference (but in any event no later than five (5) days after the Respondents file their answers). Rule 3.31(b) obligates counsel for each party, within five (5) days of receiving the Respondents' answers, to make certain initial disclosures without awaiting a discovery request.

NOTICE OF CONTEMPLATED RELIEF

Should the Commission conclude from the record developed in any adjudicative proceedings in this matter that the Acquisition challenged in this proceeding violates Section 5 of the Federal Trade Commission Act, as amended, and/or Section 7 of the Clayton Act, as amended, the Commission may order such relief against Respondents as is supported by the record and is necessary and appropriate, including, but not limited to:

1. A prohibition against any transaction between Nvidia and Arm that combines their businesses, except as may be approved by the Commission.

2. If the Acquisition is consummated, divestiture or reconstitution of all associated and necessary assets, in a manner that restores two or more distinct and separate, businesses, with the ability to offer such products and services as Nvidia and Arm were offering and planning to offer prior to the Acquisition.

3. A requirement that, for a period of time, Nvidia and Arm provide prior notice to the Commission of acquisitions, mergers, consolidations, or any other combinations of their businesses with any other company.

4. A requirement to file periodic compliance reports with the Commission.

5. Requiring that Respondents' compliance with the order may be monitored at Respondents' expense by an independent monitor, for a term to be determined by the Commission.

6. Any other relief appropriate to correct or remedy the anticompetitive effects of the Acquisition or to restore Arm as an independent business.

IN WITNESS WHEREOF, the Federal Trade Commission has caused this complaint to be signed by its Secretary and its official seal to be hereto affixed, at Washington, D.C., this second day of December, 2021.

By the Commission.

April J. Tabor
Secretary

SEAL: