

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF VIRGINIA  
ALEXANDRIA DIVISION**

UNITED STATES, *et al.*,

*Plaintiffs,*

v.

GOOGLE LLC,

*Defendant.*

No. 1:23-cv-00108-LMB-JFA

**GOOGLE LLC'S PROPOSED CONCLUSIONS OF LAW**

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## PROPOSED CONCLUSIONS OF LAW

### I. Introduction

1. The antitrust laws “were enacted for the protection of competition, not competitors.” *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488 (1977).<sup>1</sup> In the display advertising market—even in the words of Google’s rivals—competition remains “intense.”

2. The results of that competition speak for themselves. During the last two decades, spending on display advertising has grown eighteen-fold, while Google’s share of the market has significantly diminished. Today, consumers on both sides of this marketplace are seeing greater value from ad tech tools than ever before. Publishers have seen a steady increase in monthly revenue, advertisers have seen a steady decrease in costs, and users are increasingly likely to click through on the advertisements they view.

3. In order to maintain their Sherman Act claim in the face of trial evidence that showed fierce competition, increased marketwide output, decreased consumer costs, and 16 years of investment and innovation by Google and its numerous rivals, Plaintiffs must ask this Court to ignore controlling antitrust precedents, including longstanding Supreme Court law. When that law is applied, all of Plaintiffs’ claims fail.

4. First, markets. Plaintiffs bear the burden of proving their asserted markets because “without a definition of the market there is no way to measure the defendant’s ability to lessen or destroy competition.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 543 (2018). Here, Plaintiffs set out to prove three markets for separate tools to transact what Plaintiffs call “open-web display

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<sup>1</sup> With respect to quoted material, unless otherwise indicated, all brackets, ellipses, footnote call numbers, internal quotations, and citations have been omitted for readability. All emphasis is added unless otherwise indicated.

advertising.” The problem is that each of the tools Plaintiffs focus on is capable of facilitating just part of an overall two-sided transaction.

5. In *Ohio v. Amex*, the Supreme Court explained that the hallmark of a market for a two-sided transaction platform is that the product “cannot make a sale to one side of the platform without simultaneously making a sale to the other.” 585 U.S. 529, 535 (2018). That is precisely the case here. No tool can complete a sale without willing buyers (advertisers) and sellers (publishers) on both sides of the market. Recognizing this market for what it actually is proves fatal to Plaintiffs’ case because Google’s market share in a market for transactions to match display advertising has never been higher than 46% (and has fallen to 25% in 2022). *Kolon Indus. Inc. v. E.I. du Pont de Nemours & Co.*, 748 F.3d 160, 174 (4th Cir. 2014) (“The Supreme Court has never found a party with less than 75% market share to have monopoly power.”).

6. Plaintiffs instead attempt to “gerrymander [their] way to an antitrust victory without due regard for market realities.” *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016). But Plaintiffs’ evidence falls short of their burden.

7. The key question for market definition is what products are viewed as “reasonably interchangeable” by market participants. *Satellite Television & Associated Resources, Inc. v. Cont’l Cablevision of Va.*, 714 F.2d 351, 356 (4th Cir. 1983). Plaintiffs built an entire case on the idea that market participants were selecting tools based on their ability specifically to transact “open-web display advertising.” Yet all ad tech tools transact across multiple formats and channels, Plaintiffs’ experts acknowledge the markets were constructed for litigation, and industry participants compete based on their tools’ multifunctional abilities. There is extensive substitution within and without Plaintiffs’ purported markets. And the industry is only moving further away

from these tools through innovations like header bidding, supply path optimization, in-house offerings, and AI-based technologies.

8. Accounting for all of the tools that place competitive pressures on Google, or even a handful of substitutes missing from Plaintiffs' purported markets, it becomes evident that Google lacks "the possession of monopoly power in the relevant market" required to maintain a monopolization claim. *United States v. Grinnell Corp.*, 384 U.S. 563, 570 (1966). Google's prices are in line with or lower than competitors, output is growing (for Google and rivals, though Google's share of the market is declining), and Google's market share is lower than 50%—well below the 75% the Supreme Court has required for a finding of monopoly power. In short, none of the direct or circumstantial indicia of monopoly power are present.

9. Plaintiffs' claims fare no better on conduct. Over the past two decades, Google has introduced thousands of innovations and features to better serve its advertiser and publisher customers and compete against rivals. Out of those, Plaintiffs focus on five innovations or features (two of which are no longer in effect) that they contend made it harder for third-party tools to interoperate with Google's. This argument runs headlong into controlling Supreme Court precedent affirming the "long recognized right of a trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal." *Verizon Commc'ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004); *accord Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc.*, 555 U.S. 438, 448 (2009) ("Businesses are free to choose the parties with whom they will deal, as well as the prices, terms, and conditions of that dealing.").

10. Though a firm may lawfully "den[y] interconnection services to rivals in order to limit entry," *Verizon Commc'ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407-08

(2004), witness after witness (both Google employees and rivals) testified about the myriad ways in which Google has actually facilitated interconnection with third-party tools. What remains is Plaintiffs' objection that Google has not enabled rival publisher ad servers to put real-time bid amount information from advertisers buying through Google Ads—one of Google's two buying tools—in simultaneous competition with real-time bids from non-Google demand sources.

11. The witnesses Plaintiffs put forward argue that this is an acceptable demand because the real-time bids of Google's customers facilitated by Google's technology should be treated as "community property." But that is anathema to the Sherman Act, which protects a firm's ability to "establish[] an infrastructure that renders them uniquely suited to serve their customers." *Verizon Commc'ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004). Requiring otherwise dampens the incentives to "invest in those economically beneficial facilities" and asks courts "to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill suited." *Id.* at 407-08; *see also Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064, 1073 (10th Cir. 2013) (Gorsuch, J.) ("Forcing firms to help one another would also risk reducing the incentive both sides have to innovate, invest, and expand.").

12. Finally, even if Plaintiffs' claims were not entirely foreclosed by the Supreme Court's refusal-to-deal rulings, they fail to satisfy the well-settled standards for Section 2 claims because they lack anticompetitive effect and are each animated by a "valid business reason or concern for efficiency." *Oksanen v. Page Memorial Hosp.*, 945 F.2d 696, 710 (4th Cir. 1991). Each of the challenged acts may not submit to rivals on the terms and conditions of their choosing, but they were designed to serve Google's customers and ensure that Google was able to deliver a high-quality, secure, and reliable product. In particular, they promoted the virtues of an integrated ad tech offering that many of Google's rivals have also built. And (as noted above), the results in



the marketplace for customers and rivals alike demonstrate extraordinary growth. Plaintiffs would have this Court bring to a halt this long track record of innovation and growth in favor of the “uncertain virtue of forced sharing.” *Trinko*, 540 U.S. at 408. This is at odds with antitrust law, and will ultimately harm advertisers, publishers, and users in the years to come.

## II. Overview of Plaintiffs’ Claims and Theories of Liability

13. Plaintiffs’ First Amended Complaint raises claims under the Sherman Act, ECF 120 at ¶¶ 310–339, which can be grouped into the following categories:

- (1) Unlawful monopolization in violation of Section 2:
  - Count I: Unlawful monopolization of the “publisher ad server market,” *infra* § IV.B, § IV.E;
  - Count II: Unlawful monopolization of the “ad exchange market,” *infra* § IV.B, § IV.E or, in the alternative, attempted monopolization of the “ad exchange market,” *infra* IV.D; and
  - Count III: Unlawful monopolization of the “advertiser ad network market,” *infra* § IV.B, § IV.E.
- (2) Count IV: Unlawful tying of AdX and DFP in violation of Section 1 and 2, *infra* § IV.C.

14. Plaintiff United States also sought monetary damages, ECF 120 at ¶¶ 340–341 (Count V), which this Court dismissed as moot after Google tendered, without admitting liability, to the United States the full monetary relief that it sought on this count. ECF 749.

15. The elements of Plaintiffs’ claims are as follows:

16. Monopolization: A plaintiff pursuing a Section 2 monopolization claim must prove: “(1) the possession of monopoly power in the relevant market and (2) the willful acquisition

or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.” *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966); accord *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004); *E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 441 (4th Cir. 2011).

17. “The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system.” *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004); see also *Pac. Bell Tel. Co. v. linkLine Commc’ns, Inc.*, 555 U.S. 438, 454–55 (2009) (same); *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945) (“The successful competitor, having been urged to compete, must not be turned upon when he wins”). “The opportunity to charge monopoly prices—at least for a short period—is what attracts ‘business acumen’ in the first place; it induces risk that produces innovation and economic growth.” *Trinko*, 540 U.S. at 407; see also *Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 111 F.4th 337, 353 (4th Cir. 2024) (“A monopolist does not violate § 2 by offering a superior product, service, or lower prices” or “even if it attracts customers by a subpar or overly expensive product, as ‘business acumen’ . . . could explain such fortune”).

18. Specific to Section 2 cases, the Supreme Court has stated that “under the best of circumstances, applying the requirements of § 2 can be difficult because the means of illicit exclusion, like the means of legitimate competition, are myriad. Mistaken inferences and the resulting false condemnations ‘are especially costly, because they chill the very conduct the antitrust laws are designed to protect.’” *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 414 (2004) (quoting *Matsushita Elec. Industrial Co. v. Zenith Radio Corp.*,

475 U.S. 574, 594 (1986)). The Court also warned: “The cost of false positives counsels against an undue expansion of § 2 liability.” *Id.*; see also *FTC v. Qualcomm Inc.*, 969 F.3d 974 (9th Cir. 2020) (“‘Antitrust economists and in turn lawyers and judges tend to treat novel products or business practices as anticompetitive’ and ‘are likely to decide cases wrongly in rapidly changing dynamic markets.’” (quoting R. Tennis & A. Schwab, *Business Model Innovation and Antitrust Law*, 29 Yale J. Reg. 307, 3129 (2012))).

19. As to the second element—willful acquisition or maintenance of monopoly power—the Fourth Circuit requires a plaintiff to show that the factfinder “‘could find no valid business reason or concern for efficiency in the [alleged monopolist’s] choice.’” *Oksanen v. Page Mem’l Hosp.*, 945 F.2d 696, 710 (4th Cir. 1991) (en banc) (quoting *White v. Rockingham Radiologists, Ltd.*, 820 F.2d 98, 105 (4th Cir. 1987)); see also *The Imaging Ctr., Inc. v. W. Md. Health Sys., Inc.*, 2004 WL 3168776, at \*5–\*6 (D. Md. Aug. 10, 2004), *aff’d sub nom. Imaging Ctr., Inc. v. W. Md. Health Sys., Inc.*, 158 F. App’x 413 (4th Cir. 2005) (to prove a monopolization or attempted monopolization claim, plaintiff must show “the lack of a legitimate business justification”); *Berlyn Inc. v. The Gazette Newspapers Inc.*, 223 F. Supp.2d 718, 734 (D. Md. 2002), *aff’d* 73 F. App’x 576, 582–84 (4th Cir. 2003) (same); *Thompson Everett, Inc. v. Natl. Cable Advert., L.P.*, 850 F. Supp. 470, 482 n.12 (E.D. Va. 1994), *aff’d*, 57 F.3d 1317 (4th Cir. 1995) (same).

20. Although Plaintiffs ask this Court to weigh procompetitive justifications against anticompetitive harms pursuant to *United States v. Microsoft*, 253 F.3d 34, 59 (D.C. Cir. 2001), the Fourth Circuit has never endorsed such a balancing test. *Imaging Ctr., Inc. v. W. Maryland Health Sys., Inc.*, 158 F. App’x 413, 420 (4th Cir. 2005) (affirming judgment in favor of defendants on § 1 and 2 claims where they had “legitimate business justifications” without resorting to any

balancing). Further, the leading antitrust treatise has advised against it. 6C Philip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 658f (4th ed. 2020 supp.) (“Once a proffered business purpose has been accepted as asserted in good faith and not as pretext, the defense does not require “balancing” of “social gains against competitive harms”); *see also Behrend v. Comcast Corp.*, 2012 WL 1231794, at \*19 n.31 (E.D. Pa. Apr. 12, 2012) (noting that multiple circuits have remained silent on whether to adopt *Microsoft*’s balancing framework and declined to apply it).

21. Attempted monopolization: A plaintiff pursuing a Section 2 claim for attempted monopolization must show: “(1) a specific intent to monopolize a relevant market, (2) predatory or anticompetitive acts, and (3) a dangerous probability of successful monopolization.” *Kolon Indus. Inc. v. E.I. du Pont de Nemours & Co.*, 748 F.3d 160, 177 (4th Cir. 2014) (citing *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993)).

22. Both monopolization and attempted monopolization claims require “an element of anticompetitive conduct.” *Verizon Commc'ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004); *Imaging Ctr., Inc. v. W. Md. Health Sys., Inc.*, 158 F. App’x 413, 421 (4th Cir. 2005) (“Attempted monopolization explicitly requires predatory or anticompetitive conduct, and monopolization has been interpreted to require the same”). In assessing whether conduct is anticompetitive, the Supreme Court has held that “as a general matter, the Sherman Act ‘does not restrict the long recognized right of [a] trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal.’” *Trinko*, 540 U.S. at 408 (quoting *United States v. Colgate & Co.*, 250 U.S. 300, 307, (1919)). There are “few existing exceptions from the proposition that there is no duty to aid competitors.” *Id.* at 411.

23. Tying: The elements of a tying claim are: “(1) the existence of two separate products (2) an agreement conditioning purchase of the tying product upon purchase of the tied product (or at least upon an agreement not to purchase the tied product from another party), (3) the seller’s possession of sufficient economic power in the tying product market to restrain competition in the tied product market and (4) a not insubstantial impact on interstate commerce.” *Serv. & Training, Inc. v. Data Gen. Corp.*, 963 F.2d 680, 683 (4th Cir. 1992); accord *Jefferson Par. Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 10-15 (1984).

24. Plaintiffs do not argue that the alleged tie in this case must be analyzed under the *per se* framework. Accordingly, the rule of reason applies. The principal distinction between the two is that, under the rule of reason, if a plaintiff establishes the element of an unlawful tie, the burden shifts to the defendant “to show a procompetitive rationale for the restraint.” *FTC v. Qualcomm Inc.*, 969 F.3d 974, 991 (9th Cir. 2020) (quoting *Ohio v. Am. Express Co.*, 585 U.S. 529, 541 (2018)). If the defendant makes that showing, the burden shifts back once again to the plaintiff, who must “show that an alternative is substantially less restrictive and is virtually as effective in serving the legitimate objective without significantly increased cost.” *County of Tuolumne v. Sonora Community Hosp.*, 236 F.3d at 1148, 1159.

### **III. Plaintiffs Have Failed to Meet Their Burden of Establishing Relevant Product and Geographic Markets.**

25. “Proof of a relevant market is a threshold” requirement for each of Plaintiffs’ claims. *Consul, Ltd. v. Transco Energy Co.*, 805 F.2d 490, 493 (4th Cir. 1986). “Without a definition of the market there is no way to measure the defendant’s ability to lessen or destroy competition.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 543 (2018).

26. In an antitrust case, the relevant market must be defined by “commercial realities.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 544 (2018). But Plaintiffs’ alleged product markets—

which their expert says were “delineated for this case,” FOF ¶ 398—bear no resemblance to the commercial realities of how publishers and advertisers transact to fill digital ad space. As witness after witness testified, there are numerous tools that can be mixed and matched (or eliminated altogether) to facilitate these transactions yet Plaintiffs focus only on three tools: publisher ad servers, ad exchanges, and what they dub “advertiser ad networks.” Then, they artificially limit their markets only to tools that facilitate “indirect open-web display advertising” transactions, notwithstanding that there is no such thing as a tool that only facilitates what Plaintiffs call “open web display advertising.” The result is a view of the digital advertising ecosystem that manages to exclude some of the largest technology companies in the world— Amazon, Microsoft, Meta, and TikTok—who are competing for digital advertising dollars.

27. The Fourth Circuit has warned against markets that are gerrymandered to support a plaintiff’s case. *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016). Yet that is precisely what Plaintiffs offer here with markets unmoored from the facts about how publishers and advertisers do business and the law about how to soundly define the boundaries of a market. For example, if display ads and related ad tech on social media and the open-web do not compete, that would support a conclusion that Meta and Google could merge their respective display ad businesses.

**A. General Principles**

28. A relevant market is the “area of effective competition.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 543 (2018); *Satellite Television & Associated Resources, Inc. v. Cont’l Cablevision of Va.*, 714 F.2d 351, 357 (4th Cir. 1983).

29. Narrowly drawn markets that do not account for the area of effective competition may threaten antitrust enforcement. A market that is drawn “without sufficient breadth to include the competing products” would mean that a merger could be wrongly approved by failing “to

recognize competition where, in fact, competition exists.” *Brown Shoe Co. v. United States*, 370 U.S. 294, 326 (1962). For example, if display ads and related ad tech on social media and the open-web do not compete, that would support a conclusion that Meta and Google could merge their respective display ads businesses.

30. “The proper market definition . . . can be determined only after a factual inquiry into the commercial realities faced by consumers.” *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 482 (1992); *see also Oksanen v. Page Mem’l Hosp.*, 945 F.2d 696, 709 (4th Cir. 1991) (it is a “fundamental tenet of antitrust law that the relevant market definition must encompass the realities of competition”). A plaintiff cannot be permitted to “gerrymander its way to an antitrust victory without due regard for market realities.” *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016).

31. A relevant market “has two components—the relevant product market and the relevant geographic market.” *E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 441 (4th Cir. 2011); *Am. Online, Inc. v. GreatDeals.Net*, 49 F. Supp. 2d 851, 857 (E.D. Va. 1999).

32. “The plaintiff in an antitrust case bears the burden of proof on the issue of the relevant product and geographic markets.” *Satellite Television & Associated Resources, Inc. v. Cont’l Cablevision of Va., Inc.*, 714 F.2d 351, 355 (4th Cir. 1983); *see also Belmora LLC v. Bayer Consumer Care AG*, 987 F.3d 284, 297 (4th Cir. 2021). The court is “not required to accept uncritically” the market proffered by the Plaintiffs. *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016). The Fourth Circuit has rejected market definitions that are an “exercise in precise line-drawing” that “suits the needs of plaintiffs” by magnifying the appearance of market power of the defendant. *Id.*

33. A relevant product market “is composed of products that have reasonable interchangeability for the purposes for which they are produced.” *United States v. E.I. du Pont de Nemours and Co.*, 351 U.S. 377, 404 (1956); accord *Berlyn Inc. v. The Gazette Newspapers Inc.*, 73 F. App’x 576, 582 (4th Cir. 2003). Reasonable interchangeability is measured by the “extent to which consumers will change their consumption of one product in response to a price change in another, *i.e.* the cross-elasticity of demand.” *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 469 (1992); accord *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016) (same); *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962) (“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.”). Cross-elasticity of demand “is the ultimate determinative factor for relevant product market definition.” *In re Zetia (Ezetimibe) Antitrust Litig.*, 587 F. Supp. 3d 356, 363 (E.D. Va. 2022).

34. Where there is “no evidence concerning substitutability, cross-elasticity, or other facts which might be relevant to product market determination,” courts may not accept “bald statements concerning general competition.” *Omni Outdoor Advertising, Inc. v. Columbia Outdoor Advertising, Inc.*, 891 F.2d 1127, 1140–41 (4th Cir. 1989), *rev’d on other grounds City of Columbia v. Omni Outdoor Advertising, Inc.*, 499 U.S. 365 (1991). Likewise, evidence (even statistical evidence) that “consumers generally prefer one or the other” product is insufficient to show they are “in different markets.” *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016). Rather, a plaintiff must come forward with evidence about what the consumer would do “in response to an increase” in “price.” *Id.*

35. “Industry recognition is well established as a factor that courts consider in defining a market. It is significant because ‘we assume that the economic actors usually have accurate



perceptions of economic realities.” *Todd v. Exxon Corp.*, 275 F.3d 191, 205 (2d Cir. 2001) (citation omitted). For example, the “commercial realities considered when defining the relevant geographic market include: . . . the area within which the defendant and its competitors view themselves as competing.” *E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 442-43 (4th Cir. 2011); *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 46 (D.D.C. 1998) (The “determination of the relevant market in the end is a matter of business reality—of how the market is perceived by those who strive for profit in it”).

36. To meet their burden, Plaintiffs must establish that customers do not view products outside their claimed market (such as alternative ad tech tools, ad channels, ad formats) as reasonable substitutes for products within the alleged market. *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 682-83 (4th Cir. 2016) (for market confined to “major amphitheaters,” plaintiff did “not carry its burden of showing that amphitheaters are the only place certain artists are willing to perform, irrespective of the monetary or logistical advantages of other concert locations”); *Satellite Television & Associated Resources, Inc. v. Cont’l Cablevision of Va.*, 714 F.2d 351, 356 (4th Cir. 1983) (“It is exactly this failure to provide as evidence anything more than generalizations about the interchangeability and competition among the types of entertainment listed that is fatal to its submarket theory.”); *Berlyn Inc. v. The Gazette Newspapers Inc.*, 73 F. App’x 576, 582-84 (4th Cir. 2003) (advertising market limited to “legal and commercial advertising” provided by newspapers was under-inclusive because it excluded “other forms of print advertising . . . along with non-print media advertising” and “from the advertisers’ perspectives, direct mail and other forms of advertising may well be ‘reasonably interchangeable’”).

37. Reasonable interchangeability is key because antitrust markets are not just limited to products that are a “perfect match.” *United States v. Booz Allen Hamilton Inc.*, 2022 WL

997603, at \*11 (D. Md. Oct. 17, 2022); *see also DSM Desotech Inc. v. 3D Sys. Corp.*, 749 F.3d 1332, 1339 (Fed. Cir. 2014) (“For products to be substitutes for one another, they need not be identical or fungible.”). For instance, in *Satellite Television & Associated Resources, Inc. v. Cont’l Cablevision of Va.*, 714 F.2d 351, 356 (4th Cir. 1983), the Fourth Circuit affirmed a district court’s finding that “cinema, broadcast television, video disks and cassettes, and other types of leisure and entertainment-related businesses for customers who live in single-family dwellings and apartment houses” were all in the same market in a case where plaintiffs failed to prove that consumers “do not perceive entertainment media to be reasonably interchangeable.” This is because antitrust markets may be made up of “differentiated products”: “products that are distinguishable in the minds of buyers but not so different as to belong in separate markets.” Philip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 563a (4th ed. 2020 supp.) (offering “copiers, computers, or automobiles” as products that may vary “in performance, physical appearance, size, capacity, cost, price, reliability, ease of use, service, customer support, and other features” but “generally compete with one another sufficiently that the price of one brand is greatly constrained by the price of others.”). As the Supreme Court explained in concluding that glass and metal container manufacturers were in the same market: “each is trying to expand its share of the market at the expense of the other; and each is attempting to preempt for itself every use for which its product is physically suitable, even though some such uses have traditionally been regarded as the exclusive domain of the competing industry.” *United States v. Cont’l Can Co.*, 378 U.S. 441, 453 (1964).

38. Differences in the prices, cost structures, or capabilities of different ad tech tools do not demonstrate that the tools are in separate antitrust markets. “Courts have repeatedly rejected efforts to define markets by price variances or product variances. Such distinctions are

economically meaningless whether the differences are actually a *spectrum* of price and quality differences.” *Murrow Furniture Galleries, Inc. v. Thomasville Furniture Indus., Inc.*, 889 F.2d 524, 528 (4th Cir. 1989). The reason these factors do not define a market is because consumers are willing to make tradeoffs of these factors within a market. *Id.*; *see also It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 684 (4th Cir. 2016) (rejecting the claim that amphitheaters are a distinct market from other concert venues on the basis of “mere consumer preference”); *Satellite Television & Associated Resources, Inc. v. Cont’l Cablevision of Va.*, 714 F.2d 351, 356 (4th Cir. 1983) (plaintiffs failed to show that differences in economic and competitive conditions resulted in an inability of competitors to provide substitute services to impose limits on defendant’s ability “inordinately to influence price and supply”); *IGT v. All. Gaming Corp.*, 702 F.3d 1338, 1345 (Fed. Cir. 2012) (rejecting argument that market was “limited to wheel games” in casinos when evidence showed those wheel games competed with all gaming machines).

39. *United States v. Google LLC (“Search”)*, 2024 WL 3647498 at \*83 (D.D.C. Aug. 5, 2024), demonstrates how a plaintiff’s failure (as here) to include all relevant substitutes can be fatal to proving a relevant market and market power. In defining the market, the Department of Justice (“DOJ”) excluded Amazon, which the Court found made the market “underinclusive” because ads on Amazon “share the defining characteristic of search ads, which is that they are delivered in response to a user query.” *Id.* at \*87. Further, the Court found that Google lacked market power in a search ads market because “well-resourced entrants, and demonstrated growth by those entrants, belie a reality of unconstrained dominance. There is, of course, Amazon’s entry and explosive growth in the market.” *Id.* at \*89. Here, Plaintiffs define ad tech markets for display ads, limited to indirect open-web display ads, but exclude reasonably interchangeable display ads from Amazon as well as Meta, TikTok and others that have the same defining characteristics of

display ads on the open web. In doing so, they create another underinclusive market, ignoring—and not disputing—the extensive real-world data reflecting substitution by advertisers and publishers between these and other ad channels and formats. Their omission of these reasonably interchangeable display ads (and the tools to transact these ads) prevents Plaintiffs from meeting their burden on establishing both a relevant market and market power. *Id.*

40. In addition to demand side factors, courts consider supply-side substitution in defining the relevant market. *E.g.*, *Federal Trade Comm'n v. Meta Platforms Inc.*, 654 F. Supp. 892, 916 (N.D. Cal. 2023) (“Although relevant markets are generally defined by demand-side substitution, supply-side substitution also informs whether alternative products may be counted in the relevant market.”); *Federal Trade Comm'n v. Laboratory Corp. of Am.*, 2011 WL 3100372, at \*17 (C.D. Cal. 2011) (“Courts place products in the same market where there is either effective demand-side substitution or effective supply-side substitution.”); *see also Brown Shoe Co. v. United States*, 370 U.S. 294, 325 n.42 (1962); 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.”).

41. Therefore, the relevant market must account for substitution by sellers as well as buyers. *Gulf States Reorganization Grp., Inc. v. Nucor Corp.*, 721 F.3d 1281, 1285-86 (11th Cir. 2013). The “definition of a market depends on substitutability on the supply side as well as on the demand side. Even if two products are completely different from the consumer’s standpoint, if they are made by the same producers an increase in the price of one that is not cost-justified will induce producers to shift production from the other product to this one in order to increase their

profits by selling at a supracompetitive price.” *Blue Cross & Blue Shield United of Wisc. v. Marshfield Clinic*, 65 F.3d 1406, 1410-11 (7th Cir. 1995); *see also Stiles v. Walmart, Inc.*, 639 F. Supp. 3d 1029, 1047 (E.D. Cal. 2022) (“Two indicators define a market’s boundaries, one on the demand side and one on the supply side.”); *Bepco, Inc. v. Allied-Signal, Inc.*, 106 F. Supp. 2d 814, 823 (M.D.N.C. 2000) (same). “Two products produced interchangeably from the same production facilities are presumptively in the same market.” Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 561 (5th ed. 2023). Contrary to Plaintiffs’ assertion in their pre-trial proposed Conclusions of Law (“PCOL”), PCOL ¶ 26, no court has adopted a rule requiring a defendant to show substitution is “nearly universal, . . . easy, and profitable” before considering supply-side substitution.

42. As to geographic markets, the relevant market is “the area in which buyers or sellers of the relevant product effectively compete.” *Consul, Ltd. v. Transco Energy Co.*, 805 F.2d 490, 495 (4th Cir. 1986).

43. The distinctions Plaintiffs have drawn between display ad formats and channels in this case are not grounded in commercial reality and are instead gerrymandered for purposes of this case. The advertisers who testified at trial did not recognize “open-web display ads” as a distinct product market. Google employees with 18 years of experience on the sell-side and 12 years of experience on the buy-side had never heard of the term “open-web display advertising”; nor did any of the numerous industry participants called by Plaintiffs have familiarity with the term as Plaintiffs defined it. FOF ¶ 398. As discussed below, in a properly defined market that does not define “display ads” in an under-inclusive way, Google lacks market power.

**B. Product Market**

**1. Plaintiffs' Proposed Markets Are Too Narrow Because the Appropriate Market Should Be Analyzed As a Single Two-Sided Transaction Platform of Ad Tech Tools.**

44. Under controlling Supreme Court precedent, the market in this case should be analyzed as a single two-sided market rather than the three gerrymandered markets proposed by Plaintiffs. The purpose of ad tech is to bring publishers and advertisers together to create valuable matches. This is characteristic of “a two-sided platform,” which the Supreme Court explained is one that “offers different products or services to two different groups who both depend on the platform to intermediate between them.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 534 (2018).

45. In *Ohio v. American Express Co.*, 585 U.S. 529 (2018), the Supreme Court considered how to define the proper market in a case involving certain restrictions in Amex’s contracts with merchants. The Court held that “credit-card networks are two-sided platforms,” *id.* at 544, with Amex as an intermediary between consumers on the one side (using Amex credit cards) and merchants on the other (paying Amex fees but receiving access to a customer network and an efficient payment solution).

46. The Supreme Court explained in *Amex* that, although the relevant market is typically the “arena within which significant substitution in consumption or production occurs,” courts should “combine different products or services into a single market when that combination reflects commercial realities.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 543 (2018). This is the case for two-sided platforms, which by their very nature, “offer different products or services to two different groups who both depend on the platform to intermediate between them.” *Id.* at 534; *U.S. Airways, Inc. v. Sabre Holdings Corp.*, 938 F.3d 43, 56 (2d Cir. 2019).

47. One defining feature of two-sided platforms is that they exhibit “indirect network effects,” meaning that “the value of the services” that the platform provides “increases as the

number of participants on both sides of the platform increases.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 535 (2018). Among other things, these network effects mean platforms must “be sensitive to the prices that they charge each side,” because they cannot raise prices on one side without “risking a feedback loop of declining demand.” *Id.* at 535, 544.

48. “There is a subset of two-sided platforms that must always receive two-sided treatment: transaction platforms.” *US Airways, Inc. v. Sabre Holdings Corp.*, 938 F.3d 43, 56 (2d Cir. 2019). The distinguishing feature of a transaction platform is that “the business ‘cannot make a sale to one side of the platform without simultaneously making a sale to the other.’” *Id.* (quoting *Ohio v. Am. Express Co.*, 585 U.S. 529, 535 (2018)). Thus, they are “best understood as supplying only one product—transactions—which is jointly consumed by [users on both sides of the platform].” *Amex*, 585 U.S. at 545 & n.8. “These platforms inherently ‘exhibit more pronounced indirect network effects and interconnected pricing and demand’ than other types of two-sided platforms, because transaction platforms require that ‘both sides of the platform simultaneously agree to use their services.’” *Sabre*, 938 F.3d at 57 (quoting *Amex*, 585 U.S. at 545).

49. Therefore, in “cases involving two-sided transaction platforms, the relevant market must, as a matter of law, include both sides of the platform.” *US Airways, Inc. v. Sabre Holdings Corp.*, 938 F.3d 43, 57 (2d Cir. 2019); *see also Ohio v. Am. Express Co.*, 585 U.S. 529, 535 (2018) (holding credit-card networks were two-sided transaction platforms because “no credit-card transaction can occur unless both the merchant and the cardholder simultaneously agree to use the same credit-card network”). “Any other analysis would lead to mistaken inferences of the kind that could chill the very conduct the antitrust laws are designed to protect.” *Amex*, 585 U.S. at 546. For a two-sided platform, competition on one side of the market can act as a competitive constraint

on the other. *Id.* (“focusing on one dimension of . . . competition tends to distort the competition that actually exists among [two-sided platforms]”).

50. Google’s ad tech is a two-sided transaction platform that connects publishers and advertisers to facilitate ad transactions. Just like the credit-card networks in *Amex*, no ad tech tool can “make a sale to one side of the platform without simultaneously making a sale to the other.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 535 (2018); 9/16/24 AM Tr. 64:23-65:17 (Mohan) (“display advertising ad tech by definition has two sides of the market”); FOF ¶¶ 527-529. Each digital advertising transaction is “a single, simultaneous transaction” that involves a publisher, an advertiser, and a user who will view the ad. *Amex*, 585 U.S. at 545. An ad tech tool can only make a “sale” when an advertiser seeking to place an ad purchases an impression on a publisher’s inventory, which corresponds to an individual user who will view the ad. FOF ¶¶ 527-529; *see also* FOF ¶ 536 (Professor Weintraub: “all of the products and solutions within the ad tech stack” are “intermediaries that facilitate advertisers and publishers in the buying and selling of online ads”). Absent a publisher, an advertiser, and a user, no transaction would exist.

51. Ad tech tools exhibit “indirect network effects,” FOF ¶¶ 530-533, which *Amex* held are common to all two-sided transaction platforms. As explained by Google’s expert Dr. Israel, and as Plaintiffs’ expert agreed, the success of an ad tech tool and the quality of the matches it facilitates depend on its ability to attract customers on both sides. FOF ¶ 530-532. Microsoft similarly testified that investing on one side of the display ecosystem can grow the other. FOF ¶ 539. A tool for advertisers that is connected to more publishers (and, by extension, more users) becomes more valuable to advertisers. The same is true in the reverse: a tool for publishers that is connected to more advertisers becomes more valuable to publishers. FOF ¶¶ 538-539.



52. Indirect network effects are evident from Google’s conduct throughout its time in the ad tech business. From its earliest days, Google’s display ad business focused on serving the interests of both advertisers and publishers in order to facilitate more and higher quality matches between them. FOF ¶ 538. As DoubleClick veteran and former Google display ads executive Neal Mohan explained, the display ads business has always “by definition” served the interests of two sides, advertisers and publishers. FOF ¶ 538; *see also, e.g.*, PTX-32 at -917. When Google relaunched the DoubleClick ad exchange as AdX, it vetted both sides of the transaction and enforced safety and security policies on each side because Google recognized that advertiser business is dependent on the quality of publisher inventory, and vice versa. FOF ¶¶ 129-130, 743, 747. Google has always made decisions to maximize the value generated for publishers and advertisers because the value of its products derives from facilitating optimal two-sided transactions between them. FOF ¶¶ 15-16. The benefits that advertisers and publishers have experienced from using Google’s integrated ad tech stack from end to end further demonstrate that ad tech tools are fundamentally two-sided. There are unique benefits when the same ad tech provider has a relationship with both sides of the transaction, not just one. FOF section VII.A.2.

53. Other industry participants recognize the presence of network effects and have invested in developing integrated tools across the ad tech stack to better connect the two sides of a digital advertising transaction. FOF ¶¶ 539-540 (recognition of indirect network effects by Microsoft and Meta). Consistent with a single two-sided transaction platform market, industry participants do not identify their competitors as only those that provide the same components in the ad tech stack. Instead, they describe competition in the “broader market” for “any and all companies’ entities that take part in the process of serving digital ads online.” FOF ¶ 541.2

(testimony about Meta’s views on scope of competition); FOF ¶ 541 (similar testimony from other rivals including BidSwitch, now owned by Criteo, which describe “two-sided marketplaces”).

54. Ad tech tools also exhibit another quality of two-sided transaction platforms—“interconnected pricing.” *Sabre*, 938 F.3d at 57. In a two-sided transaction platform, the price for enabling a transaction is “allocate[d] between” the two sides because the product sold is the match. *Ohio v. Am. Express*, 585 U.S. at 540, 548 (2018). The fees in the ad tech market reflect this principle, as experts from both sides agree, the fees are “borne by both advertisers and publishers.” FOF ¶¶ 534-535. Prices are therefore properly assessed across the entire transaction. Google’s pricing decisions take into account the totality of the price across the ad tech stack. FOF ¶ 535.2.

55. Because the evidence shows that there is a single ad tech market to match advertisers and publishers, Plaintiffs’ proposed markets of individual ad tech components are fatally underinclusive. Plaintiffs’ markets are impermissibly an “exercise in precise line-drawing” that “suits the needs of plaintiffs” by magnifying the appearance of market power of the defendant, *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016), and in doing so omit critical competition. *Ohio v. Am. Express*, 585 U.S. at 540, 546 (2018) (rejecting government’s argument, and district court’s ruling, that the credit-card market should be treated as “two separate markets” rather than a single two-sided market). Plaintiffs have therefore failed to meet their burden to establish a relevant product market. *It’s My Party*, 811 F.3d at 681 (“Plaintiff faces . . . the initial challenge of identifying exactly what market defendant is accused of monopolizing.”).

56. The fact that some ad tech products service only a subset of customers does not change the two-sided nature of this transactions market. In *Ohio v. Am. Express Co.*, 585 U.S. 529, 534, 536 (2018), for instance, the Court recognized that a network could have different offerings for cardholders and merchants but still be part of the same market. For cardholders, the

network extended a line of credit and the credit card companies competed on factors such as the rewards program; for merchants, the network offered a solution for “processing transactions” and “quick, guaranteed payment.” *Id.* The same is true here: Advertisers and publishers may use different tools to access the network but the ultimate product supplied is a display advertising match between a publisher and advertiser. Thus, each component of the two-sided ad tech market matching advertisers and publishers imposes competitive pressure on Google and other ad tech firms.

56.1. Just as in *Amex*, each of the tools here cannot make a sale to one side of the platform without supplying a sale to the other and each exhibits the indirect network effects common to transaction platforms. The point is self-evident for ad exchanges because they intermediate transactions between publishers and advertisers.

56.2. Likewise, a tool that helps publishers sell inventory cannot complete those sales if it is not connected to any advertiser demand. Moreover, the value “to one group of participants depends on how many members of a different group participate.” *Amex*, 585 U.S. at 535. For example, a representative of Equativ, which offers a publisher ad server, testified that, when publishers consider whether to switch to another publisher ad server, they consider what demand they will have access to. 9/13/24 PM Tr. 66:9-67:21 (Creput).

56.3. The same is true in reverse for tools that help advertisers buy ad space, which require publisher inventory to sell to advertisers. Even a competitor like The Trade Desk, which “explicitly sits” on one side, “the buy-side,” of the advertising industry, recognizes that it operates in a two-sided industry and has

launched a product that connects its buy-side tool directly to publishers. FOF ¶ 541.3.

57. Plaintiffs' framing of this case only underscores the relevant market is a two-sided transaction platform. Plaintiffs' Complaint (as well as industry participants) consistently refer to the "buy-side" (those buying ad space) and "sell-side" (and those selling it). ECF 120 ¶ 54 (defining the terms). Plaintiffs' basic theory of the case is that Google intended to "becom[e] the dominant player on both sides of the digital advertising industry" so that it "could also play both sides against the middle." *Id.* ¶ 15. To take one example, Plaintiffs allege that "restrictions" on how Google's buy-side tool, Google Ads, bids in turn coerces sell-side publisher customers to use Google's sell-side tools, AdX and DFP. That allegation necessarily assumes that the conduct of a buy-side tool affects the sell-side. While the evidence has shown these allegations are unsupported, the basic point remains that even Plaintiffs see this market as one with two sides and this case as one about the competitive pressures that can be placed on the transactions linking those two sides of that market.

58. The proper market in this case must include any product that facilitates transactions within the two-sided ad stack. The failure to recognize the nature of this two-sided transaction platform is not simply a formal defect in Plaintiffs' allegations but one that improperly invites the Court to overlook significant competitive constraints in the relevant marketplace. Advertisers and publishers have many options for pathways to connect to each other that are not accounted for in Plaintiffs' markets, consisting of "advertiser ad networks," ad exchanges, and publisher ad servers. Those pathways facilitate the same transaction—the match to place an ad—and exert competitive pressure that is not accounted for by Plaintiffs' component-based markets.

- 58.1. Plaintiffs exclude some of the tools offered by Google—even though those tools serve the same function of facilitating a transaction between advertisers and publishers that tools included in Plaintiffs’ markets do. For example, just like Google Ads, DV360 connects advertisers to publisher inventory. FOF ¶¶ 141-142. Just like DFP and AdX, AdSense connects publishers to advertiser demand, including the Google Ads demand that Plaintiffs’ allegations are concerned with. FOF ¶ 47.
- 58.2. Plaintiffs also fail to account for header bidding (an ad tech tool excluded from all of Plaintiffs’ markets) being “an extremely important competitor” to Google’s ad tech, FOF ¶¶ 547-550, and a growing part of the marketplace that went “viral” (according to Plaintiffs’ expert) in 2015 and has since steadily grown to be adopted by almost 80% of publishers, FOF ¶ 203, 549, 555. Several of Plaintiffs’ experts, including its lead market definition expert Professor Lee, agree that header bidding places significant competitive pressures on Google’s offerings in all three of Plaintiffs’ markets, yet they exclude it from their alleged markets. FOF ¶¶ 555-561. For example, a header bidding wrapper can serve the same function as a publisher ad server and, according to the website of one of the most popular wrappers, can supplant a publisher ad server entirely. FOF ¶¶ 168-169. Yet it is not included in any alleged market. FOF ¶ 561.
- 58.3. Likewise, Plaintiffs also overlook the impact supply path optimization has had on the business of matching advertisers and publishers. FOF ¶¶ 562-569. The industry has shifted to limiting or eliminating ad tech intermediaries. FOF ¶¶ 272-273. For example, there are tools that have eliminated the need for third-

party exchanges, tools that eliminated the need for third-party buying tools, and tools that have eliminated the need for any third-party ad tech tool FOF ¶¶ 565-568. Supply path optimization places pressure on individual components and underscores that the underlying product is one simultaneous transaction between a publisher and advertiser. FOF ¶ 569.

59. Because all ad tech tools serve the same purpose of facilitating a match between two sides—whether through a direct or indirect transaction—Plaintiffs’ market share calculations in their “advertiser ad network” and “ad exchange” markets fail to account for the ways in which substitution to direct transactions places significant competitive pressure on indirect transactions. Direct transactions account for a significant majority of all display ad sales, FOF ¶ 496 (77% in in 2022), use the same ad creatives to reach the same users, FOF ¶ 498, and are substituted by advertisers and publishers for indirect transactions, FOF ¶¶ 500-502. The only distinctions Plaintiffs offer are that the two transactions are differently priced and that direct deals require more work from advertisers and publishers. FOF ¶¶ 507, 509. As to the former, the Fourth Circuit has held that “price variances” are insufficient to prove separate markets. *Murrow Furniture Galleries, Inc. v. Thomasville Furniture Indus., Inc.*, 889 F.2d 524, 528 (4th Cir. 1989). Moreover, technological features like Google’s Enhanced Dynamic Allocation place direct and indirect transactions in competition on an impression-by-impression basis. FOF ¶¶ 503-505. As to the latter, advertisers can use programmatic tools like DV360 to negotiate directly with publishers without a sales team. FOF ¶ 510.

**C. Plaintiffs’ Three Alleged Product Markets Fail To Capture the Commercial Realities.**

60. Plaintiffs have alleged three distinct product markets for ad tech tools: (1) “advertiser ad networks,” (2) “ad exchanges,” and (3) “publisher ad servers.” Plaintiffs further

cabin those three markets to include only the subset of tools in each market that transact “indirect open-web display advertising.” Even if the Court were to consider Plaintiffs’ markets divided by individual components of the ad tech stack—which is wrong as a matter of law and fact for the reasons set forth above—Plaintiffs’ markets fail to capture the “area of effective competition.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 543 (2018).

**1. Defining Markets Based on Tools that Transact in Indirect “Open-Web Display Advertising” Fail to Capture Significant Competitive Constraints on Plaintiffs’ Markets Composed of Multi-Functional Tools.**

61. Plaintiffs’ three markets are for different types of ad tech tools that are capable of facilitating “open-web display advertising.” Yet Plaintiffs offered no evidence showing that any ad tech tool was limited to transacting open-web display ads. Nor did Plaintiffs or their market definition expert offer any evidence accounting for the other functions that competing ad tech tools perform.

62. Plaintiffs’ market definitions are gerrymandered because none of the tools in their markets exclusively transact “open-web display ads.” Instead, each tool is multi-functional and designed to enable market participants to transact across ad formats and channels. FOF ¶¶ 384-386. Plaintiffs’ experts nowhere analyze how that reality factors into customer decisions about which tool to select or which tools are “reasonably interchangeable” even though that is the focus of market definition analysis. *Satellite Television & Associated Resources, Inc. v. Cont’l Cablevision of Virginia, Inc.*, 714 F.2d 351, 356 (4th Cir. 1983).

62.1. *First*, Google designed its tools to provide multi-functional offerings for advertisers and publishers, supporting multiple types of digital advertising such as in-app, mobile, video, and CTV. FOF ¶¶ 386-387, 391. Google’s

competitors have also designed and marketed their products based on their ability to serve ads across different channels and formats. FOF ¶ 394.

62.2. *Second*, advertisers and publishers do not select ad tech tools based solely on their ability to transact “open-web display advertising.” Both value platforms that service multiple channels and ad formats. FOF ¶ 388. For advertisers, these tools help them reach users in more places and more ways while also not inundating them. FOF ¶¶ 388, 432 (noting in particular the value of “cross-channel frequency capping” so the same user is not reached too many times). For publishers, multi-functional tools help them manage inventory across channels and interoperate with a wider variety of tools. FOF ¶¶ 388, 438-439.

62.3. *Third*, Plaintiffs have not analyzed competition as it exists among the multi-functional tools that they say define their markets. Plaintiffs’ market definition expert testified that he expressed no opinion whether there are markets for such multi-functional tools, FOF ¶ 378, or whether advertisers select ad tech tools based on multi-functional capabilities, FOF ¶ 396.

63. At bottom, Plaintiffs’ market definition expert Professor Lee has proposed markets of tools that have multiple functions without considering how competition actually takes place between those tools. He analyzed ad tech tools looking only at the functionality for open-web display advertising. FOF ¶ 380. Plaintiffs and their experts have done no analysis of competition in this case based on the totality of the functions offered by ad tech tools. Professor Lee admitted that he did not analyze the ability of ad tech tools such as exchanges to monetize inventory other than open-web display ads and did not know what advertisers considered when making their decisions among ad exchanges and the functions they offered. FOF ¶¶ 396-397. Professor Lee’s



testimony as a result was not grounded in how publishers and advertisers make their choices among ad tech tools based on the functionalities they offer and accordingly was not an analysis of the relevant competition.

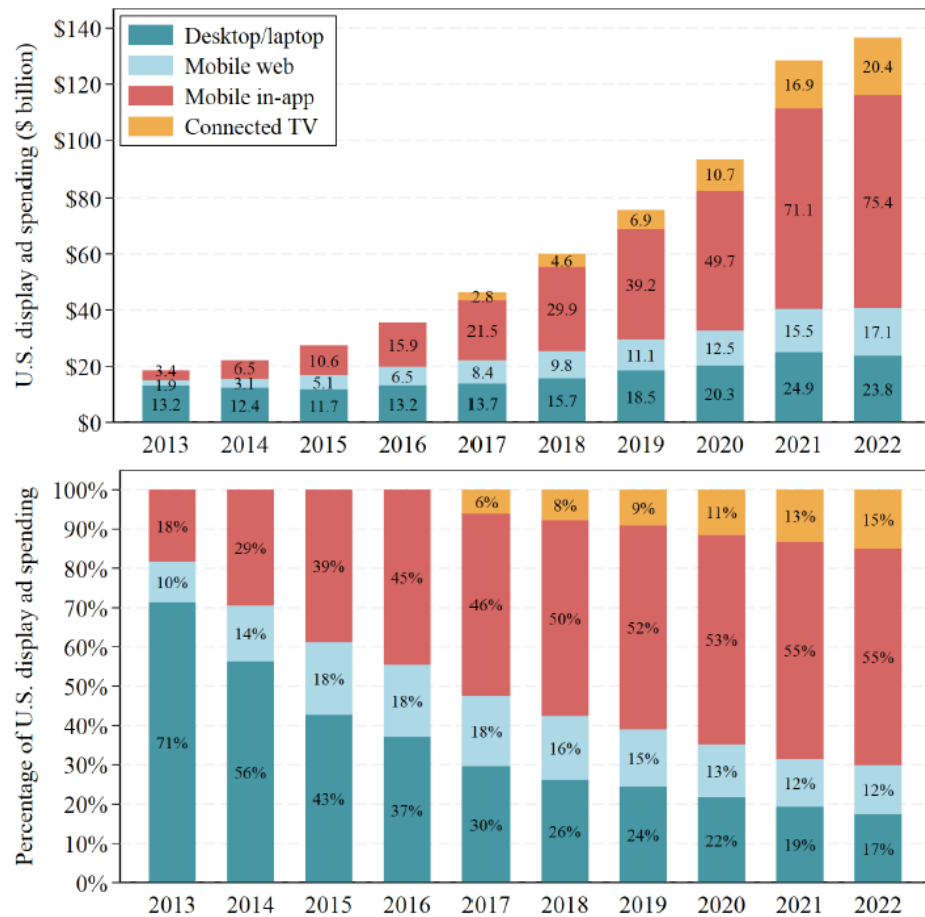
**2. Plaintiffs’ Markets Based on Tools that Transact in Indirect “Open-Web Display Advertising” Fail to Capture Significant Competitive Constraints from Other Display Ads and Ad Tech Tools.**

64. As detailed in the Findings of Fact, Plaintiffs have built their case around whether tools transact a narrow category of ads, which are not generally recognized as distinct by market participants. FOF section III.B. The extensive empirical evidence that Google presented at trial of substitution by advertisers and publishers across advertising channels and formats was unrebutted by Plaintiffs. By ignoring the empirical evidence of substitution, Plaintiffs exclude the channels where most display ads are placed today and fail to account for the competitive pressures of the marketplace. Plaintiffs’ markets fail to capture the varied ways in which ad tech works to match advertisers and publishers, and thus they fail to include all products that are reasonably interchangeable for the same use. In *United States v. Google LLC*, 2024 WL 3647498 (D.D.C. Aug. 5, 2024), Judge Mehta rejected this type of line-drawing, explaining that certain ads shown on Google and Amazon are in the same market because they “share the defining characteristic of search ads” and “look a lot like” each other, *id.* at \*87. Plaintiffs here likewise exclude ads that share the “defining characteristic” of display ads and “look a lot like” the display ads in Plaintiffs’ markets.

64.1. *First*, Plaintiffs exclude display ads that appear in digital environments other than websites. For example, display ads can appear on mobile apps or Connected TV. FOF ¶¶ 11, 470. This is a significant omission given the sharp decline in display ad spend on the “open web” (declining from 81% of ad spend in 2013 to at most 29% in 2022) and the sharp increase in in-app and Connected

TV advertising (up to 55% and 15%, respectively, in 2022). FOF ¶¶ 418, 470, 475, 491. The evidence and testimony show advertisers treat non-website ad channels and associated ad tech as reasonable substitutes for “open-web display ads,” and they shift spending to achieve improved results. FOF ¶¶ 432, 477, 488, 490. That is because advertisers follow users, and they experiment with and allocate spending in order to maximize their return on investment in reaching users—regardless of whether the ad is displayed on a website or these other channels. FOF ¶¶ 423-431. This substitution is critical to defining a relevant market because “the relevant market is defined as the area of effective competition. Typically this is the ‘arena within which significant substitution in consumption or production occurs.’” *Ohio v. Am. Express Co.*, 585 U.S. 529, 543 (2018). Plaintiffs’ market definitions—and their evidence at trial—ignore the applicable legal standard and the extensive substitution that exists across channels and formats, as depicted below, DTX-1831, to maximize return on investment; they did not even call a single advertiser witness at trial.

Figure 10: U.S. Display Ad Spending by Environment, 2013-2022



64.1.1. As the evidence at trial demonstrates, to purchase ads in different channels, advertisers can use the same tools to target the same users using the same ads that they use to purchase ads on the “open web.” For example, accounting for a changing landscape, 90% of Google Ads advertisers already use both the in-app and website ad buying functionalities of Google Ads, which makes shifting spend between channels even easier for these advertisers. FOF ¶ 476. The Census, for example, used programmatic tools to purchase across channels. FOF ¶ 390.2.

64.1.2. Likewise, publishers can use the same ad tech tools to sell ad space both on their websites and on apps or video streaming services (i.e., “omnichannel”). FOF ¶¶ 435-436, 438.

64.2. *Second*, Plaintiffs exclude ads that are traditional display ads and do appear on websites, but are not “open-web” (by their definition) because they are not served using third-party ad tech tools.

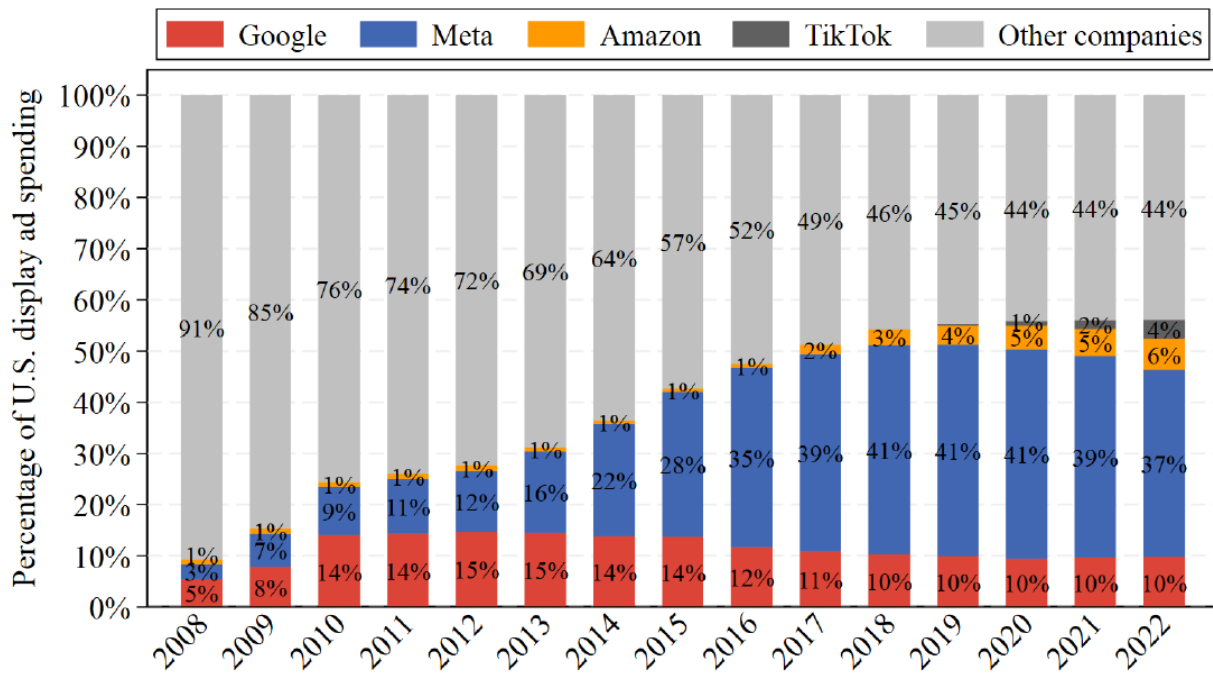
64.2.1. That means ads move in and out of “open-web display” despite being served in the exact same format on the exact same website. FOF ¶ 445.1 (New York Times); FOF ¶ 445.2 (Disney); FOF ¶ 445.2 (Amazon).

64.2.2. Advertisers are particularly focused on reaching audiences on social media ads, which Plaintiffs exclude as “closed” because they are served by proprietary ad tech and because they are frequently native ads, and ad spend has shifted dramatically in that direction. FOF ¶¶ 447-451. Google’s ordinary course documents and witness testimony confirmed there is significant substitution among advertisers for ads on social media. FOF ¶¶ 452, 454-455. Retail media is another fast-growing channel for display ads that Plaintiffs exclude. FOF ¶¶ 465-468.

64.2.3. Empirical data show, as depicted below, that advertisers and publishers are shifting their display ad spend to channels that Plaintiffs exclude from their markets, including Meta,

Amazon, and TikTok, with Google’s share of display ad revenues declining and other firms such as Meta and Amazon significantly increasing. FOF section III.E; DTX-1874.

**Figure 54: The Percentage of U.S. Display Ad Spending Accruing to Selected Industry Participants, 2008-2022**



65. Artificial intelligence like Google’s Performance Max tool is also making ad tech tools more effective by permitting advertisers to shift spending among channels and formats automatically without requiring the advertiser to make those decisions. FOF ¶ 431. The advertisers who use those tools are literally, in real time, treating “open-web display ads” and other formats as substitutes.

66. The same is true for publishers who likewise move revenue-generating efforts to different channels and ad formats based on where user attention and buyer dollars are concentrated. FOF ¶¶ 435-437. For example, as user time spent on mobile apps (rather than desktop or mobile websites) has grown exponentially, apps have become an increasingly important way for

publishers to reach users. FOF ¶¶ 435-436. Those publishers seek ad tech tools to help them manage their apps (or, for some sellers, Connected TV or video) inventory. From the publisher perspective, as other channels and formats have become more salient, whether a tool serves multiple functionalities is important. FOF ¶ 438.

**3. Data on Substitution Show that Plaintiffs' Markets Are Not Properly Defined.**

67. As noted, market definition is a question of what market participants view as reasonable substitutes. *It's My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 682-83 (4th Cir. 2016). Here, even with the asserted differences between ad tech tools, or ad formats and channels, the data still show substantial substitution between the different display ads and associated ad tech. FOF section III.E This data from industry sources such as E-marketer, as well as Google and third-party data, show significant and long-term substitution between display ads on the open-web and those on social media, retail media, Connected TV, instream video, and apps. FOF section III.D.2 8. The data reflecting substitution was not rebutted by Plaintiffs, and therefore this significant and long-term substitution is undisputed.

68. Prof. Lee maintained at trial that there were issues with relying on substitution in a monopolization case if there had been an exercise of significant power. FOF ¶ 520. He referenced the “*Cellophane* fallacy,” which is the idea that in a market where prices were elevated by significant market power, consumers might resort to suboptimal substitutions that would not occur in a more competitive market. *See United States v. Eastman Kodak Co.*, 63 F.3d 95, 105 (2d Cir. 1995) (“High cross-elasticity of demand may, in some cases, be the product of monopoly power rather than a belief on the part of consumers that the products are good substitutes for one another.”). In such a market, newspapers could become an alternative to cellophane for wrapping sandwiches or walking could become a substitute for purchasing gasoline. FOF ¶¶ 521-522.

69. One problem with relying on the cellophane fallacy is that Professor Lee offered no opinion as to whether Google had significant market power before 2015 nor could he even identify the year when he would say Google had acquired significant market power. FOF ¶ 582. Because the evidence shows significant display ad substitution among Google and its competitors across display ad channels and formats, as well as Google’s declining share of display advertising, it is implausible to say the substitution in the market is simply a result of Google’s alleged dominance. FOF ¶¶ 447, 450, 474, 476, 485-487, 497, 519, 572.

70. Moreover, Prof. Lee did not show evidence that prices increased after Google acquired any market power; nor did he do any independent analysis of whether prices were supra-competitive for his publisher ad server or “advertiser ad network” markets. FOF ¶¶ 405, 593, 697; *see PepsiCo., Inc. v. Coca-Cola Co.*, 114 F. Supp. 2d 243, 257-58 (S.D.N.Y. 2000) (granting summary judgment for defendant in monopolization case on market definition where plaintiff raised *Cellophane* fallacy but did no analysis of prices).

71. Here, the *Cellophane* fallacy does not justify disregarding evidence of real-world substitution, particularly given the quantity and duration of the evidence. The substitution taking place is to strong competitors like Facebook, Amazon, and TikTok, hardly examples of customers resorting to inferior options in the face of a dominant firm. *See United States v. Google LLC*, 2024 WL 3647498, at \*74 n.5 (D.D.C. Aug. 5, 2024) (rejecting a similar cellophane fallacy argument because Amazon was not a “poor substitute” there, though concluding the evidence did not otherwise prove substitution for purposes of a particular market); *United States v. Eastman Kodak Co.*, 853 F. Supp. 1454, 1470 (W.D.N.Y. 1994) (*Cellophane* fallacy inapplicable where products of comparable quality are competing for the same customers). No industry witness testified that advertisers are shifting to non-“open-web display ads” despite them being inferior; to the contrary,

the evidence presented suggested that advertisers shift because performance is superior. FOF ¶ 523.

72. Plaintiffs cannot meet their burden of defining their proposed markets (or showing significant market power) by resorting to the *Cellophane* fallacy given the substantial evidence of significant and long-term substitution. Plaintiffs did not rebut that evidence or present contrary evidence. *Virginia Vermiculite, Ltd. v. W.R. Grace & Co.-Conn.*, 108 F. Supp. 2d 549, 579 (W.D. Va. 2000) (“In the face of unrebutted evidence of reasonably interchangeable downstream substitutes that constrain the price of upstream mining rights, it is the plaintiffs’ burden to conduct at least a rudimentary cross-elasticity analysis that would tend to show these substitutes should be excluded from the product market.”) (citing *Satellite Television & Associated Resources, Inc. v. Continental Cablevision of Va., Inc.*, 714 F.2d 351, 356 (4th Cir. 1983)).

**4. Evidence of Industry Recognition Shows that Plaintiffs’ “Open-Web Display Advertising”-Based Markets Are Too Narrow.**

73. Industry participants do not even recognize “open-web display ads,” as defined by Plaintiffs, as a market or even a distinct type of ad. *Todd v. Exxon Corp.*, 275 F.3d 191, 205 (2d Cir. 2001) (“Industry recognition is well established as a factor that courts consider in defining a market . . . because we assume that the economic actors usually have accurate perceptions of economic realities.”). This includes the federal agency advertiser Census Bureau witness who testified that she did not understand what the term meant and first heard of it through this lawsuit. FOF ¶ 398.7. A number of industry participants had never heard the term before and/or defined the term and component parts of the term differently than Plaintiffs did. FOF ¶ 397.

74. Business documents from Google and many other firms define their competitors as social media companies such as Meta or retail advertising firms such as Amazon, whose businesses are not limited to or do not include “open-web display ads.” FOF ¶¶ 302, 338, 345, 352. No



business document offered by Plaintiffs defined an area of competition or market limited to open-web display ads or ad tech.

75. Prof. Lee defines market shares for Plaintiffs' markets based on impressions or revenues for "open-web display ads" (not ad tech), but testified that he was unaware of anyone ever defining market shares for these open-web display ads before this case. FOF ¶ 401.

76. Plaintiffs maintain that there is industry recognition of "open-web display ads" as a type of ad or advertising channel that is "distinct" from other display ads. While some documents may discuss differences between different types of ads, they are not competition documents and do not analyze competitors, areas of competition, markets, or substitution.

77. Testimony from Plaintiffs' experts further confirms that the delineated tool markets based on "open web-display advertising" functionality are inconsistent with commercial realities. Several testified that they had not heard the term "open-web display advertising" in the "industry" or seen it in industry documents. FOF ¶¶400-401. Even Plaintiffs' own definition of the term has changed between their Amended Complaint and the definitions advanced by their experts. The Complaint excluded all video ads, ECF 120 at 16-17 n.4, but at trial Plaintiffs defined the term to include outstream video ads, FOF ¶ 377. Another of Plaintiffs' experts defined it differently from any definition advanced by Plaintiffs, stating that it referred to open auctions—a concept that has no relation to how Plaintiffs define their market. FOF ¶ 400.3.

78. The idea that traditional banner ads on certain websites—"open-web display advertising"—might be a distinct set of ads is becoming even less defensible over time. The rapid increase in user time on social media, FOF ¶ 448, ecommerce sites, FOF ¶ 465, and apps, FOF ¶¶ 474-475, has dramatically changed the way ad dollars are spent in the marketplace. As ad tech has developed and provided ad buyers with more immediate feedback on how different categories

of spending perform, advertisers have been able to shift spending more nimbly. FOF ¶¶ 429-432. In addition, it has become more important for advertisers to target particular audiences, which may occur across different devices or channels and does not necessarily depend on ad channel or format. FOF ¶ 428. Recognizing this reality, ad tech providers have further developed tools that enable advertisers to run campaigns across ad formats.

**5. Evidence of the Marketing Funnel Shows that Plaintiffs’ Open-Web Display Markets Are Too Narrow.**

79. In the *Search* trial, the United States successfully relied on the concept of the “funnel” to distinguish search ads and display ads. *United States v. Google LLC*, 2024 WL 3647498, at \*83 (D.D.C. Aug. 5, 2024).

80. In this case, although Plaintiffs’ expert would not commit to an opinion about where display ads fit on the funnel, FOF ¶ 411, the evidence concerning the marketing funnel showed that Professor Lee’s market definitions were inconsistent with commercial reality. According to Plaintiffs’ witnesses, the upper funnel focuses on generating consumer awareness of the product; in the middle is the interest or consideration phase; and the lower funnel seeks to persuading a user to carry out a transaction. FOF ¶ 409. Following this rubric, industry participants, including Plaintiffs’ own witnesses, recognize that “open-web display ads” and other ad channels and formats, including social media ads, serve the same purposes within the funnel and are therefore reasonable substitutes. FOF ¶ 410.

81. In the *Search* case, the Court found that the government’s evidence, including the testimony of Joshua Lowcock who also testified in this case, demonstrated that social media ads are a type of display ad directed at the same level of the funnel as other display ads. *United States v. Google LLC*, 2024 WL 3647498, at \*36-38 (D.D.C. Aug. 5, 2024) (“Social media

advertisements are essentially display ads that are integrated into a social media feed,” citing Lowcock).

#### 6. Plaintiffs’ Evidence is Insufficient to Prove their Markets

82. Plaintiffs attempt to defend their market definitions on the ground that “open-web display advertising” is “distinct from other forms of advertising” and that there is direct evidence of market power. FOF ¶¶ 404, 407.

83. On distinct features, even Plaintiffs’ expert acknowledges that, from an economist’s perspective, simply being “distinct” in the mind of consumers is insufficient to sustain a separate product market. FOF ¶ 408. The same is true under the law. *Murrow Furniture Galleries, Inc. v. Thomasville Furniture Indus., Inc.*, 889 F.2d 524, 528 (4th Cir. 1989) (“Courts have repeatedly rejected efforts to define markets by price variances or product quality variances.”). That type of analysis is unreliable not only because it is purely qualitative, but also because it would lead to innumerable single markets of “valuable and distinct” products. *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016) (rejecting plaintiffs’ evidence that customers preferred a certain product because that was akin to “claiming that Pepsi and Coke are in different markets because consumers generally prefer one or the other”); *Delano Farms Co. v. Ca. Table Grape Comm’n*, 655 F.3d 1337, 1351 (Fed. Cir. 2011) (plaintiff cannot define market based on “naked assertion” that product was “uniquely valuable and distinct”). Basing market definition on differences in product characteristics would make non-commodity products their own market and result in countless single product markets.

84. Plaintiffs’ “industry recognition” argument falls similarly flat. As recounted above, neither industry participants nor Plaintiffs’ experts recognized “open-web display advertising” as a commonly used industry term. FOF ¶ 398.

85. “[M]any courts” have recognized the commercial reality that different forms of advertising can be reasonably interchangeable with each other, and have therefore “rejected antitrust claims reliant on proposed advertising markets limited to a single form of advertising.” *Hicks v. PGA Tour, Inc.*, 897 F.3d 1109, 1121-23 (9th Cir. 2018) (a market in advertising to golf fans includes advertising on websites, social media, TV programs, radio broadcasts, and podcasts); *Berlyn Inc. v. The Gazette Newspapers, Inc.*, 73 F. App’x 576, 583 (4th Cir. 2003) (“from the advertisers’ perspectives, direct mail and other forms of advertising may well be ‘reasonably interchangeable’”); *America Online, Inc. v. GreatDeals.Net*, 49 F. Supp. 2d 851, 858 (E.D. Va. 1999) (market should not be restricted to “email advertising” because there are “numerous substitutes,” like “direct mail, billboards, television, newspapers, radio, and leaflets”). Plaintiffs’ markets should be rejected for the same reason: other display ads are reasonable substitutes for “open-web display ads”—the tools at issue are built to facilitate precisely that substitution—and thus Plaintiffs’ have failed to meet their burden of proving their tool markets.

86. In *United States v. Google LLC*, in discussing search ads, the court distinguished *Hicks* because it concluded that the evidence before the court showed that search ads served “fundamentally different purposes” from display ads because, for example, search ads are “unique” for advertisers because they “respond to expressed user intent in real time” and are a “bottom funnel ad channel or push ad.” 2024 WL 3647498, at \*83-84, 86 (D.D.C. Aug. 5, 2024). Here, Plaintiffs are focused on markets for tools that transact a specific subset of display ads, even though the tools at issue readily transact other sorts of display ads. When it comes to those tool markets, Plaintiffs’ argument falls short given their failure to consider how a customer might pick a tool to transact across multiple channels and might use the same tool to readily substitute between ads in and out of Plaintiffs’ purported markets (e.g., advertisers achieving their goals by shifting

spending between display ads in social, retail, apps, and the web). If anything, this error is analogous to the one the court found in *Search* of excluding search ads on Amazon from the search advertising market, even though they served the same purpose from the perspective of the advertiser as search ads on Google (targeting potential customers with an ad in response to their search query). *Id.* at \*87.

87. The substitution issues in *FTC v. IQVIA Holdings Inc.*, 710 F.Supp.3d 329 (S.D.N.Y. Jan. 8, 2024), cited by Plaintiffs, were different from those in the *Search* case and those at issue here. *See* PCOL ¶ 21. In *IQVIA*, a district court concluded that the Federal Trade Commission (“FTC”) had carried its burden of raising “some question” that certain ad channels were not reasonable substitutes for programmatic advertising to healthcare professionals for purposes of securing a preliminary injunction against a proposed merger and continuing agency proceedings. 710 F.Supp.3d at 354. In *IQVIA*, the FTC was reviewing the proposed merger of two of three companies that had built a specific ad buying tool to target advertising of healthcare products or services to healthcare professionals on the Internet. *Id.* at 340. The use case for the tools was so specific that the court found there was evidence these healthcare professionals could not be reached through typical online advertising channels, like social media (Facebook), or direct deals with website publishers. *Id.* at 355-57. The focus was so narrow that not even Google’s ad buying tools were suitable for that purpose. *Id.* at 358-61. Plaintiffs’ case here, on the other hand, is not limited to advertising of particular products or services to particular professionals. Rather, it is about advertising all products to any and all online users—a goal that can be achieved through multiple channels and formats. Thus, the preliminary findings in *IQVIA* have little bearing on this case. Further, as noted, given the procedural posture in that case, the FTC faced a far lower burden to prove a market than Plaintiffs do here. As the court acknowledged, at the preliminary injunction

stage, the burden on the FTC was “lower” than the burden it would face later. *Id.* at 367-68. It was “not necessary” for the FTC even to prove the existence of a market, just “raise serious and substantial questions” as to the market. *Id.*

88. Even with the FTC’s burden of proof in *IQVIA*, the evidence presented in support of the proposed market definition there only highlights the absence of similar evidence in this case. In *IQVIA*, the FTC presented numerous business documents referring to the healthcare professional advertising market “as a distinct market” and “acknowledged that there are three leading healthcare-focused DSPs.” *FTC v. IQVIA Holdings Inc.*, 710 F.Supp.3d 329, 362 (S.D.N.Y. Jan. 8, 2024). Here, all of Google’s and its competitors’ competitive analysis documents identify a much broader competitive landscape. They name as competitors the very providers that Plaintiffs exclude from their markets, such as Meta, Amazon, and TikTok. FOF ¶¶ 338, 345, 352. The exhibits in this case do not refer to tools that transact in “open-web display advertising” as a distinct market or suggest market shares or a dominant firm for such a market. FOF ¶¶ 401-402.

89. Plaintiffs may attempt to argue that “open-web display ads” and other ad formats and channels are not substitutes that should be included in the same product market, but complements that must be in separate markets. As explained in the leading antitrust treatise, complements and substitutes are distinguished based on whether the “prices of the goods in the market tend to be uniform, or to rise and fall together.” Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 565a (5th ed. 2023). When goods are substitutes, such as coal and natural gas, “a reduction in coal output will increase the demand for natural gas, thus causing its price to increase, as well as the coal price.” *Id.*; *Menasha Corp. v. News Am. Mktg., Inc.*, 354 F.3d 661, 664 (7th Cir. 2004). “In contrast, when goods are complements, “their prices tend to move in opposite directions. For example, gasoline

and automobiles are complements, because a driver needs both. A significant output reduction and price increase in gasoline will cause less driving, which will reduce the demand for cars, causing a price decrease there.” Areeda & Hovenkamp ¶ 565a.

90. Applying that test, “open-web display ads” and other types of ads are substitutes, not complements. There is no evidence that a decrease in spend on “open-web display ads” caused by a price increase for “open-web display ads” would reduce the demand for other display ads. Consistent testimony and evidence at trial demonstrates the opposite: different kinds of display ads are substitutes for each other because they “have reasonable interchangeability for the purposes for which they are produced.” *Berlyn Inc. v. The Gazette Newspapers, Inc.*, 73 F. App’x 576, 582 (4th Cir. 2003) (quoting *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 404 (1956)); Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 565a (5th ed. 2023) (“Substitutes are goods that can replace one another and thus ‘compete’ for the user’s purchase.”). As an advertiser testified, advertisers have “a constrained amount—a limited amount of resources” to achieve their goals, so spend on one kind of ad necessarily decreases spend on another. 9/27/24 AM Tr. 31:7-19 (Bumpers). To allocate that limited budget, advertisers constantly measure their return on investment and decide how to allocate spend among ad channels and formats to maximize that return. FOF ¶¶ 425-432 (e.g., Zulily reviews performance metrics weekly and decided to decrease spend on Google Ads and increase spend on Facebook in response to lower return on investment on Google Ads). Advertisers do not react to a decrease in ROI of traditional web banner ads by stopping spending on social media ads as well (which would be consistent with the ads as complements). Artificial intelligence tools now even automate that substitution process, choosing whether to buy an “open-

web display ad” or a non-“open-web display ad” on an impression-by-impression basis. FOF ¶¶ 288-295, 431.

91. Plaintiffs’ final argument on this issue is that “direct evidence” or market power proves the existence of the product markets that Plaintiffs put forward. This “direct evidence” is discussed in more detail below but it too fails to justify the purported markets. First, the only direct evidence of market power Plaintiffs’ expert offers relates to prices in the alleged ad exchange market. In the markets for publisher ad servers and “advertiser ad networks,” Plaintiffs did not attempt to show that prices were supra-competitive, and the unrebutted evidence shows that Google’s prices are in line with or significantly lower than competitors. FOF ¶¶ 405, 594, 697. As for the ad exchange market, the evidence shows at best that AdX’s revenue share was higher than some but not all exchanges. FOF ¶¶ 1160-1166. Accepting Plaintiffs’ argument would mean that any time a firm has a price higher than some group of firms selling related products, that would be proof of market definition and market power all at once. No court has articulated such an expansive rule. *See Virginia Vermiculite, Ltd. v. W.R. Grace & Co.-Conn.*, 108 F. Supp. 2d 549, 586-87 (W.D. Va. 2000) (evidence of elevated prices was insufficient to establish a triable issue on market definition in the face of evidence of consumer substitution between two grades of a product).

92. Other than prices, Prof. Lee’s only other “direct” evidence was the conduct he alleged was anticompetitive: Google not sharing its customers or technology with competitors, which he considered as diminishing product quality. FOF ¶ 590-591, 700. As Plaintiffs see it, Google has “degraded quality” (i.e., undertaken design decisions that Plaintiffs object to), and the fact of those actions should suffice to prove market definition, market power, and anticompetitive conduct in one fell swoop. Even if this were valid reasoning under the Sherman Act, Prof. Lee’s



claims of “degraded quality” are premised on Google taking action that controlling Supreme Court law does not deem anticompetitive. *See infra* § IV.B.3 (explaining why all the challenged acts are lawful refusals to deal).

93. For example, Plaintiffs maintain that Google’s prices are high accounting for how Google “degraded” the quality of DFP by implementing Unified Pricing Rules and restricting AdX real-time bids to DFP. FOF ¶ 593. Plaintiffs thus argue that their allegations of anticompetitive conduct suffice to also prove market definition and market power. But that is not how the antitrust laws work. To assess whether conduct is anticompetitive, it is first necessary to define the relevant market. “Here, the plaintiffs rely exclusively on direct evidence to prove that Amex’s antisteering provisions have caused anticompetitive effects in the credit-card market. To assess this evidence, we must first define the relevant market.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 542 (2018); *see also Mil. Servs. Realty, Inc. v. Realty Consultants of Virginia, Ltd.*, 823 F.2d 829, 832 (4th Cir. 1987) (in the section 1 context, “facts must be presented to the court to enable it to ascertain the market power of the defendant both before and after the alleged anti-competitive conduct”).

94. Furthermore, the features Plaintiffs claim demonstrate monopoly power actually improved the quality of DFP. FOF ¶¶ 866-869, 1033, 1036. The fact that Plaintiffs believe giving other rivals access to certain features would make DFP even more valuable does not mean the initial offering “degraded” value.

95. Moreover, no court has endorsed the notion that a plaintiff’s expert may opine on anticompetitive conduct which is detrimental to customers, and that this opinion will then suffice to define a market and show market power. Professor Lee’s theory would collapse the proof of anticompetitive conduct, market definition, and market power into a single finding—triggering the

risk of “false positives” about which the Supreme Court has warned. *Verizon Commc’ns Inc. v. Law Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 414 (2004).

96. Setting aside the objections to the claim that Google degraded quality, this single-inquiry approach to antitrust also finds no support in the case law. Market definition is not proven by arguing there was some perceived shortcoming in a product but rather by measuring the “extent to which consumers will change their consumption of one product in response to a price change in another, i.e., the ‘cross-elasticity of demand.’” *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016). Plaintiffs’ assertions about Google’s conduct shed no light on that question of consumer substitution and fail to rebut the extensive evidence presented of real-world customer substitution.

**7. Plaintiffs’ Experts Have Not Performed a Quantitative Hypothetical Monopolist Test.**

97. Plaintiffs cannot cure the above shortcomings by invoking the Hypothetical Monopolist Test (“HMT”).

98. The HMT is a way to measure cross-elasticity of demand by evaluating whether a hypothetical monopolist could profitably impose a small but significant and non-transitory increase in price (“SSNIP”)—i.e., whether enough customers would respond to the SSNIP by choosing an alternative product, thereby causing the price increase to be unprofitable. *FTC v. Cmty. Health Sys., Inc.*, 2024 WL 2854690, at \*20 (W.D.N.C. June 5, 2024), vacated on other grounds, 2024 WL 3561941 (4th Cir. July 24, 2024) (citing *FTC v. Penn State Hershey Med. Ctr.*, 838 F.3d 327, 338 (3d Cir. 2016)). The HMT is a “quantitative” approach to defining a relevant product market. *Teradata Corp. v. SAP SE*, 570 F. Supp. 3d 810, 838-41 (N.D. Cal. 2021); *Epic Games, Inc. v. Apple*, 67 F.4th 946, 975 (9th Cir. 2023) (market definition “inquiry involves

empirical evidence in the form of a SSNIP analysis,” which “uses past consumer-demand data and/or consumer-survey responses”).

99. Plaintiffs’ market definition expert has not performed an HMT in this case because he has failed to collect or analyze any customer substitution data that would show which products might impose competitive constraints on the products in his alleged markets. FOF ¶ 584. Further, he failed to define a but-for world where Google lacks an alleged monopoly or to perform any comparison against such a but-for world. FOF ¶ 586.

100. Instead of conducting any valid or relevant quantitative analysis, Plaintiffs’ expert purports to rely on a qualitative analysis that appears to draw on a limited subset of the practical indicia identified in *Brown Shoe* (e.g., industry recognition, product characteristics, customer bases, effect of price changes).<sup>2</sup> Plaintiffs’ expert’s HMT is insufficient to define a market for the reasons stated. But it also fails because it is not based on any *quantitative* evidence of customer substitution patterns in response to a price increase.

101. Numerous courts have rejected attempts to “primarily” rely on the practical indicia factors” of *Brown Shoe*, noting that they “come into play *only after* the ‘outer boundaries of a product market are determined’ by evaluating the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it.” *Ky. Speedway v. NASCAR*,

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<sup>2</sup> In *Brown Shoe Co. v. United States*, the Supreme Court made clear that 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.” 370 U.S. 294, 325 (1962). The Court recognized, however, that within “this broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes.” *Id.* These submarkets may be determined by evaluating “practical indicia” such as: (1) “industry or public recognition of the submarket as a separate economic entity”; (2) “the product’s peculiar characteristics and uses”; (3) “unique production facilities”; (4) distinct customers”; (5) “distinct prices”; (6) “sensitivity to price changes”; and (7) “specialized vendors.” *Id.* Plaintiffs expert does not expressly reference *Brown Shoe* but does allude to “practical indicia” in passing.

588 F.3d 908, 918 (6th Cir. 2009) (emphasis added) (citing *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962)). Courts therefore reject a qualitative analysis, even based on the full *Brown Shoe* factors, as sufficient to meet Plaintiffs’ burden on market definition. *Id.* (*Brown Shoe* factors insufficient to define market); *Reifert v. S. Cent. Wis. MLS Corp.*, 450 F.3d 312, 319-20 (7th Cir. 2006) (“While the practical indicia named in *Brown Shoe*” are “important considerations in defining a market, they were never intended to exclude economic analysis altogether.” *Brown Shoe* “recognized the importance of economic analysis, including cross-price elasticity of demand.”); *Teradata Corp. v. SAP SE*, 570 F. Supp. 3d 810, 838-41 (N.D. Cal. 2021) (excluding plaintiffs’ expert for putting forward a “flawed” analysis where he did not apply the HMT “as contemplated” by the merger guidelines).

102. This does not mean that qualitative evidence is irrelevant to consider in addition to quantitative analysis by an expert. Qualitative evidence can be relevant when used to supplement a quantitative HMT that determined the boundaries of the product market. In addition to *IQVIA* discussed above, 710 F.Supp.3d 329, 368-372 (D.D.C. Jan. 8, 2024), other cases have found the analysis of the government’s expert was sufficient despite relying on supplemental qualitative evidence because the expert had conducted a quantitative HMT, e.g., *United States v. Aetna, Inc.*, 240 F. Supp. 3d 1, 33-41 (D.D.C. 2017).

103. Judge Mehta’s *Search* decision does not warrant a different approach here. In *United States v. Google*, 2024 WL 3647498, at \*68 (D.D.C. Aug. 5, 2024), the court cited the Eleventh Circuit’s decision in *McWane, Inc. v. FTC*, 783 F.3d 814, 829-30 (11th Cir. 2015), finding the absence of quantitative analysis “surprising,” but not “fatal,” 2024 WL 3647498, at \*68, and reached an opposite conclusion than the Sixth and Seventh Circuits. *McWane* is limited to a context where the reliability of the HMT was not being challenged and the qualitative evidence

consisted of “persistent price differences,” “distinct customers,” and a “lack of reasonable substitutes.” 783 F.3d at 829-30. Here, Professor Lee has not presented evidence that ad tech tools that facilitate “open-web display advertising” have persistent price differences from tools that transact other digital or display advertising, identified customers for different transactions, or analyzed substitution of multi-functional tools whose functions include “open-web display advertising.”

**8. Plaintiffs Did Not Provide Evidence of Supply-Side Substitution to Support their Markets.**

104. The attempt to define markets around a single use of multi-functional tools is not only a poor fit for how customers approach the tools in this market but also fails to account for the competitive constraint imposed by supply-side substitution. *Virtual Maint., Inc. v. Prime Comput. Inc.*, 11 F.3d 660, 665 (6th Cir. 1993) (“The relevant product market cannot be determined without considering the cross-elasticity of supply.”). On the supply-side, “if producers of product X can readily shift their production facilities to produce product Y, then the sales of both should be included in the relevant market.” *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1436 (9th Cir. 1995); *Twin City Sportservice, Inc. v. Charles O. Finley & Co.*, 512 F.2d 1264, 1271 (9th Cir. 1975) (“Where the degree of substitutability in production is high, cross-elasticities of supply will also be high, and again the two commodities in question should be treated as part of the same market.”).

105. Plaintiffs fail to account for how multi-functional ad tech tools could “readily shift” from transacting non-open web display ad impressions to transacting more open-web display ad impressions. To “shift production” between ad formats, they would not need to build new capabilities. Plaintiffs’ expert Prof. Lee defined his markets only from the demand-side. As demonstrated by contemporaneous business documents, Google has always competed in the

display advertising business by expanding the functionalities of its ad tech tools to new formats and channels in order to respond to the needs of advertiser and publisher customers. FOF ¶ 391. “In a world of rational economic actors,” if Google actually raised prices above competitive levels for tools capable of facilitating “open-web display ads” or restricted output, “many, if not all,” of Google’s competitors could choose to shift their ad tech focus and capabilities to “open web display ads.” *Gulf States Reorg. Grp., Inc. v. Nucor Corp.*, 721 F.3d 1281, 1287 (11th Cir. 2013).

106. Furthermore, there are numerous ad tech tools that, while they do not currently transact “open-web display ads,” could readily shift to transacting “open-web display ads.” *Twin City Sportservice, Inc. v. Charles O. Finley & Co.*, 512 F.2d 1264, 1271 (9th Cir. 1975) (“Substitutability in production refers to the ability of firms in a given line of commerce to turn their productive facilities toward the production of commodities in another line because of similarities in technology between them.”). Ad tech with multiple functions could also shift to increase supply of open-web display ads. Any market definition must take into account this supply elasticity. *E.g., Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir. 1995) (affirming finding that a “reasonable market definition must also be based on supply elasticity”).

**D. Each of Plaintiffs’ Markets Is Not a Proper Antitrust Market Because Each Excludes Reasonably Interchangeable Substitutes.**

**1. The Alleged “Advertiser Ad Network for Open-Web Display Advertising” Market Is Not a Proper Antitrust Market.**

107. Plaintiffs’ “advertiser ad network for open web display advertising” market fails because it excludes “reasonably interchangeable” substitutes discussed above. *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 683 (4th Cir. 2016).

108. At the outset, the term “advertiser ad network” is not one commonly used in the industry nor one that Plaintiffs’ lead market definition expert could “recall hearing . . . prior to this

case.” FOF ¶ 654. Likewise, Plaintiffs’ fact witnesses did not present definitions of the term consistent with Plaintiffs’ understanding. FOF ¶ 655.

109. Plaintiffs have defined the term in such a way that almost all the products that might be considered “advertiser ad networks” by the industry are excluded except Google Ads and two competitors. The term “ad networks” traditionally referred to tools that aggregate third-party publisher inventory and offer it to advertisers, which was a two-sided product serving advertisers and publishers. Plaintiffs’ witnesses agreed that those ad networks are two-sided, but Plaintiffs’ market definitions do not purport to include any publisher side of an ad network. FOF ¶ 655. The traditional conception of “ad network” has since become obsolete; today the term is used to refer to tools like the ones from Facebook, Amazon, and TikTok that primarily enable purchasing on owned-and-operated inventory, and sometimes third-party inventory as well. FOF ¶¶ 656, 688. Yet Plaintiffs exclude from their market the integrated advertising tools offered by Meta and Amazon, despite evidence showing that advertisers switch “fairly frequently” between these tools and Google Ads. FOF ¶¶ 689-691 (integrated buying tools recognized by industry as competitors with Google Ads).

110. According to Plaintiffs’ market definition expert, the term “advertiser ad networks” refers to buying tools that are characterized by two features: “a simplified user interface that is useful to smaller advertisers” and “the ability to pay on a CPC or cost-per-click basis.” 9/19/24 PM Tr. 99:6-14 (Lee).

111. As Plaintiffs see it, applying their very narrow definition of “advertiser ad networks for open-web display advertising,” and based on generalizations about the interchangeability of products and competition, they assert that there have only been two competitors to Google Ads

during the period for which they calculated market share: Criteo and (for the period of time that it sold third-party website inventory) Facebook Audience Network.

112. Professor Lee has not offered evidence of industry recognition or substitution patterns that mirror the limited market he has defined consisting of two or three firms. The evidence shows that advertisers substitute spending between “advertiser ad networks” and other buying tools. FOF ¶¶ 664, 687. No competitive analysis documents limit Google Ads’ competitors to these two buying tools nor do they define market shares for such a market. FOF ¶ 659.

113. In addition, no competitive analysis describes Google as number one in ad tech or display ads; Google has viewed itself as occupying “second place” compared to Facebook “since 2014.” FOF ¶ 238. Plaintiffs have not cited a single monopolization case in which the defendant has consistently recognized itself as number 2 in a market.

114. In addition, no competitive analysis describes Google as number one in ad tech or display ads; Google has viewed itself as occupying “second place” compared to Facebook “since 2014.” FOF ¶ 238. Plaintiffs have not cited a single monopolization case in which the defendant has consistently recognized itself as number two in a market. On that basis, and Plaintiffs’ exclusion of other significant competition that Google faces and Plaintiffs’ exclusion of other significant competition that Google faces, Plaintiffs cannot meet their burden. *E.g., Satellite Television & Associated Resources, Inc. v. Continental Cablevision of Va., Inc.*, 714 F.2d 351, 356 (4th Cir. 1983) (plaintiff “fails to realize that it is exactly this failure to provide as evidence anything more than generalizations about the interchangeability and competition among the [products] . . . that is fatal”).



115. The evidence demonstrates that Plaintiffs overlook other major sources of competition, including demand-side platforms that enable advertisers to access and bid on much of the same publisher inventory as Google Ads and compete head-to-head in the same auctions for the same impressions as Google Ads. FOF ¶¶ 662, 665-666. These platforms are the primary buying tools for many advertisers, including for “open-web display” inventory. Evidence of advertiser spending patterns is consistent with advertisers substituting spend away from Google Ads, an “advertiser ad network,” to third-party buying tools like demand-side platforms. FOF ¶ 664.

116. Plaintiffs argue demand-side platforms are not reasonably interchangeable with advertiser ad networks because they are primarily used by large customers and their pricing structures are different. FOF ¶ 671. These assertions are factually inaccurate, and fail to carry Plaintiffs’ burden of proving the products are not reasonably interchangeable. *United States v. Sabre Corp.*, 452 F. Supp. 3d 97, 142 (D. Del. 2020) (noting that where the defendant has introduced evidence that a product should be part of the relevant market, “the burden is on the [plaintiff] to show that [that product] is not part of the relevant . . . market”) (abrogated on other grounds).

116.1. As to customers, Plaintiffs argue that demand-side platforms serve larger advertisers, so they are not a reasonable substitute for “smaller advertisers with less complex advertising needs.” FOF ¶ 671. But many smaller advertisers use DSPs both because the interface for tools like DV360 are accessible for them and because they work through ad agencies that work through DSPs. FOF ¶¶ 676-677. By the same token, the large advertisers that use Google Ads account for a majority of the ad spend on both “advertiser ad networks” and DSPs. FOF

¶¶ 672-674. As a result, large advertisers act as a competitive constraint because they make up the vast majority of Google Ads revenue and could easily substitute to demand-side platforms. FOF ¶ 675.

116.2. On cost structure, Plaintiffs maintain that advertiser ad networks offer prices based on impressions (cost-per-mille) while demand-side platforms offer a cost-per-click pricing structure. Many demand-side platforms offer the same cost structure that “advertiser ad networks” do. FOF ¶ 680. Moreover, the difference in cost structure does not ultimately lead to price differences and is becoming an outmoded difference with new automated bidding technologies. FOF ¶ 682. In any event, “in a differentiated market, one would expect prices for two differentiated products to be different.” *IGT v. Alliance Gaming Corp.*, 702 F.3d 1338, 1346 (Fed. Cir. 2012); *AD/SAT, Div. of Skylight, Inc. v. Associated Press*, 181 F.3d 216, 228 (2d Cir. 1999) (“significant price differences do not always indicate distinct markets.”). Courts have “repeatedly rejected efforts to define markets by price variances.” *Murrow Furniture Galleries, Inc. v. Thomasville Furniture Indus., Inc.*, 889 F.2d 524, 528 (4th Cir. 1989).

117. Evidence from market participants confirm that these two products are substitutes in the same market. AdX data, for example, show a decrease in spend on Google Ads at the same time as an increase in spend on other buying tools that include demand-side platforms. FOF ¶ 664. Demand-side platforms and Google Ads even compete on an impression-by-impression basis in the same auctions. FOF ¶ 665. Tellingly, Criteo (the only remaining competitor in Plaintiffs’ concocted “advertiser ad network”) self describes its competition as DSPs, such as DV360 and the

Trade Desk. FOF ¶ 668. Likewise, DSPs (such as The Trade Desk) consider themselves competing with Google Ads. FOF ¶ 669.

118. Plaintiffs also exclude tools that can be used to access display inventory without an advertiser buying tool. For example, publishers' self-service platforms, like Meta's Amazon's, and TikTok's, allow advertisers to purchase owned-and-operated inventory directly from publishers. FOF ¶ 281. Evidence also shows that advertisers shift spending out of "open-web display" into these integrated buying tools, which would require spending through tools excluded from Plaintiffs' "advertiser ad networks" market. FOF ¶¶ 687, 689.

119. Plaintiffs also exclude ad buying tools that do not transact in "open-web display ads," such as tools for purchasing in-app or instream video ad space, even though Google Ads serves all of these ad channels and ad formats. Google considers buying tools that serve primarily native, for example, to compete with Google Ads, and advertisers can easily shift spend between banner ads and in-app ads in order to optimize performance. FOF ¶¶ 693, 695. These tools are therefore also reasonable substitutes for "advertiser ad networks" that are not excluded from Plaintiffs' market.

**a. The Alleged "Ad Exchange for Indirect Open-Web Display Advertising" Market Is Not a Proper Antitrust Market.**

120. Plaintiffs' purported market of "ad exchanges for indirect open-web display advertising" excludes various ad tech tools and ways to advertisers and publishers in advertising that are "reasonably interchangeable," including as set forth above, for transacting display ads other than open-web display ads.

121. Exchanges are not necessary for the transactions of ads. Plaintiffs' expert defines the "valuable features" of ad exchanges as allowing "open-web publishers to auction off their remnant inventory to thousands of advertisers without having to form individual direct

relationships with each and every one.” 9/19/24 PM Tr. 72:25-73:7 (Lee). Numerous tools that are not third-party exchanges also fulfill the function of allowing “open-web publishers to auction off their remnant inventory,” and today programmatic direct functionalities allow publishers to do the same “without having to form individual direct relationships with each and every one” manually. Those tools are all reasonable substitutes for “ad exchanges for indirect” transactions.

122. For example, publishers can sell their ad space and access advertiser demand through ad networks or self-service platforms, without using ad exchanges. FOF ¶ 633. Such indirect sales are reasonable substitutes for selling ad space and accessing advertiser demand through ad exchanges.

123. Publishers also sell their ad space and access advertiser demand through direct deals with advertisers, facilitated by one or more ad tech tools, instead of through indirect, auction-based transactions on ad exchanges. For example, publishers can negotiate direct contracts with advertisers and facilitate those ad placements with publisher ad servers, without using ad exchanges. FOF ¶ 511. Publishers also can arrange such direct sales in an entirely automated fashion—called programmatic direct or guaranteed deals—using some combination of publisher ad servers, ad exchanges, or DSPs (though not necessarily all of them), but notably without transacting through the indirect auctions on the ad exchange that Plaintiffs’ case is focused on. FOF ¶ 511. Direct transactions are the predominant way of matching publishers and advertisers, accounting for up to 77% of U.S. display ad spending. FOF ¶ 496. And these ways for publishers to directly transact with advertisers are all competitive alternatives to ad exchange auctions. Indeed, advertisers use publisher ad servers specifically to create competition between direct deals and indirect, auction-based sales through ad exchanges, and shift spend between those sales

channels. FOF ¶¶ 503-504. Yet, Plaintiffs exclude all direct sale alternatives to auction-based ad exchange sales from their proposed relevant markets.

**b. The Alleged “Publisher Ad Server for Open-Web Display Advertising” Market Is Not a Proper Antitrust Market.**

124. Plaintiffs’ proposed “publisher ad servers for open web display advertising” market is flawed for similar reasons. *Berlyn Inc. v. The Gazette Newspapers, Inc.*, 73 F. App’x 576, 582 (4th Cir. 2003) (holding that a relevant market accounts for all products that “have reasonable interchangeability for the purposes for which they are produced.”) (quoting *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 404 (1956)).

125. *First*, tools that facilitate sales of inventory other than “open-web display advertising” compete with “publisher ad servers for open-web display advertising.” As users have spent increasing amounts of time on mobile apps, publishers, including publishers with “open-web inventory,” have also shifted their content from websites to apps or created apps that display the same content. FOF ¶¶ 601-603. If a publisher ad server for “open-web display advertising” were to do a poor job of monetizing content for a publisher, that publisher could push more content and users to its app and sell more ad space there. *Id.*

126. *Second*, publishers’ ability to turn to in-house ad serving tools to manage and sell their ad inventory also competes with “publisher ad servers for open web display advertising.” Publishers use in-house ad serving tools for the same purpose and same ad formats and channels as they use ad servers provided by third-party vendors; the only difference is that in-house ad serving tools are built and maintained by the publisher. FOF ¶ 607. “Courts have generally recognized that when a customer can replace the services of an external product with an internally-created system, . . . the self-production of all or part of the relevant product[] should be included in the same market.” *United States v. Sungard Data Sys., Inc.*, 172 F. Supp. 2d 172, 186 (D.D.C.

2001). It does not matter “whether the companies that currently use internal solutions have the capacity to enter the market as vendors for others, but whether the customers that currently use [external products] would switch to an internal [one] in response to a SSNIP.” *Id.* at 187 (internal disaster recovery computer systems are in the same market as shared systems); *see also Spectrofuge Corp. v. Beckman Instruments, Inc.*, 575 F.2d 256, 278 (5th Cir. 1978) (in-house service personnel compete with external service organizations); Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 535e (5th ed. 2023) (“If iron ore is the relevant market and if shares are best measured there by sales, internally-used ore—so-called captive output—is part of the ore market even though it is not sold as such.”).

127. Publishers can and do switch their inventory management from externally sourced publisher ad servers to in-house “publisher ad servers.” The relevant inquiry is not whether a publisher’s own in-house server can be used to sell inventory on third-party websites, but whether a publisher could switch to an in-house one for that purpose. *Sungard*, 172 F. Supp. 2d at 187; *cf.* Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 535e (5th ed. 2023) (noting that higher prices “may induce an integrated firm to expand its [] production—to supply others in direct competition with the alleged monopolist”—acting as a further constraint on the market). Companies like Amazon, Reddit, and Snapchat literally substituted Google’s ad server, which is in Plaintiffs’ market, for their own in-house ad servers, which are not. FOF ¶ 610. Publishers can substitute in the other direction, too. IMDb (a major entertainment site owned by Amazon) was previously an Amazon owned and operated company, which means that its inventory was deemed “inaccessible” by Google because it was served through Amazon’s own tools. FOF ¶¶ 611, 617. In 2023, IMDb switched to managing all

of its indirect demand sources through Google Ad Manager, and its inventory became available through AdX. FOF ¶ 617. Other major publishers that use their own in-house ad servers include Meta (Facebook and Instagram), TikTok, Amazon, Reddit, Snapchat, Pinterest, eBay, and LinkedIn. FOF ¶ 608. Kevel offers a solution that enables publishers such as Ticketmaster, Beth Bath & Beyond, and Yelp to build their own ad servers in weeks and at an affordable cost of as low as \$80,000. FOF ¶ 614.

128. *Third*, publishers can choose to monetize their inventory without using any publisher ad server. For example, millions of publishers use Google’s AdSense ad network to sell their inventory indirectly, and it is “very common” for those publishers to use no publisher ad server at all. 9/23/24 AM Tr. 15:12-14 (Korula). Publishers can also use the Prebid header bidding wrapper to gather bids from exchanges, run an auction to select from those bids, and serve the winning ad without any publisher ad server. FOF ¶¶ 618-619. Plaintiffs’ markets do not account for the competitive pressure exerted by other tools that can help publishers achieve the same purposes of a publisher ad server without using a publisher ad server.

#### **E. Geographic Market**

129. Plaintiffs also bear the burden to define a relevant geographic market. *Satellite Television & Associated Resources, Inc. v. Cont’l Cablevision of Va.*, 714 F.2d 351, 355 (4th Cir. 1983). The relevant geographic market is “the area in which buyers or sellers of the relevant product effectively compete.” *Consul, Ltd. v. Transco Energy Co.*, 805 F.2d 490, 495 (4th Cir. 1986). A geographic market must “correspond to the commercial realities of the industry and be economically significant.” *Brown Shoe Co. v. United States*, 370 U.S. 294, 336-37 (1962).

130. When evaluating geographic markets, courts must keep in mind a core tenet of American antitrust laws: they “do not regulate the competitive conditions of other nations’ economies.” *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 582 (1986). The

U.S. antitrust laws are concerned only with U.S. consumer welfare, not the welfare of foreign consumers. *Vollrath Co. v. Sammi Corp.*, 1989 WL 201632, at \*8 n.21 (C.D. Cal. Dec. 20, 1989) (noting that “harm to . . . Korean manufacturers could not form the basis of an antitrust claim”).

131. Plaintiffs propose two geographic markets: one limited to the United States, and an alternative market based on worldwide impressions. The evidence demonstrates that Plaintiffs’ proposed global market is legally untenable.

132. *First*, it would be inappropriate to apply evidence relating to competitive conditions in the United States to the rest of the world. Competitive conditions are different in other countries, so a worldwide market is over-inclusive of geographic areas that do not share effective competition. Factors that are relevant to “whether a geographic market corresponds to commercial realities” include: “determinants that affect the behavior of market participants,” such as regulatory constraints and, most importantly, “the relationship between” elements such as “population, income, political boundaries, or geographic extent” and “the characteristics of competition in the relevant market within a particular area.” *Apani Sw., Inc. v. Coca-Cola Enters., Inc.*, 300 F.3d 620, 626-27 (5th Cir. 2002). Here, those factors all weigh against combining country markets into one worldwide market.

132.1. The goal of digital advertising transactions is to reach Internet users. But Internet users vary across countries based on differences in language, income, and preferences. FOF ¶¶ 711, 713. Advertising competition therefore varies along these metrics across countries.

132.2. Different countries have different regulatory landscapes that directly affect ad tech providers. FOF ¶¶ 712-713.



132.3. Empirical evidence demonstrates that the competitive conditions vary by country. The shares of AdX and Google Ads for indirect non-video impressions is different between the United States shares and worldwide shares. FOF ¶ 710.

132.4. Industry participants recognize these realities. Internal documents from Google and competitors analyze ad tech performance by region or country, not worldwide. FOF ¶ 709.

133. *Second*, permitting Plaintiffs to tack on an alternative, worldwide market violates the smallest market principle that Prof. Lee said was appropriate to avoid mistaken inferences of market power. FOF ¶ 704. This principle applies even to products, like technological tools, that can be “sold worldwide.” *United States v. Bazaarvoice, Inc.*, 2014 WL 203966, at \*27-28 (N.D. Cal. Jan. 8, 2014) (agreeing with the government that the United States is the relevant geographic market because, in part, of differences in language as well as recognition by market participants “that there are separate geographic markets”). Plaintiffs’ invocation of *United States v. Pabst Brewing Co.*, 384 U.S. 546 (1966); *see* PCOL ¶ 34, to suggest the opposite is misplaced given that *Pabst* was a Clayton Act case where the Court held that it was not essential “for the Government to show a relevant geographic market, *Pabst*, 384 U.S. at 548. That says nothing about a Sherman Act case where it is black letter law that the relevant market “has two components—the relevant product market and the relevant geographic market.” *E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 441 (4th Cir. 2011).

**F. Google Should Not Be Judicially Estopped From Asserting One Two-Sided Market.**

134. There is no legal or factual basis to sustain Plaintiffs’ effort to avoid *Amex*’s two-sided market doctrine under the guise of judicial estoppel. Plaintiffs contend that Google’s motion to dismiss in another case—which had to assume the well-pled facts of the complaint—judicially

estops Google from arguing for application of the Supreme Court’s controlling *Amex* decision in this case. Dkt. 1234 at 1-3. Plaintiffs are wrong because Google took no contrary *factual* position in the other case, nor did the district court in that case even rely on the complaint-specific legal argument Plaintiffs cling to here (let alone a *factual* position, as required for judicial estoppel even to apply) in dismissing the complaint. Dkt. 1234 at 5-10. Judicial estoppel “protects against improper manipulation of the judiciary.” *Emergency One, Inc. v. Am. Fire Eagle Engine Co.*, 332 F.3d 264, 274 (4th Cir. 2003). To establish judicial estoppel, Plaintiffs must demonstrate that: (1) Google “seek[s] to adopt a position that is inconsistent with a stance taken in prior litigation”; (2) “the position [is] one of fact rather than law or legal theory”; (3) “the prior inconsistent position [was] accepted by the court,” and (4) Google advanced its inconsistent factual position to “intentionally [mislead] the court to gain unfair advantage.” *Lowery v. Stovall*, 92 F.3d 219, 224 (4th Cir. 1996); Dkt. 1234 at 4-5. Plaintiffs have not and cannot make any of those showings.

**1. Google’s Arguments in N.D. Cal. Were Legal Rather than Factual Arguments.**

135. Judicial estoppel requires the prior position to have been “one of fact rather than law or legal theory.” *Lowery v. Stovall*, 92 F.3d 219, 224 (4th Cir. 1996); Dkt. 1234 at 5. That alone ends the inquiry here. As the Fourth Circuit has explained, “judicial estoppel exists to deter the use of *facts* from other litigation to manipulate a subsequent court that is unfamiliar with the prior *factual positions* assumed by the litigants.” *Emergency One, Inc. v. Am. Fire Eagle Engine Co., Inc.*, 332 F.3d 264, 274 (4th Cir. 2003) (emphasis added) (rejecting application of judicial estoppel to “a legal argument about what issues were raised and resolved at trial”).

136. Google’s argument in the N.D. Cal. Case was a legal argument, not a factual one. In its N.D. Cal. motion to dismiss, Google argued that the plaintiffs’ allegations regarding market definition were insufficient on the face of the complaint as a matter of law. Dkt. 1234 at 5-6.

Indeed, a defendant *cannot* make factual arguments in a motion to dismiss, in which “factual matter” must be “accepted as true” and which instead can only attack the legal sufficiency of the plaintiff’s allegations. *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009); *see also Adams v. 3D Sys., Inc.*, 2020 WL 1283712, at \*2 (D.S.C. Mar. 18, 2020) (“the motion-to-dismiss stage is not the time to consider opposing factual allegations”); *Harmon v. CB Squared Servs. Inc.*, 2009 WL 234982, at \*2 (E.D. Va. Jan. 30, 2009) (“the Court will disregard all factual arguments and exhibits submitted by Defendant ... when considering Defendant’s Motion to Dismiss”).

137. Because a defendant is limited to legal arguments on a motion to dismiss, courts have held that arguments made in motions to dismiss are not factual positions that can form the basis for judicial estoppel. *E.g., HTC Leleu Fam. Tr. v. Piper Aircraft, Inc.*, 2013 WL 12092211, at \*1 (S.D. Fla. Feb. 6, 2013) (judicial estoppel inapplicable where “Defendant simply argued that Plaintiff’s allegations, which had to be accepted as true at the motion to dismiss stage, failed to state a claim”); *Lehman Bro. Holdings, Inc. v. Hirota*, 2007 WL 6881841, at \*2 (M.D. Fla. Nov. 28, 2007) (same where defendant “assumed Plaintiff’s factual allegations as true and argued that the tort claims were barred”); *Hijack v. United Techs. Corp.*, 24 F. Supp. 2d 243, 251–52 (D. Conn. 1998) (same where “Defendant, accepting the allegations of plaintiff’s complaint as true for its motion to dismiss, took no position on this issue”); *Brown v. City of Central*, 2023 WL 2950613, at \*6 (M.D. La. Jan. 13, 2023) (at the motion to dismiss stage, “the Court does not consider any factual assertions made by Defendants” for purposes of estoppel); Dkt. 1234 at 5-6.

138. The same principle applies to the arguments made in Google’s motion to dismiss in the N.D. Cal. Case. At the motion-to-dismiss stage, Google did not (and could not) dispute the plaintiffs’ factual claims about the relevant market. It could only argue that the alleged market on which the plaintiffs’ antitrust claim was based did not constitute a relevant antitrust market as a

matter of law. *See, e.g., E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 442-48 (4th Cir. 2011) (reversing district court’s rejection of alleged geographic market on a motion to dismiss because district court based its ruling on facts about commercial realities); *Queen City Pizza, Inc. v. Domino's Pizza, Inc.*, 124 F.3d 430, 436 (3d Cir. 1997) (“Where the plaintiff fails to define its proposed relevant market with reference to the rule of reasonable interchangeability and cross-elasticity of demand, . . . the relevant market is legally insufficient and a motion to dismiss may be granted.”); *Chapman v. N.Y. State Div. for Youth*, 546 F.3d 230, 238–39 (2d Cir. 2008) (affirming dismissal where proposed market was “legally insufficient”); Dkt. 1234 at 5-7.

139. Google’s motion to dismiss the N.D. Cal. Case was precisely in line with this precedent. Google argued that the way *the plaintiffs* chose to allege the relevant market meant that *the plaintiffs* had no choice but to allege two separate markets. Dkt. 1234 Ex. 3 at 5. The motion never argued anything, as a factual matter, about how advertisers or publishers use the ad tech products at issue in the case. Nor did Google adopt any factual position that could be inconsistent with Google’s factual position about the relevant markets in this litigation—a position adopted after the benefit of extensive discovery to develop a factual record about the relevant market here.

**2. Google Did Not Assert an Inconsistent Factual Position in the N.D. Cal. Case.**

140. Plaintiffs’ judicial estoppel claim fails for the independent reason that Google’s position in the N.D. Cal. Case was not inconsistent with Google’s position here. Google argued in its N.D. Cal. motion to dismiss that the *plaintiffs*’ proposed “single market” for buy-side and sell-side platforms failed as a matter of law given the complaint’s allegations. Dkt. 1234 Ex. 3 at 5. Google noted that the plaintiffs alleged that the buy-side and sell-side services were “distinct” from each other, and explained that “In light of these allegations, Plaintiffs fail to adequately plead a single relevant product market.” *Id.* Google acknowledged in a footnote that “allegations not

made” in the case could support the single two-sided market the plaintiffs asserted, but explained that the plaintiffs’ failure to make any such allegations was fatal. Specifically, Google stated, consistent with its position in this case: “Although business practices impacting the products and services offered to *publishers* surely could have important consequences for *advertisers*, that is not sufficient, absent other allegations not made here, to support the broad overarching services market pled by Plaintiffs here.” *Id.* at 5 n.2.

141. Google therefore did not take the position that a single market encompassing buy-side and sell-side products failed. It took the position that, as a matter of law, the allegations in the N.D. Cal. Complaint were insufficient to allege such a market. Dkt. 1234 Ex. 7 at 6-7. Nothing about that argument conflicts with Google’s arguments in support of a single two-sided market here.

142. Further, here, Google and Dr. Israel have not defined or offered a single two-sided market with precise parameters. FOF ¶ 528 n.11. Rather, the contention that the proper market would be a more expansive single two-sided market here shows that Plaintiffs’ three markets are too narrow and improperly defined. Plaintiffs’ asserted markets in this case were not at issue in the N.D. Cal. Case, where Plaintiffs asserted a market of search and online display advertising. Order, N.D. Cal. Case, ECF No. 143, at 6.

### **3. The N.D. Cal. Court Did Not Accept Any Factual Representation by Google.**

143. Not only did Google not make any factual representation in the N.D. Cal. Case, Plaintiffs have not established that any “prior inconsistent [factual] position [was] accepted by the court,” *Lowery v. Stovall*, 92 F.3d 219, 224 (4th Cir. 1996), another essential requirement for judicial estoppel. For estoppel purposes, “judicial acceptance means” “that the first court has adopted the position urged by the party . . . as part of a final disposition.” *Id.* This element serves

an important function: “Without the court’s adopting the party’s position, it cannot be said that the integrity of the judicial process has been compromised.” *In re Merry-Go-Round Enterprises, Inc.*, 229 B.R. 337, 347 (D. Md. 1999) (citing *Konstantinidis v. Chen*, 626 F.2d 933, 939 (D.C. Cir. 1980)). Accordingly, “where the court’s disposition of a matter does not reflect an awareness of the party’s position, the judicial acceptance element of judicial estoppel is not satisfied.” *Id.* at 347 (D. Md. 1999) (citing *Teledyne Industries, Inc. v. N.L.R.B.*, 911 F.2d 1214, 1218–19 (6th Cir. 1990)).

144. The Court in the N.D. Cal. Case never addressed—let alone accepted—Google’s purely legal arguments about whether advertiser and publisher products or services are in the same market or whether that market is two-sided. The argument became moot before it was necessary for the court to read—let alone resolve—Google’s motion to dismiss.

145. The N.D. Cal. Case originally involved a putative class action on behalf of advertisers, but the complaint alleged a market that also included publisher tools. Google’s opening motion-to-dismiss brief argued, among other things, that the relevant market, as pled by the plaintiffs, could not contain tools used by publishers given that “none of the named Plaintiffs is alleged to be an online *publisher*” that uses publisher-facing tools. Dkt. 1234 Ex. 3 at 5. After Google filed its opening brief, the parties agreed at a case management conference on February 4, 2021, that publisher tools would be addressed in a separate case filed by publishers, and that the complaint filed by advertisers would assert a different market limited to advertiser tools. Dkt. 1234 Ex. 4 at 20-28. The court directed the new publisher plaintiffs, who had not previously been parties to the suit, to file a separate complaint. *Id.* at 8-10, 27-28. At the time of the conference, the advertiser plaintiffs had not yet filed their opposition to Google’s motion to dismiss. Nor had the court read Google’s opening motion to dismiss brief, explaining: “I don’t read opening briefs

until a case is fully briefed, so *I have not looked at your motion to dismiss.*” *Id.* at 20 (emphasis added). The court explained that, moving forward, it would only consider arguments in Google’s motion to dismiss that were not rendered moot by the parties’ agreement. *Id.* at 28. As counsel for Google observed, the advertisers’ change in their alleged market “obviously . . . takes away one of [Google’s] arguments” in its opening brief—namely, that plaintiffs had not plausibly pleaded a single market. *Id.* at 20-21.

146. Consistent with the discussion at the case management conference, the briefing going forward did not address whether the relevant market for the plaintiffs’ allegations should be viewed as a single market containing advertiser and publisher products, because that argument had been mooted by the parties’ agreement to file separate advertiser-side and publisher-side complaints. Dkt. 1234 Ex. 5 at 3; Dkt. 1234 Ex. 6 at 1.

147. The N.D. Cal. court decided Google’s motion based on Google’s remaining arguments, dismissing the complaint with leave to amend. Consistent with the understandings reached at the case management conference, in addressing market definition, the N.D. Cal. court observed that while plaintiffs’ original class action accused Google of “monopolizing the intermediary services that connect advertisers and publishers of display advertisements,” the plaintiffs “do not dispute that any future amended complaint will be narrowed to address only the claims of digital advertisers, not digital publishers.” Dkt. 1234 Ex. 7 at 6. The N.D. Cal. court then agreed with Google that “the alleged market for ‘online display advertising services’ on the ‘open web’ improperly excludes other ways for advertisers to reach publishers without using Google’s services.” *Id.*

148. Accordingly, the N.D. Cal. court did not accept or resolve any legal argument (let alone a factual argument as required) about whether, as a matter of law, the relevant market should

be one or two-sided. Google’s argument was mooted before the court could “rely upon or so much as take notice of” the argument. *In re Merry-Go-Round Enterprises, Inc.*, 229 B.R. 337, 347 (D. Md. 1999); *Konstantinidis v. Chen*, 626 F.2d 933, 939 (D.C. Cir. 1980).

#### **IV. Plaintiffs Fail to Prove Google Has Monopoly Power in Any Relevant Market.**

149. Plaintiffs’ unlawful monopolization claims also fail because Google lacks monopoly power in any market for digital ad transactions, including Plaintiffs’ proposed markets.

150. Monopoly power can be shown through either direct or circumstantial evidence. “Direct evidence” of monopoly power includes “evidence of supracompetitive prices and restricted output.” *Broadcomm Corp. v. Qualcomm Inc.*, 501 F.3d 297, 307 (3d Cir. 2007) (citing *United States v. Microsoft Corp.*, 253 F.3d 34, 51 (D.C. Cir. 2001)); *Blue Cross & Blue Shield of United of Wis. v. Marshfield Clinic*, 65 F.3d 1406, 1412 (7th Cir. 1995); *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir. 1995); *R.J. Reynolds Tobacco Co. v. Philip Morris Inc.*, 199 F. Supp. 2d 362, 381 (M.D.N.C. 2002), *aff’d*, 67 Fed. App’x 810 (4th Cir. 2003) (discussing direct evidence and citing *Rebel Oil*).

##### **A. Direct Evidence: Prices**

151. Proof of increasing prices alone does not demonstrate that competition has been injured or prices are supracompetitive because increasing prices are “fully consistent with a free, competitive market.” *FTC v. Qualcomm Inc.*, 969 F.3d 974, 990 (9th Cir. 2020); *see also Safeway Inc. v. Abbott Labs.*, 761 F. Supp. 2d 874, 887 (N.D. Cal. 2011) (same).

152. Here, Plaintiffs provide no evidence of rising prices and whatever claims they do make about prices fail to account for increasing demand. To prove monopoly power directly, supracompetitive pricing must be accompanied by restricted output. *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir. 1995). “Where . . . output is expanding at the same time prices are increasing, rising prices are equally consistent with growing product demand.” *Ohio v. Am.*



*Express Co.*, 585 U.S. 529, 549 (2018) (quoting *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 237 (1993)).

153. Courts account not simply for the nominal price but also the quality-adjusted price. *Freeland v. AT&T Corp.*, 238 F.R.D. 130, 149 (S.D.N.Y. 2006) (“an analysis of price change in a product must account for changes in the product over time ‘so that only real price changes will be measured,’” and that “the lack of any attempt to include an independent variable for quality in an investigation of price changes is especially remarkable” in an antitrust case). “The economic term ‘quality-adjusted prices’ captures both the nominal price and total quality of a particular product.” *In re Qualcomm Antitrust Litig.*, 328 F.R.D. 280, 309 (N.D. Cal. 2018).

153.1. Courts account for quality because a firm can lawfully increase prices to reflect improvements in quality. *Harrison Aire, Inc. v. Aerostar Int’l, Inc.*, 423 F.3d 374, 381 (3d Cir. 2005) (“Competitive markets are characterized by both price and quality competition, and a firm’s comparatively high price may simply reflect a superior product.”); *In re HIV Antitrust Litig.*, 2023 WL 3089820, at \*7 (N.D. Cal. Mar. 7, 2023) (“One product may have the same price as another product. However, if the first product is of better quality than the second,” then the “first product is actually cheaper than the second.”).

153.2. A “reasonable finder of fact cannot infer monopoly power just from higher prices—the difference may reflect a higher quality more costly to provide.” *Blue Cross & Blue Shield United of Wisc. v. Marshfield Clinic*, 65 F.3d 1406, 1412 (7th Cir. 1995); *Xerox Corp. v. Media Servs., Inc.*, 660 F. Supp. 2d 535, 549 (S.D.N.Y. 2009) (higher price “hardly supports a reasonable inference of

supracompetitive pricing” without considering “potentially confounding variables”).

153.3. Plaintiffs’ own pricing analysis expert, Professor Simcoe, confirms that higher quality products command higher prices. FOF ¶ 1149.2 (acknowledging that “superior” features “would be priced” in “the real world”).

153.4. Despite this, Plaintiffs’ experts have not done quality-adjusted price comparisons of the products in this case; they compared only nominal prices and fees. FOF ¶¶ 1151. None of Plaintiffs’ experts were even qualified to offer opinions on ad tech product quality.

153.5. Professor Lee stated throughout his report that market power and supracompetitive prices must be measured by quality-adjusted prices, but he testified that the only quality he would take into account was reduced quality from the anticompetitive conduct. FOF ¶ 1150. And he testified that the reduced quality he was referring to was the same as the anticompetitive conduct he described based on Google not sharing its customers and technology with its rivals. FOF ¶¶ 590-591, 700. He did not assess the quality of Google’s products or other products as a whole. FOF ¶ 1151.

154. Google’s products in particular have offered advertiser and publisher customers better quality matches. For publishers, the data show that the average revenue such sellers generate from their inventory has trended upward between 2014 and 2022. FOF ¶ 1141.

155. Likewise, for advertisers, the experts for both Plaintiffs and Google agreed that the average “cost per click” has trended downward and the average click-through rate for Google Ads advertisers has gone up during that period, and that these factors were relevant to assessing quality.

FOF ¶¶ 1139-1140, 1143. The data show that, while fees have remained stable, publishers using Google products are making more money, FOF ¶ 1141, advertisers using Google products are spending less money to place ads, FOF ¶ 1139, and users are being served ads that they are more likely to actually click, FOF ¶ 1140.

156. When viewing Google’s fees across its products for advertising transactions, and without even accounting for demand and quality factors, Google’s prices are below the majority of its competitors. FOF ¶¶ 1153-1154. This follows from economic studies that suggest integrated tools operate with lower costs and generally at lower prices given that only one firm needs to make a profit across the stack. FOF ¶¶ 773-776. Plaintiffs did not contradict this; they presented no evidence that Google’s fees taken as a whole were anything other than among the lowest in the industry.

157. Moreover, both Google’s fees and the industry’s average fees as a percentage of ad spending went down from 2014 to 2022, underscoring the competitive pressures faced by Google and its rivals. FOF ¶¶ 1145-1146; *United States v. Google LLC*, 2024 WL 3647498, at \*88 (D.D.C. Aug. 5, 2024) (“That prices have remained flat” is “inconsistent with the notion that Google has monopoly pricing power.”). The data showing this decline in industry average fees was also undisputed by Plaintiffs. Even in *United States v. Google*, where prices remained flat in only 40 percent of the market, not as here the entirety of the market, the court found no monopoly power in a search ad market. 2014 WL 3647498, at \*88 (D.D.C. Aug. 5, 2024); *see also Somers v. Apple, Inc.*, 729 F.3d 953, 964 (9th Cir. 2013) (finding implausible a claim of anticompetitive harm when firm “charged the same price . . . irrespective of the absence or presence of a competitor”).

## **B. Direct Evidence: Output**

158. Plaintiffs have failed to show evidence of reduced output; to the contrary, the evidence shows dramatic increases in output. FOF ¶ 1104-1106. Digital display advertising output

served by ad tech has increased eighteen-fold from 2008-2022, from \$7.6 billion in 2008 to \$136.7 billion in 2022. FOF ¶¶ 1104. For example, exchange revenues for open-web display ads, according to Plaintiffs' expert, doubled from \$50 million in January 2018 to over \$100 million per month by the end of 2022. FOF ¶ 1106.1. Output is not only growing, but has consistently beat industry projections underscoring the dynamism of the market.

159. Plaintiffs argued that the evidence of increased output does not demonstrate that output would not have been higher absent conduct by Google. On cross examination of Dr. Israel, Plaintiffs presented a demonstrative containing charts of historical monopolies in industries that were also characterized by increasing output. 9/26/24 PM Tr. 79:10-80:7 (Israel). Plaintiffs made no attempt to show that those industries were comparable to ad tech. And notwithstanding the comparisons, Plaintiffs presented no evidence that output would have been higher absent Google's conduct.

160. Unlike the comparators Plaintiffs point to, not only has output grown here, most of that increased output has gone to Google's competitors, not Google. Google's share in a single market for ad tech tools has steadily declined from its highest, 46% in 2012, to 25% in 2022. FOF ¶ 576. As Dr. Israel explained, the comparators Plaintiffs identified are thus "very different" from Google because they are "pretty well-known examples where we have firms operating effectively" as monopolists to capture increase in output. 9/26/24 PM Tr. 117:7-118:4 (Israel).

161. This growth in output reflects not only a dramatic increase in the number of ad impressions being served but also the value and quality being delivered across the display advertising industry. Because of the numerous innovations in the industry, including ones that Google has helped introduce or advocate for, the quality and usefulness of advertising matches has improved significantly. As explained below, innovations like real-time bidding have increased

spending on digital advertising, helped advertisers reach more relevant users (i.e., those more likely to click-through on an ad), and made publishers more revenue.

### C. Circumstantial Evidence

162. To show monopoly power using indirect evidence, a plaintiff must: “(1) define the relevant market; (2) show that the defendant owns a dominant share of that market; and (3) show that there are significant barriers to entry and show that existing competitors lack the capacity to increase their output in the short run.” *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir. 1995). The “Supreme Court has never found a party with less than 75% market share to have monopoly power.” *Kolon Indus. Inc. v. E.I. du Pont de Nemours & Co.*, 748 F.3d 160, 174 (4th Cir. 2014). A plaintiff using market share to establish monopoly power also ““must show that new competitors face high market barriers to entry and that current competitors lack the ability to expand their output to challenge a monopolist's high prices.”” *Intell. Ventures I LLC v. Cap. One Fin. Corp.*, 99 F. Supp. 3d 610, 624 (D. Md. 2015) (quoting *Image Tech. Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1208 (9th Cir. 1997)).

163. Notably, a dominant market share does not alone prove monopoly power. *United States v. Microsoft*, 253 F.3d 34, 54 (D.C. Cir. 2001) (“because of the possibility of competition from new entrants, looking to current market share alone can be misleading”). “The relative effect of percentage command of a market varies with the setting in which that factor is placed.” *United States v. Columbia Steel*, 334 U.S. 495, 528 (1948); see *Rebel Oil Co. v. Atl. Richfield Co.*, 51 F.3d 1421, 1439 (9th Cir. 1995) (“A mere showing of substantial or even dominant market share alone cannot establish market power sufficient to carry out a predatory scheme.”).

164. Circumstantial evidence of monopoly power focuses on market structure. *Kolon Indus. v. E.I. du Pont de Nemours & Co.*, 748 F.3d 160, 174 (4th Cir. 2014) (“Beyond percentage market share, some courts have also focused on the durability of the defendant’s market power,

particularly with an eye toward other firms' (in)ability to enter the market." (internal quotations and citations omitted)); ABA Section of Antitrust Law, *Antitrust Law Developments* 236 (8th ed. 2017) (structural characteristics indicating monopoly power include "the relevant size and strength of competitors, . . . probable development of the industry, . . . potential competition").

165. In a two-sided market, "indirect network effects thus limit the platform's ability to raise overall prices and impose a check on its market power." *Ohio v. Am. Express Co.*, 585 U.S. 529, 536 n.1 (2018).

**D. Google Lacks Monopoly Power in Any Market for Ad Tech Tools.**

166. "In the absence of a plausible market definition, courts are hard pressed to discern the nature or extent of any anticompetitive injury that plaintiff and other similarly situated parties may be suffering." *It's My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 681 (4th Cir. 2016); *see also Ohio v. Am. Express Co.*, 585 U.S. 529, 543 (2018) ("Without a definition of the market there is no way to measure the defendant's ability to lessen or destroy competition."). The failure to define proper antitrust markets, for reasons detailed above, defeats Plaintiffs' claims of monopoly power. Further: "When the strength of the market's boundaries is more dubious, higher shares should be required." Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 801a1 (5th ed. 2023).

167. Had Plaintiffs properly accounted for the overall transactions market, the resulting market share calculations for Google would depict a vastly different competitive landscape. As a share of the total spending on display advertisements in the United States, Google's products never made up more than 46% of the market in the period between 2008 and 2022. FOF ¶ 576. Moreover, that share has been steadily declining since 2012, and was 25% in 2022, establishing that Google cannot have had any durable market power, with all the competitive alternatives to which advertisers and publishers can turn. FOF ¶ 576.

168. The gerrymandered-nature of Plaintiffs' markets to generate high market shares is illustrated by adding to Plaintiffs' component-based markets just some of the alternatives that impose competitive constraints on Google—alternatives to which publishers and advertisers are increasingly turning.

168.1. In an advertiser buying tool market that accounts even just for demand-side platforms—without including all the other reasonable alternative buying tools Plaintiffs exclude—Google Ads' share of the U.S. indirect open web display (non-video) ad spending by advertisers would be no greater than 20% over the period from 2019 to 2022. FOF ¶ 685. And Google's share, including DV360 (Google's demand-side platform), would still be below 50%. FOF ¶ 686.

168.2. In Plaintiffs' ad exchange market, even by Plaintiffs' own account, Google's share of the market based on spend is lower than 50%. FOF ¶ 640. Accounting for other transaction types, other ad formats, and other ad channels, Google's share among ad exchanges for total U.S. display ad spending drops to only 17-18% during the 2019 to 2022 period. FOF ¶ 636.

168.3. In an ad server market that includes just the subset of publishers with in-house ad servers who produced data in this case (Meta, Pinterest, Snapchat, and TikTok), Google's share of the ad server market (including DFP, AdSense, and YouTube) was never higher than 45% from 2019 to 2022, and was only 38% in 2022. FOF ¶ 615.

169. The circumstantial evidence about the digital display advertising marketplace confirms that it is a highly competitive industry with new entrants and fast growing competition. Google faces pressures from a range of rivals who compete for its publisher and advertiser

customers. FOF ¶ 300. Meta has expanded from selling advertising on its own properties to connecting advertisers with third-party publishers through the Meta Audience Network (tracking Google’s strategy of going from selling advertising on owned-and-operated properties such as Search and YouTube to connecting with third-party publishers). FOF ¶¶ 329-340. Overall, Meta’s U.S. ad revenues grew from around \$200 million in 2008 to approximately \$50 billion in 2022. FOF ¶ 337. Likewise, through a series of acquisitions, Microsoft has emerged as a significant player with an integrated ad tech stack and has won major deals over Google such as the opportunity to be Netflix’s ad tech provider. FOF ¶¶ 304-328. Amazon is also a significant competitor with buy- and sell-side offerings, including header bidding products to serve publishers and a major buying platform for advertisers. FOF ¶¶ 341-346. Display ad spend on Amazon has grown from less than 1.8% in 2017 to 6.1% in 2022. FOF ¶ 344. TikTok—which has become the most downloaded app in the U.S.—has also become another major competitor for advertising dollars, growing from 0.2% of display ad spending in 2019 to 3.7% in 2022, and is projected to reach 5.2% by 2025. FOF ¶¶ 347-352.

170. There is also no evidence of decreased quality, in Google’s products or in the relevant market. Google has introduced thousands of innovations that have improved quality. FOF ¶ 16. For publishers on AdX, monthly revenue has increased steadily from 2014 to 2022. FOF ¶ 1141. For advertisers on Google Ads, the average click-through rates have increased from 0.2 percent to more than one percent between 2012 and 2022. FOF ¶ 1140. At the same time, cost-per-click for Google Ads customers has decreased. FOF ¶ 1139.

171. As the recent decision in *United States v. Google* concluded, in discussing Google’s position in the market for search advertising, “the recent history of new entrants, the strength of those entrants, and their growth show that barriers to entry are not so high as to compel the



conclusion that Google has monopoly power.” *United States v. Google LLC*, 2024 WL 3647498, at \*89 (D.D.C. Aug. 5, 2024). As the court found in that case, this factor alone requires the conclusion that Google lacks market power in the alleged markets.

172. The increasingly significant role of artificial intelligence (AI) further demonstrates that even if Google had any market power, it lacks the requisite “durability” that the Fourth Circuit has considered relevant when evaluating a monopolization claim. *Kolon Indus. v. E.I. du Pont de Nemours & Co.*, 748 F.3d 160, 175 (4th Cir. 2014) (“in light of DuPont’s reduced market share and lack of durable market power, the evidence cannot sustain a jury finding that DuPont had the ‘power to control prices or exclude competition’” or was truly predominant in the market’ during the relevant period”). The district court opinion in *United States v. Google LLC* noted that “new technologies may lower, or even demolish, barriers to entry” but found that AI would not sufficiently “change the market dynamic in the ‘foreseeable future’” for the search advertising markets at issue in that case. 2024 WL 3647498, at \*80 (D.D.C. Aug. 5, 2024) (quoting *United States v. Microsoft Corp.*, 253 F.3d 34, 55 (D.C. Cir. 2001)). Here, however, there is evidence that rapidly evolving technology has already deteriorated the artificial distinctions between Plaintiffs’ alleged markets, as AI tools offered by Google and its rivals automatically shift spending among formats and channels without any input from advertisers. FOF ¶¶ 288-295. Plaintiffs offer no account of how their allegations of market power are likely to persist into the future given that, as the industry participants who testified at trial agree, technological change is not just in the “foreseeable future” but the present. FOF ¶¶ 1206-1207.

173. Plaintiffs’ definition of the market as a narrowly drawn area of effective competition would mean that Google and Meta, or Google and Amazon, could merge their businesses of ad tech tools and advertising without impairing competition, a conclusion that

suggests Plaintiffs’ markets are drawn “without sufficient breadth to include the competing products” because they fail to “recognize competition where, in fact, competition exists.” *Brown Shoe Co. v. United States*, 370 U.S. 294, 326 (1962).

**E. Google Lacks Monopoly Power Even in Plaintiffs’ Artificially Defined Markets.**

174. Even accepting the three markets Plaintiffs delineated for purposes of this case, Plaintiffs fail to show monopoly power. In each of these purported markets, there is no evidence of restricted output or falling demand. There is also no analysis of quality-adjusted pricing. To the contrary, there has been explosive growth in display ad spending with more successful matches between advertisers and publishers than ever before—including using ad tech tools other than Google’s. Further, in each of the alleged markets, Plaintiffs also fail to show supracompetitive prices. And, in each market, Plaintiffs fail to consider the “commercial reality” that places competitive pressures on Google and challenges the durability of any market share it possesses. *Oksanen v. Page Mem’l Hosp.*, 945 F.2d 696, 710 (4th Cir. 1991) (en banc). Rather, as demonstrated by the consistent inflow of major competitors, these are markets with limited barriers to entry and considerable capacity by competitors to expand output.

**1. “Advertiser Ad Networks for Open-Web Display Advertising”**

175. In the market for “advertiser ad networks for open-web display advertising” Plaintiffs have no direct evidence of monopoly power. Although Plaintiffs assert a high market share in a gerrymandered market where Google allegedly has only two competitors—Criteo and (for a brief period) Meta Audience Network—if that market were accepted, Google would be the half-price or discount competitor. Plaintiffs’ own expert’s fee calculations show that Google Ads’ average fee is less than half of the average fees for the three tools that Plaintiffs consider to be “advertiser ad networks.” FOF ¶ 1184. And, as just noted, output is up across the market and

advertisers are receiving a greater return on their investment as their cost per click goes down and the click-through rate goes up. FOF ¶¶ 1139-1140.

176. Plaintiffs' expert also suggests that two Google experiments, one from 2014 and one from 2018, examining whether Google could increase its Google Ads fees by 1% support their claim of power in a market for "advertiser ad networks for open web display advertising." FOF ¶ 698. Plaintiffs offered no evidence of power over prices after 2018. FOF ¶ 698. The two experiments were run over short-term periods of hours or days that were not shown to be the basis for Google business decisions or to be supportive of conclusions over the medium- or long-term. FOF ¶¶ 698-699. Plaintiffs provided no evidence that Google was running experiments to corroborate these experiments in those two years, or any similar experiments in any other years. Even if valid, these experiments showing a temporary price increase over a day or days (rather than the medium- or long-term) would not demonstrate durable market power.

177. The 2014 experiment is also irrelevant because it dates to a period when Plaintiffs' experts have not opined that Google had market power. FOF ¶ 698.2. And both ultimately support the conclusion that there are other competitive constraints in this marketplace given that Google's fees have remained flat or declined during this period. Google did not actually raise prices suggesting the experiment is failing to capture competitive constraints on ad tech pricing. FOF ¶ 699.

178. And even if the experiment had any probative value in 2018, the ad tech landscape has changed so rapidly and significantly since then (including the continuing rise of display ads on social media and apps and the emergence of display ads on TikTok and retail media like Amazon) that this experiment would have no bearing on market power today. *E.g.*, FOF ¶ 440-468.

179. Beyond these direct indicia, the market for advertiser buying tools is intensely competitive because advertisers multi-home. FOF ¶ 663. Google’s own data from AdX confirm that 85% of spending on the exchange was attributable to buyers using two or more buying tools. FOF ¶ 663. Given pervasive multi-homing, there are considerably lower costs for those advertisers to switch buying tools and significantly greater capacity for competitors to expand their own output.

180. Plaintiffs counter that multi-homing reveals that the tools do not have identical uses. But the evidence shows advertisers multi-home to find the best return on investment and because it is relatively costless to substitute ad tech. FOF ¶¶ 425, 432. Further, even if there were some distinction among buying tools, products “need not be entirely the same.” *United States v. Google LLC*, 2024 WL 3647498, at \*67 (D.D.C. Aug. 5, 2024). “So long as ‘consumers can substitute the use of one for the other, then the products in question will be deemed functionally interchangeable.’” *Id.* (quoting *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 119 (D.D.C. 2004)).

181. In addition to multi-homing, the emergence of Supply Path Optimization places further competitive pressure on Google. Supply path optimization is the development in ad tech products to reduce the number of intermediaries that facilitate each transaction. FOF ¶ 272. Among these innovations are integrated products that give advertisers direct access to publishers, rendering a third-party buying tool superfluous. FOF ¶¶ 274-76, 567-568.

## 2. “Ad Exchanges for Indirect Open-Web Display Advertising”

182. In the market for “ad exchanges for indirect open web display advertising,” Plaintiffs have also failed to show monopoly power. By the calculation of Plaintiffs’ own expert, Google accounted for less than 50 percent of total U.S. ad spend each year during the 2018 to 2022 time period. FOF ¶ 640. Plaintiffs’ experts estimate revenue shares based on impressions, not spending, which unlinks sales to market value, but even those shares were less than 51% during

the same period. FOF ¶ 642. Given “the Supreme Court has never found a party with less than 75% market share to have monopoly power,” Plaintiffs face a steep climb in proving monopoly power in this alleged component market. *Kolon Indus. Inc. v. E.I. du Pont de Nemours & Co.*, 748 F.3d 160, 174 (4th Cir. 2014).

183. Even setting aside Google’s low market share, there is no other evidence of monopoly power. Output has exploded: by Plaintiffs’ own expert’s calculations, exchange revenues doubled from \$50 million in January 2018 to over \$100 million per month by the end of 2022. FOF ¶ 1106.1.

184. With respect to prices, Plaintiffs claim that Google’s AdX take rate of approximately an average 20% is supra-competitive. To support this, Plaintiffs’ experts say that the Google revenue share is higher than a weighted average market revenue share, and not the highest price. FOF ¶¶ 1160-1164. An above average price – a price less than some competitors and higher than others – cannot be labeled as a monopoly price. Google charges a revenue share for AdX that has been the same since 2008 (with the share originated with DoubleClick), and that share is consistent with the revenue shares charged by Google’s competitors . FOF ¶¶ 1160-1164. Plaintiffs’ experts do no analysis of these prices on a quality-adjusted basis. One expert (Professor Lee) made no attempt to compare Google’s prices to what it might charge in a non-monopoly situation; the other (Professor Simcoe) suggested based on unreliable analyses that Google’s revenue share was 2% higher than a but-for rate, which even he acknowledged was hardly evidence of an overcharge. FOF ¶¶ 626-630.

185. The average price calculations for exchanges also show that average prices do not reveal supra-competitive prices. Looking at prices on a per-exchange basis, a number of exchanges

charge *higher* than the average revenue shares. FOF ¶ 1162. The average revenue shares are being affected by a low price outlier. FOF ¶ 1164.

186. When third-party prices fell relative to the cost of Google’s offering (as was the case for ad exchanges), Google lost market share by Plaintiffs’ own expert’s account. FOF ¶ 647.1.

187. As with buying tools, multi-homing places significant constraints on Google’s market power in the alleged ad exchange market. As one illustration, 67% of U.S. DFP impressions are accounted for by publishers that use 4 or more exchanges, 85% by publishers that use 3 or more, and 94% by publishers that use 2 or more. FOF ¶ 646.6. For much the same reason, publishers who prefer to use an exchange other than with AdX can and do utilize alternative exchanges and competitor exchanges can readily expand output to capture Google’s customers.

188. Another competitive constraint in this alleged market are products competitors have introduced to let advertisers and publishers fully bypass third-party exchanges. Advertisers can purchase inventory directly from a publisher’s self-service platform, for example, or they can connect through ad-networks. FOF ¶ 633. Major competitors have launched products to disintermediate ad exchanges and connect advertisers directly with publishers, including The Trade Desk which has partnered with Reuters, The Washington Post, Gannett, USA Today, Conde Nast, Forbes Media, and more. FOF ¶ 565; *see United States v. Google LLC*, 2024 WL 3647498, at \*89 (D.D.C. Aug. 5, 2024) (the presence of rivals who “are not small firms likely to compete only at the margins” but instead “mega-retailers looking to aggressively expand” counsels against finding monopoly power).

### **3. “Publisher Ad Servers for Open-Web Display Advertising”**

189. In the “publisher ad servers for open-web display advertising” market, Plaintiffs have also failed to show monopoly power. Prices are low (with less than 2% revenue share for

DFP). FOF ¶ 1156. Moreover, DFP charges no fees for publishers who transact below a certain threshold of impressions. In 2022, that meant more than 85% of DFP publishers paid nothing in ad serving fees. FOF ¶ 1157. Against these consistently low prices, output is up and so is publisher average revenue. FOF ¶¶ 1104, 1141. According to the estimates of Plaintiffs' expert, from 2018 to 2022, publisher ad server monthly impressions have risen from about 450 billion impressions to almost 600 billion impressions. FOF ¶ 1106.2.

190. Plaintiffs maintain that Google's prices are high accounting for how Google "degraded" the quality of DFP by implementing Unified Pricing Rules and restricting AdX real-time bids to DFP. FOF ¶ 593. In essence, Plaintiffs argue that their allegations of anticompetitive conduct suffice to also prove market definition and market power. FOF ¶¶ 591, 593. That is not how our antitrust laws operate. "To prove a Section 2 monopolization offense, a plaintiff must establish two elements: (1) the possession of monopoly power; and (2) willful acquisition or maintenance of that power—as opposed to simply superior products or historic accidents." *E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 441 (4th Cir. 2011). Anticompetitive conduct may be a means of acquiring or maintaining monopoly power but courts have not held it is a substitute for proof of that power. *Cf. Dickson v. Microsoft Corp.*, 309 F.3d 193, 201 (4th Cir. 2002); *Mil. Servs. Realty, Inc. v. Realty Consultants of Virginia, Ltd.*, 823 F.2d 829, 832 (4th Cir. 1987) (noting in the section 1 context, "facts must be presented to the court to enable it to ascertain the market power of the defendant both before and after the alleged anti-competitive conduct").

191. Furthermore, as described in the Findings of Fact and below, the features Plaintiffs claim demonstrate monopoly power actually improved the quality of DFP. The fact that Plaintiffs

believe giving other rivals access to certain features would make DFP even more valuable does not mean the initial offering “degraded” value.

192. Plaintiffs make much of their claim that DFP’s market share exceeds 90%, but that assertion ignores market realities. As a leading antitrust treatise explains, when a firm with a dominant market share is “charging a price at the competitive level . . . most likely, it has no market power: demand may be so responsive or entry so easy that lower output at higher prices would be immediately or quickly unprofitable.” Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 508 (5th ed. 2023); see also *Oahu Gas Service, Inc. v. Pacific Resources, Inc.*, 838 F.2d 360, 366-67 (9th Cir. 1988) (“A high market share, though it may ordinarily raise an inference of monopoly power, will not do so in a market with low entry barriers or other evidence of a defendant’s inability to control prices or exclude competitors.”). The market realities for publishers confirm precisely that point.

192.1. Prof. Lee was given the opportunity to testify for the first time in redirect on DFP fees and did not testify that those fees were supra-competitive. FOF ¶ 593. He only testified that Google charges a positive fee (on a worldwide basis) for DFP. FOF ¶ 593.

192.2. DFP provides its publisher customers the capability of making every impression available for bid to competitors of Google, including Amazon and Prebid header wrapping. FOF ¶ 214. This is the type of technological sharing with rivals that Plaintiffs seek, e.g., FOF ¶¶ 927-929 (requesting that Google build integrations between DFP and rival exchanges), and is inconsistent with Plaintiffs’ theories of Google’s DFP having market power.



192.3. Plaintiffs presented no evidence that Google used a high market share for DFP to exercise market power. To the contrary, Plaintiffs contend that Google leverages the market power of AdX (which has market shares according to Professor Lee under 50% and declining), *infra* § IV.B.3.b, to force sales of DFP.

193. Plaintiffs' calculation of DFP's market share focuses on the share of "open-web display ads" that it transacts, failing to take into account the sharp decline in "open-web display advertising" compared to other forms of advertising. That decline exerts significant pressure on DFP, and competitors have successfully competed for publisher inventory management in other formats. FOF ¶¶ 600-605. The time that users are spending on traditional, non-video websites has dropped precipitously and now lags behind time spent on mobile apps or Connected TV. FOF ¶ 417. As user attention has shifted, so have advertising dollars. In 2022, display ad spend on the "open web" is down to 29% compared to 81% in 2013. FOF ¶ 418.1. Entrants compete successfully by enabling, or even specializing in, transactions in ad channels and formats other than "open-web display advertising" that have become areas of significant growth, compared to "open-web display advertising," which continues to experience a decline. For example, Meta Audience Network made a "strategic" move to serving third-party app publishers instead of third-party web publishers consistent with the shift in ad spend toward mobile apps. FOF ¶ 332. As artificial intelligence makes cross-channel purchasing even easier and a more important part of advertiser strategy, other channels and formats of advertising will also become important. FOF ¶¶ 288-294, 431.

194. As set forth above, many publishers are also creating in-house solutions to manage and sell inventory, and those solutions compete with third-party ad tech such as Google's DFP offering. FOF ¶¶ 607-608, 613, 616-617. Undisputed data from Professor Israel showed that,

taking into account just a subset of in-house ad servers, Google’s DFP was serving less than half of the ad revenues attributable to display ads. FOF ¶ 615.

195. Finally, even if Plaintiffs could maintain their inflated market share calculations, the Fourth Circuit has cautioned that “big is not invariably bad.” *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 690 (4th Cir. 2016). “An outsized market position may reflect nothing more than business success achieved through superior effort and sound strategy.” *Id.* This is well the case when, as here, a firm has “invested heavily in developing . . . an infrastructure” to best serve its customers. *Id.*

## **V. Plaintiffs Have Failed to Prove Any Anticompetitive Conduct.**

### **A. Plaintiffs Challenge Five Acts Out of Thousands of Innovations**

196. Google first entered the world of digital advertising in 2000, with a product (AdWords) to enable advertisers to place search ads on Google’s search engine. FOF ¶ 30. Realizing that advertisers were interested in reaching users beyond just Google’s own properties, Google launched a tool (AdSense) to build a network of vetted non-Google publishers where advertisers could also place ads. FOF ¶¶ 36, 38-39. As detailed in the Findings of Fact, since then, Google has undertaken thousands of innovations and select acquisitions to build on this basic value proposition: connecting Google’s diverse advertiser customers with Google’s vetted group of third-party publishers in a seamless transaction.

197. Across the thousands of innovations over a sixteen-year period, Plaintiffs argue that only five were themselves anticompetitive. FOF ¶ 715. The gravamen of Plaintiffs’ claims—according to their own expert—is that Google denies its rivals access to Google’s technology and rivals that is “comparable” to the access Google itself has. FOF ¶ 715. Put another way, Plaintiffs believe that the very infrastructure that Google has built to seamlessly and securely connect its two customer bases with tools that have increased value for customers on both sides of the equation

and have driven immense growth across the industry must be opened up to Google's rivals on the terms that Google's rivals demand.

198. According to Plaintiffs' expert Robin Lee, the five specific acts that are allegedly anticompetitive are as follows:

198.1. "Providing unrestricted access to Google's advertiser demand exclusively to its AdX ad exchange, and denying comparable access to rival ad exchanges." FOF ¶ 715.1.

198.2. Providing DFP "access to real-time bids from AdX," but not providing "comparable access to rival publisher ad servers." FOF ¶ 715.2.

198.3. For the period 2009 to 2019, providing access to a feature known as "Dynamic Allocation" exclusively to AdX within DFP, and thereby granting AdX "first-look" and "last-look" advantages over rival ad exchanges." FOF ¶ 715.3.

198.4. Following the acquisition of Admeld in 2011, failing to build on its ad tech stack an Admeld feature sharing real-time bid information with rival publisher ad servers. Plaintiffs' experts' complaint here is about the "same issue" as the second challenged form of conduct. FOF ¶ 715.4.

198.5. Impairing "the ability of its customers to work with competitor ad exchanges" within DFP by implementing the Uniform Pricing Rules. FOF ¶ 715.5.

199. Of all of the alleged acts mentioned in the Complaint and identified as anticompetitive by Plaintiffs' experts, only three are alleged to be ongoing: the limitation of Google Ads bidding into AdX, the provision of real-time bids from AdX only to DFP, and the Unified Pricing Rules. Lee DX 5; 9/20/24 AM Tr. 91:3-6 (Lee).

200. In addition, all the acts mentioned in the Complaint and identified as anticompetitive by Plaintiffs' experts—with the exception of the Unified Pricing Rules—began before 2015, which is the earliest year for which Plaintiffs' experts opine that Google had monopoly power in any market. Lee DX 5; 9/20/24 AM Tr. 91:3-6 (Lee).

201. At bottom, Plaintiffs' objection to the five so-called exclusionary acts is an objection to Google's decision to develop an integrated ad tech stack. At each step, Plaintiffs insist that Google should open up its infrastructure to grant rivals greater access to Google's technology and customers than the access it is already providing.

202. Not only is interoperability not required by law (and integration is protected), over the years, Google has made its products more, not less, interoperable with rivals. And Google has done so when it served the interests of its customers and could be done in a manner that ensures quality, security, and reliability.

203. Even if Google had monopoly power in a relevant market, Plaintiffs' claims fail the second element of a Section 2 claim—the willful acquisition or maintenance of monopoly power—because all of the challenged acts are lawful refusals to deal under settled law and underlying each of them were valid business reasons that account for the interests of publishers, advertisers, and/or end users.

**B. Plaintiffs Have Failed to Establish Any Exclusionary Conduct.**

**1. Refusal to Deal Law**

204. As a general matter, a firm does not engage in exclusionary conduct merely because it elects not to deal with a competitor or on that competitor's preferred terms. *Verizon Commc 'ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004) (reiterating the “long recognized right of a trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal”).

205. This principle applies even where an alleged monopolist “denie[s] interconnection services to rivals in order to limit entry.” *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407-08 (2004). In *Trinko*, the Supreme Court considered a claim by a customer of Verizon’s rival that Verizon had discriminated against its competitors by failing adequately to service its competitors’ customers, thus discouraging them from doing business with Verizon’s rivals. *Id.* at 404-05. The Supreme Court found that this did not give rise to an antitrust claim:

Firms may acquire monopoly power by establishing an infrastructure that renders them uniquely suited to serve their customers. Compelling such firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities. Enforced sharing also requires antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill suited.

*Id.* at 407-08. Accordingly, the Court held that Verizon was under no obligation to design or implement “new systems. . . simply to make [rivals’] access possible.” *Id.* at 410; *cf. Cavalier Tel., LLC v. Verizon Va., Inc.*, 330 F.3d 176, 188, 190 (4th Cir. 2003) (similar); *Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064 (10th Cir. 2013) (Gorsuch, J.).

206. The Court in *Trinko* explained the reasons why the antitrust laws do not impose a duty on an alleged monopolist to deal with its rivals, all of which apply here. *First*, the Court recognized that compelling firms to share their competitive advantages would lessen the incentive of an alleged “monopolist, the rival, or both to invest in those economically beneficial facilities.” *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407-408 (2004). (As applied here: Why would ad tech firms invest in developing and improving technology they must share or will be shared with them?) *Second*, “Enforced sharing also requires antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill-suited.” *Id.* at 408. This is not an issue limited to the remedy phase: Courts

would have to determine the levels of sharing with rivals necessary to comply with the antitrust laws, and firms would have to know how not to violate those laws. (Google already provides its rivals access to its customers, including through AwBid and DV360. How much sharing is required to avoid an antitrust violation? How is a firm to know how much sharing is required? How are technical connections to be assessed by a court in determining whether there is an antitrust violation?) *Third*, “compelling negotiation between competitors may facilitate the supreme evil of antitrust: collusion.” *Id.* Andrew Casale of Index Exchange illustrated this issue when he testified that Amazon had been a major competitor of Index Exchange, but after a strategic partnership with Amazon, competition between the firms was diminished by as much as half. 9/9/24 PM Tr. 19:7-21:1 (Casale). Here, one can only imagine Plaintiffs’ reaction if Google announced technology sharing negotiations for display ads and ad tech with major rivals such as Meta or Amazon.

207. As to *Trinko*, the Fourth Circuit has stated: “The Court observed that exceptions to the right to refuse to deal should be recognized with caution due to the uncertain virtue of forced sharing and the difficulty of identifying and remedying anticompetitive conduct by a single firm.” *Loren Data Corp. v. GSX, Inc.*, 501 F. App’x 275, 283 (4th Cir. 2012).

208. Since *Trinko*, the Supreme Court has further emphasized that “a firm with no duty to deal in the wholesale market has no obligation to deal under terms and conditions favorable to its competitors.” *Pac. Bell Tel. Co. v. linkLine Commc’ns, Inc.*, 555 U.S. 438, 450-51 (2009); *Loren Data Corp. v. GXS, Inc.*, 501 F. App’x 275, 283 (4th Cir. 2012) (no Section 2 violation where competitors were “not satisfied” with terms of access); *see also Aerotec Int’l, Inc. v. Honeywell Int’l, Inc.*, 836 F.3d 1171, 1184 (9th Cir. 2016). In *linkLine*, plaintiffs argued that the high fees Pacific Bell charged rival Internet providers to access Pacific Bell’s infrastructure for

delivering an Internet connection created a “price squeeze” for competitors. 555 U.S. at 450-451. Although the lower courts “did not regard *Trinko* as controlling because the case did not directly address price-squeeze claims,” the Supreme Court rejected that approach because the reasoning of *Trinko* still applied “with equal force.” *Id.*

209. Consistent with the Supreme Court’s admonition about the broad reach of *Trinko*, courts have consistently refused to require technology companies to make their products interoperable with their rivals across a wide array of contexts. *E.g.*, *New York v. Facebook, Inc.*, 549 F. Supp. 3d 6, 33 (D.D.C. 2021), *aff’d sub nom. New York v. Meta Platforms, Inc.*, 66 F.4th 288 (D.C. Cir. 2023) (rejecting claim that Facebook be more interoperable with competing social media applications); *Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064, 1076 (10th Cir. 2013) (rejecting claim that Microsoft make it easier for rivals to develop word processing software to run on Microsoft’s system); *Dream Big Media Inc. v. Alphabet Inc.*, 2024 WL 3416509, at \*5 (N.D. Cal. July 15, 2024) (rejecting claim that Google Maps must allow customers to place links on its maps offering that connect to rivals’ navigational direction offerings); *In re Apple iPod iTunes Antitrust Litig.*, 796 F. Supp. 2d 1137, 1145 (N.D. Cal. 2011) (rejecting claim that Apple must make iPod music player interoperable with rival’s music format). This uniform line of legal authority includes the recent decision in *Search. United States v. Google LLC*, 2024 WL 3647498, at \*129 (D.D.C. Aug. 5, 2024) (rejecting claim that Google must allow Microsoft Ads access to “auction time bidding” technology on Google’s proprietary search engine management tool).

210. The amount of work required to build interoperability does not change the analysis. The question under the law is not whether it is technologically possible to require Google to deal with rivals (setting aside the trade-offs in cost, resources, and exposure to security and latency risks), but whether Google has any such duty at all and whether the courts should make rulings on

the amount of technical work that must have been done in order to avoid a claim of anticompetitive conduct. *Goldwasser v. Ameritech Corp.*, 222 F.3d 390, 400-01 (7th Cir. 2000) (“the antitrust laws do not impose that kind of affirmative duty, even on monopolists”).

211. The only limited exception to the no duty to deal rule arises out of *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985), which Plaintiffs do not invoke here.

212. *Aspen Skiing*, the Supreme Court has cautioned, “is at or near the outer boundary of § 2 liability.” *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 409 (2004). To fit within its “limited exceptions” to the general rule, the Supreme Court has looked to three factors: (1) “unilateral termination of a voluntary” and “presumably profitable course of dealing” with its competitor; (2) termination must reflect “a willingness to forsake short-term profits to achieve an anticompetitive end”; and (3) defendant must “already [be] in the business” of providing the products or services at issue. *Id.* at 409-10. The Fourth Circuit has looked to similar considerations in a recent case holding that a power company’s unilateral termination of an agreement to build transmission lines should survive summary judgment because a jury could conclude that it “[forsook] short-term profits to achieve an anticompetitive end.” *Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 111 F.4th 337, 364 (4th Cir. 2024) (quoting *Trinko*, 540 U.S. at 409).

213. Plaintiffs and their experts do not contend that these predicates for an *Aspen Skiing* claim have been or could be established here. For example, Plaintiffs do not offer evidence that Google had at any point offered rivals the features to which Plaintiffs now demand access—much less that it sought to terminate a profitable course of dealing. Far from a claim that Google “forewent a profitable arrangement,” Plaintiffs’ case rests on assertions that Google engaged in the challenged acts to ensure its profitability. *Compare Duke Energy Carolinas, LLC v. NTE*



*Carolinas II, LLC*, 111 F.4th 337, 364 (4th Cir. 2024) (holding defendant was not entitled to summary judgment because the factfinder “could reach the conclusion that [the defendant], like the defendant in *Aspen Skiing*, ‘[forsook] short-term profits to achieve an anticompetitive end’ by unilaterally terminating the Reidsville Interconnection Agreement”).

## 2. Valid Business Reasons

214. In order to prove that Google willfully acquired or maintained monopoly power, Plaintiffs bear the burden of proving that Google had “no valid business reason or concern for efficiency” when Google engaged in the challenged conduct. *Oksanen v. Page Memorial Hosp.*, 945 F.2d 696, 710 (4th Cir. 1991).

215. In assessing the business reasons or justifications for challenged conduct, the Fourth Circuit has noted that a “monopolist does not violate § 2 by offering a superior product, service, or lower prices, as such conduct is procompetitive and thus increases consumer welfare.” *Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 111 F.4th 337, 353 (4th Cir. 2024). Courts also consider whether product design decisions improve a product, offering a new benefit to customers. “A monopolist is permitted, and indeed encouraged, by § 2 to compete aggressively on the merits, any success that it may achieve through the process of invention and innovation is clearly tolerated by the antitrust laws.” *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 281 (2d Cir. 1979).

216. To avoid chilling innovation and thereby competition, antitrust law recognizes that an alleged monopolist’s “design change that improves a product by providing a new benefit to consumers does not violate Section 2 absent some associated anticompetitive conduct,” even if the change “harms competitors as a result.” *Allied Orthopedic Appliances Inc. v. Tyco Health Care Grp. LP*, 592 F.3d 991, 998-1000 (9th Cir. 2010); *see also Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 896-97 (2007) (antitrust laws permit a manufacturer to “strive[] to

improve its product quality”); *United States v. Nat’l Lead Co.*, 332 U.S. 319, 359 (1947) (antitrust law should not “reduce the competitive value of the independent research of the parties”); *Goldwasser v. Ameritech Corp.*, 222 F.3d 390, 397 (7th Cir. 2000) (“even a monopolist is entitled” to improve the “quality of its products”). This reflects “the undesirability of having courts oversee product design” because “any dampening of technological innovation would be at cross-purposes with antitrust law.” *United States v. Microsoft Corp.*, 147 F.3d 935, 948 (D.C. Cir. 1998). “The attempt to develop superior products is . . . an essential element of lawful competition.” *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 286 (2d Cir. 1979). “Any firm, even a monopolist, may generally bring its products to market whenever and however it chooses.” *Id.*

217. Importantly, a product improvement does not violate antitrust law even if it has a negative impact on rivals. *Foremost Pro Color, Inc. v. Eastman Kodak Co.*, 703 F.2d 534, 544 (9th Cir. 1983) (“The introduction of technologically related products, even if incompatible with the products offered by competitors, is alone neither a predatory nor anticompetitive act.”). Product improvements are intended to provide competitive advantages and disadvantage rivals. Courts have also cautioned against balancing “the benefits or worth of a product improvement against its anticompetitive effects” because that would be “unwise” and “unadministrable.” *Allied Orthopedic Appliances Inc. v. Tyco Health Care Grp. LP*, 592 F.3d 991, 1000 (9th Cir. 2010); *see also Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 286-87 (2d Cir. 1979). Any other result would require the judicial redesign of products, but courts are not product designers and do not assess whether an improvement was the “right amount of innovation,” as even an improvement that is “seemingly minor”—or “less valuable” than “initially believed”—“can be adequately judged only by the market itself.” *Allied Orthopedic*, 592 F.3d at 1000-1001.

**3. All the Challenged Acts Are Lawful Refusals to Deal and Have Valid Business Reasons for When and How Sharing Took Place.**

218. Plaintiffs’ unlawful monopolization and attempted monopolization claims (Counts 1-3 of the Complaint) turn on only five challenged product design decisions. As noted above, Plaintiffs’ basic theory of the case is that through these five acts, Google established an integrated ad tech stack that denied rivals “comparable access” to Google’s customers and technology. FOF ¶ 715. This came into sharper relief through Plaintiffs’ witnesses—many of whom were Google’s rivals—who candidly admitted that what they wanted was for the court to require Google to share its technology and its customers and to even make them readily accessible by rivals on their chosen terms and conditions. FOF ¶¶ 720-722.

219. Plaintiffs’ presentation at trial emphasized how radical this case is: Plaintiffs offered witness testimony that Google’s technological innovations transmitting the real-time bids of its advertiser customers should be treated as “community property.” FOF ¶ 720. Antitrust law has long cautioned against recognizing such claims because they often undermine the goals of competition that the law endeavors to promote. Deviating from that principle here is particularly ill-advised given that each of the challenged acts was animated not by a desire to cut off competitors (though the law allows that) but to serve a particular customer or marketplace need. To override the strong presumption that refusals to deal are not anticompetitive would risk harming not only the future of innovation in the display advertising industry specifically, it would do so across technology markets more generally.

220. This case fits squarely within *Trinko*’s general rule. Plaintiffs’ theory is essentially the same as the one advanced in that case: the denial of “interconnection services to rivals in order to limit entry.” *Verizon Commc’ns., Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004). There it was services to enable rivals to access Verizon’s telecommunications network;

here it is technical functionality that Plaintiffs want Google to develop to enable rival ad exchanges to access advertiser demand Google has cultivated and rival ad servers to access functionality Google has developed for its own ad exchange. Although Google has built “an infrastructure that renders [it] uniquely suited to serve [its] customers,” Plaintiffs want to force Google “to share the source of [its] advantage” rather than asking rivals “to invest in those economically beneficial facilities.” *Id.* at 407-08.

221. Plaintiffs’ arguments that Google has acquired “scale” at the expense of its competitors illustrates the problem with Plaintiffs’ case. Successful firms, whether or not monopolies, are free to exercise their discretion in deciding whether to begin dealing with rivals and to what degree. *Verizon Commc’ns., Inc. v. Law Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 405-08 (2004). By contrast to this settled law, Plaintiffs ask that Google’s conduct be condemned if its competitors are not achieving substantial scale.

222. A recent decision involving a different Google advertising tool confirms precisely this point. In *United States v. Google LLC*, 2024 WL 3647498 (D.D.C. Aug. 5, 2024), one argument plaintiffs advanced was that Google engaged in anticompetitive conduct when it declined to provide a rival (there, Microsoft) access to a bidding feature on SA360 (Google’s proprietary search engine marketing tool) while granting Google Ads access to that feature, *id.* at \*129. Like their allegations here, Plaintiffs argued that denying Microsoft comparable access hindered its ability to compete against Google Ads and harmed customers that opted to use Microsoft’s buying tool. *Id.* The district court held that Plaintiffs’ demand that Google share its bidding feature with Microsoft was foreclosed by *Trinko*, explaining that the theory “falters at the threshold because it conflicts with the settled principle that firms have ‘no duty to deal’ with a rival.” *Id.*

223. In rejecting the duty-to-deal claim, the court emphasized two additional points that are relevant here:

223.1. First, the court explained that compelling Google to share the bidding feature “requires grappling with a host of questions that the court is ill-equipped to handle.” *United States v. Google LLC*, 2024 WL 3647498, at \*131 (D.D.C. Aug. 5, 2024). For example, how should Google decide when to invest the time to integrate the feature with a rival’s tool (it took 2 to 3 years to build the feature on Google’s own tool) or how much consumer interest warrants imposing a duty to deal. *Id.* Because “Any relief presumably would require Google to ensure feature parity on SA360 now and into the future. A favorable outcome for Plaintiff States thus would mire the court in Google’s day-to-day operations.” *Id.*

223.2. Second, the court warned that “to circumvent *Trinko*’s strict limits also would invite uncertainty as to when antitrust liability attaches to otherwise rational business conduct.” *Id.* If the court ordered relief here, it would leave Google and other firms to engage in a standardless inquiry about “when it must integrate [the bidding feature] or other features for Microsoft Ads to avoid a Sherman Act violation?” *Id.* In that case, one reason Google gave for declining to integrate the feature at issue for Microsoft was prioritizing work on other product launches. Such a “business decision,” the court concluded “may have come at Microsoft’s expense, but it does not give rise to Section 2 liability.” *Id.*

224. In addition, each of the challenged acts was motivated by a business reason to improve the quality of Google’s products, and the ad tech ecosystem, for Google’s publisher and

advertiser customers and users of the Internet. As part of that effort, Google has built an integrated ad tech stack with the benefits of integration and made business decisions balancing when to build interoperability between its tools and third parties and the benefits of integration. FOF ¶¶ 723-726, 732. When that was not possible, Google prioritized preserving the quality of its own products—as, under *Trinko*, it is lawfully permitted to do. As the evidence at trial demonstrated, Google’s decisions were driven by the competition it faces. Over the past two decades, Google and its rivals have consistently faced significant competitive pressures to invest in improving the quality and integration of their ad tech stacks. Some of the major rivals who have won market share from Google over the past two decades have done so by building tools or engaging in acquisitions that allow those firms to more effectively and efficiently connect the buy- and sell-side of display advertising transactions. FOF ¶¶ 727-728. Although each of the challenged acts was driven by particular business reasons that are discussed below, the acts (along with many of the thousands of other innovations Google introduced during the period at issue in this case) were also more generally driven by the goal of delivering the significant benefits that come from offering an end-to-end integrated ad tech stack:

224.1. Integration enables Google to promote ad safety, security, and user privacy.

FOF ¶¶ 733-772. Value in ad tech is created by reliably facilitating transactions that are relevant, quality matches for all stakeholders. Google’s product design allowed it to better vet and screen its customers on both sides of the transaction. FOF ¶¶ 743-745. The result was publishers had fewer concerns they would display harmful ads (either because of the content of the ad or the risk of malware), advertisers had fewer concerns their brands would end up on

inappropriate sites, and users had greater trust in the overall systems. FOF ¶¶ 735-742.

224.2. Integration improved the performance of ad tech tools by reducing latency—a key benefit because it increased the likelihood of a user having a good experience on the publisher’s page and actually viewing an ad (which in turn is a benefit for advertisers trying to reach that user and for publishers trying to monetize their ad spaces). FOF ¶¶ 780-783.

224.3. Integration also improves the value of ad tech offerings, both by keeping prices down across the ad tech stack, FOF ¶¶ 773-776 (discussing value of minimizing the friction of integrating across multiple firms), and by increasing the incentive and return to investing in improving the product for customers, FOF ¶¶ 777-779 (discussing increased value of investment when firm can recover returns on investment on either side of the transaction). Building the technological integrations, processing power, and safety and security mechanisms needed to expand beyond Google’s integrated stack would require Google itself to pay for considerable investment and resources. E.g., FOF ¶¶ 297, 788, 885, 930. When done without adequate planning, it could raise prices and choices for customers and harm the overall industry.

224.4. Google’s decisions were consistent with the trend across the ad tech industry in favor of reducing connections between and among ad tech intermediaries because that promotes efficiency and security. FOF ¶¶ 272-277.

**a. Rival Ad Exchanges’ Access to Google Ads**

225. Plaintiffs object to Google “providing unrestricted access to” Google Ads’ “advertiser demand” (that is, access to Google Ads’ advertiser customers) “exclusively to its AdX

ad exchange, and *denying comparable access to rival ad exchanges.*” FOF ¶ 715.1. Contrary to the Supreme Court’s rulings, this claim would require Google to provide competitor exchanges access to Google advertiser customers.

226. Requiring Google to share Google Ads customers would force Google to no longer offer differentiated buying tools for its advertiser customers and instead turn Google Ads into a buying tool that it already offers—DV360. That would in turn reduce choice for advertiser customers, who currently choose whether to use Google Ads, DV360, or both. FOF ¶¶ 795-804.

227. Since it was first created, Google Ads was designed to connect advertiser customers to publisher inventory, aggregated by Google, that is high quality and curated. FOF ¶¶ 31-32, 790-791. Google Ads initially purchased only on Google owned-and-operated inventory, then expanded to third-party publisher inventory sold through Google’s ad network, AdSense. FOF ¶¶ 36-37, 790. Because Google had a relationship with the publishers on AdSense, it could better vet the safety and security of inventory offered to Google Ads advertisers through AdSense. FOF ¶ 791. After Google launched its new ad exchange, AdX, Google also connected Google Ads to AdX. FOF ¶¶ 104-105. For AdX publishers, too, Google has ensured that inventory meets Google’s safety and security standards. FOF ¶¶ 128-130. Since Google Ads was first integrated with these other Google tools until today, when Google Ads advertisers purchase on AdX or AdSense inventory, they receive the benefits of an end-to-end integrated transaction, including improved ad safety, ad security, shorter latency, and lower end-to-end prices. FOF ¶¶ 790-794. When Google Ads bids onto third-party exchanges, in contrast, Google cannot collect the same signals and perform the same vetting as it can when Google Ads bids into AdX, so Google Ads customers are exposed to greater security and safety risks. FOF ¶¶ 766, 800.



228. The value proposition of DV360 has always been different. Both Google Ads and DV360 serve the same advertiser goals, but the two offer advertiser customers different product qualities to choose between depending on the customer's priorities. FOF ¶¶ 797-799. Since Google acquired DV360 in 2010, DV360 customers have had access to broader inventory, but in exchange receive fewer guarantees of ad security. FOF ¶¶ 141-143, 799. DV360's technology has been built accordingly, serving "more or less as a pipe for advertisers' bids to be sent to the exchanges" without the same optimizations and protections that Google Ads provides. FOF ¶ 838.

229. In essence, Plaintiffs complain that Google has not made Google Ads the same product as DV360, without providing any explanation how, under their theory, Google could offer two differentiated buying tools without violating the antitrust laws. FOF ¶ 804.

230. The required dealing with competitors here would require Google not only to relinquish the competitive advantages unique to Google Ads, but also undertake significant work to achieve interoperability, including building technical connections to and negotiating agreements with its rivals. FOF ¶¶ 805-838. The costs, time, and resources required to do so are not just theoretical. Google has built a tool called AwBid to connect Google Ads to third-party exchanges—even though not required to do so by antitrust law—but the development of AwBid has faced significant challenges such as high volumes of invalid traffic on third-party exchanges, brand safety concerns introduced by non-vetted publisher inventory, and high latency from connecting to additional intermediaries. FOF ¶¶ 817-827, 829-831. Moreover, building AwBid and expanding it is expensive, and those costs must be borne by customers in the form of higher prices in order for expansion to be profitable. FOF ¶¶ 834-835. Google has nonetheless persevered to steadily expand AwBid, but only when it can ensure that the benefits of incremental inventory

outweigh the safety, security, increased costs, and other concerns introduced by connecting Google Ads to non-Google tools. FOF ¶¶ 828, 830, 832-833, 836.

231. As Plaintiffs see it, Google has not made sufficient progress and this Court should be put in the position of determining compliance with the antitrust laws by assessing how much work and cost must be undertaken to build additional integrations with rivals and how to balance those integrations against the risks introduced by connecting to third parties. Under the law, Google is entitled to make those choices; the antitrust laws do not dictate when or how those choices are made.

232. Despite this, Plaintiffs believe that the customer base Google has attracted and cultivated by building a high quality buying tool and investing in quality services for its customers, FOF ¶¶ 839-842, is so valuable that rival ad exchanges must be allowed “comparable access” to Google’s customers. This is precisely what *Trinko* cautioned against when it noted that “compelling such firms to share the source of their advantage . . . may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities.” *Verizon Commc’ns., Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407-08 (2004). Such consequences might not only be felt by Google but also its most successful rivals innovating in this space. If advertisers who buy through Google must be made available to third-parties as a “community asset,” presumably the same must be true for advertisers who purchase display ads on truly “closed” walled gardens like Meta or TikTok (where a significant and growing number of ad dollars are spent).

**b. Rival Ad Servers’ Access to AdX Real-Time Bids**

**(1) Refusal to Deal**

233. Plaintiffs also object that “DFP had access to real-time bids from AdX,” and Google did not provide “comparable access to rival publisher ad servers.” FOF ¶ 715.2.

234. Publishers can and do already access AdX without DFP by using AdX Direct tags. FOF ¶¶ 871-874. What Plaintiffs really complain about is that, since Google first launched AdX, AdX cannot submit the amount of a winning real-time bid into a third-party publisher ad server in real time. FOF ¶¶ 882-883. Plaintiffs want to be able to run an “auction of auctions” like the Unified First Price Auction, comparing real-time bid amounts from AdX to amounts from other exchanges, without using DFP. FOF ¶¶ 882-883, 886 (functionality Plaintiffs are seeking already exists, just in AdX and DFP).

235. Here, too, Plaintiffs are demanding that Google share the “source of its advantage”—the technological infrastructure it has built within AdX and DFP and the real-time bid amount information for AdX’s advertiser customers—with rival publisher ad servers on the same terms that Google has access. Plaintiffs complain that AdX Direct tags are not “comparable” access, but controlling law makes clear it is for Google, not its rivals, to determine the “terms and conditions” under which it will integrate. *Pac. Bell Tel. Co. v. linkLine Commc’ns, Inc.*, 555 U.S. 438, 450-51 (2009).

236. Although Plaintiffs now seek to claim it as “community property,” real-time bidding is an actual technological innovation pioneered by Google (among a few others) to dramatically improve how ad impressions are sold online. FOF ¶¶ 109-116. Google made significant investments and efforts to rebuild AdX with real-time bidding capabilities on its high performance infrastructure after the acquisition of DoubleClick. FOF ¶¶ 109-116. This is precisely the sort of innovation the law protects Google from having to turn over to its rivals. The law does not require that Google, as soon as it developed real-time bidding on AdX, to design AdX so that it can provide the amounts of winning real-time bids to rival publisher ad servers.

237. In addition, requiring Google to deal with competitors would force Google to offer a different ad exchange product that does not provide customers with the benefits of integrating AdX real-time bid amounts with DFP. The connection between AdX and DFP improves Google's ability to protect AdX advertisers from invalid traffic and enforce ad safety standards. FOF ¶¶ 866-867. The evidence at trial was undisputed that an integrated end-to-end ad tech offering has these and other benefits, FOF ¶¶ 727-728, with Google competitors, including Microsoft, also offering—and marketing the same advantages of—an integrated offering, FOF ¶¶ 727-728.

238. By challenging Google's decision to offer a well-integrated product (with the benefits if it offers its customers) instead of one that facilitates dealing with rivals, Plaintiffs are demanding that Google undertake a “substantial amount of work”—potentially years—in order to rewrite AdX's “core code.” FOF ¶¶ 884-885. Moreover, Google would have to write new code to integrate AdX with third-party publisher ad servers, as well as engineer new tools to control for inventory quality sold through third-party publisher ad servers. FOF ¶¶ 887. Although the law does not require it, Google did explore the possibility of doing the engineering work to enable third-party ad servers to receive real-time bids from AdX. It ultimately concluded that there was no business case because third-parties were unwilling to share in the cost of doing the work and there was a lack of clarity about how to resolve the technical challenges that would arise with such an effort (*e.g.*, controlling for spam and the quality of inventory). FOF ¶¶ 888-894.

239. If Plaintiffs' refusal-to-deal claim were a viable antitrust claim, the Court would have to weigh Plaintiffs' asserted benefits to publishers of being able to compare AdX real-time bid amounts with other exchanges without using DFP against the costs required to rewrite the core code of AdX and build integrations and expose advertisers to additional security and safety risks. Moreover, the question would remain who should bear the costs of these forced integrations—

Google, rival publisher ad servers, or customers. That is precisely the sort of “central plann[ing]” that the Supreme Court has described courts as “ill suited” to perform. *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407-08 (2004).

## (2) Plaintiffs’ “Tying” Claim

240. Plaintiffs also call this claim a “tying” claim. In Plaintiffs’ Fourth Claim for Relief, Plaintiffs allege a tie between Google’s ad exchange functionality (AdX) (the tying product) and Google’s ad server functionality (DFP) (the tied product), which are now combined in one user interface, Google Ad Manager. FOF ¶¶ 120-122 (explaining Google Ad Manager); 9/16/24 PM Tr. 121:5-13 (Abrantes-Metz) (“tying DFP to AdX”).

241. Plaintiffs do not actually challenge the integration of AdX and DFP. Regardless of whether AdX and DFP are sold separately or together, Plaintiffs are complaining that Google has not yet built a way for AdX to give rival publisher ad servers real-time bid amount information in real time. FOF ¶¶ 879-883. The description of Plaintiffs’ claim by their own expert—“Google did not provide comparable access to rival publisher ad servers”—invokes a duty to deal. 9/20/24 AM Tr. 82:13-18, 89:3-16 (Lee).

242. Plaintiffs cannot avoid Supreme Court law on a duty to deal by alleging that the denial of access to rivals is a tying claim. “A challenged arrangement is not a tie-in unless the alleged foreclosure can be eliminated by instructing the defendant to disaggregate what it sells to its customers,” “rather than by an order to sell something . . . to would-be rivals.” Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 1700j1 (5th ed. 2023). In other words, if the claim is tying, “the proper remedy” is “to enjoin the tie, not to create a duty to deal.” *Authenticom, Inc. v. CDK Glob., LLC*, 874 F.3d 1019, 1026 (7th Cir. 2017).

243. By Plaintiffs' own account, a ruling ordering that AdX and DFP be sold separately would not satisfy their claim. As their own economics expert, Dr. Abrantes-Metz admitted, selling DFP and AdX separately—in other words, severing a “tie” between the two—would not “solve the problem” challenged by their tying claim. FOF ¶ 882. Instead, Plaintiffs are complaining that “access to real-time bids to AdX” is available only through DFP. FOF ¶ 882. But the law protects Google's ability to make decisions about who can access its own systems and customers and on what terms. *Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc.*, 555 U.S. 438, 448 (2009) (“businesses are free to choose the parties with whom they will deal, as well as the prices, terms, and conditions”).

244. Courts have consistently rejected tying claims seeking forced sharing of technology and customers. *E.g., Service & Training, Inc. v. Data General Corp.*, 963 F.2d 680, 686 (4th Cir. 1992) (rejecting plaintiff's tying claim where the evidence “showed nothing more than” the defendant's “unilateral decision” to selectively license its product); *It's My Party, Inc. v. Live Nation, Inc.*, 88 F. Supp. 3d 475, 501 (D. Md. 2015), *aff'd*, 811 F.3d 676 (4th Cir. 2016) (construing tying claim that defendant “forces artists to use its promotion services at its venues” as a non-actionable refusal-to-deal claim).

245. Not only is Plaintiffs' tying claim barred by refusal-to-deal precedent, it does not otherwise meet the elements of such a claim. Tying is “defined as an agreement by a party to sell one product but only on the condition that the buyer also purchases a different (or tied) product.” *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5 (1958). “What causes these anticompetitive harms and distinguishes tying from ordinary market behavior is not the mere bundling of two products together but rather the coercion of the consumer.” *It's My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 684-85 (4th Cir. 2016). In a tying arrangement, a party conditions the sale of one product

(the tying product) on the buyer’s purchase of a second product (the tied product). *Id.* at 684. “[T]he essential characteristic of an invalid tying arrangement lies in the seller’s exploitation of its control over the tying product to force the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms.” *Jefferson Par. Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 12 (1984); accord *It’s My Party*, 811 F.3d at 684. Thus, “in all cases involving a tying arrangement, the plaintiff must prove that the defendant has market power in the tying product.” *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 46 (2006). And Plaintiffs must show that the alleged tie “has a substantial anticompetitive effect that harms consumers” in the relevant tied product market. *FTC v. Qualcomm Inc.*, 969 F.3d 974, 991 (9th Cir. 2020).

246. Courts have recognized that “arguable tie-ins are to be found everywhere, [and] that most of them serve legitimate objectives without threatening competitive vitality in the second market or anywhere else and without even harming buyers.” Philip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 1701c (5th ed. 2023). Here, to prevail on their tying claim, Plaintiffs “must prove (1) the existence of two separate products, (2) an agreement conditioning purchase of the tying product upon purchase of the tied product (or at least upon an agreement not to purchase the tied product from another party), (3) the seller’s possession of sufficient economic power in the tying product market to restrain competition in the tied product market, and (4) a not insubstantial impact on interstate commerce.” *Serv. & Training, Inc. v. Data Gen. Corp.*, 963 F.2d 680, 683 (4th Cir. 1992).

247. Here, Plaintiffs make no argument that the application of the *per se* rule is appropriate. Accordingly, if Plaintiffs are able to make their showing on these four elements, the burden shifts to the defendant “to show a procompetitive rationale for the restraint.” *FTC v.*

*Qualcomm Inc.*, 969 F.3d 974, 991 (9th Cir. 2020) (quoting *Ohio v. Am. Express Co.*, 585 U.S. 529, 541 (2018)); *cf. Mozart Co. v. Mercedes-Benz of N. Am., Inc.*, 833 F.2d 1342, 1348 (9th Cir. 1987) (“We have recognized that antitrust defendants may demonstrate a business justification for an otherwise per se illegal tying arrangement.”). If Google makes such a showing, the burden shifts back once again to the plaintiff, who must “show that an alternative is substantially less restrictive and is virtually as effective in serving the legitimate objective without significantly increased cost.” *Cnty. of Tuolumne v. Sonora Cmty. Hosp.*, 236 F.3d 1148, 1159 (9th Cir. 2001).

248. Not only is Plaintiffs’ tying claim barred by refusal-to-deal precedent, it does not otherwise meet the elements of such a claim. First, a tying arrangement is “defined as an agreement by a party to sell one product but only on the condition that the buyer also purchases a different (or tied) product.” *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5 (1958). “What causes these anticompetitive harms and distinguishes tying from ordinary market behavior is not the mere bundling of two products together but rather the coercion of the consumer.” *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 684-85 (4th Cir. 2016). Second, “in all cases involving a tying arrangement, the plaintiff must prove that the defendant has market power in the tying product.” *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 46 (2006).

249. Plaintiffs’ tying claim stems from its providing access to real-time bids from AdX in the product Google Ad Manager, which also includes the publisher ad server DFP. Plaintiffs’ tying claim fails because they have not shown the element of coercion: that the “sale of the desired (‘tying’) product is conditioned on purchase of another (‘tied’) product.” *Aerotec Int’l, Inc. v. Honeywell Int’l, Inc.*, 836 F.3d 1171, 1178 (9th Cir. 2016). If “the buyer is free to decline the tied product or to purchase the two products separately, then by definition there is no unlawful tying.” *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 684 (4th Cir. 2016); *see also* Philip E. Areeda



& Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 1752b (4th ed. 2020) (defining a tie as the improper imposition of “conditions that explicitly or practically require buyers to take the second product if they want the first one”). Publishers can access AdX without using DFP, and publishers can access DFP without using AdX. FOF ¶¶ 871-878 (“vast majority” of publishers using DFP do not use AdX). To be sure, if customers want to compare real-time bid amounts from AdX with bid amounts from other exchanges, they have to use DFP, but generating additional value for customers when two products are used together is not a tie.

250. Plaintiffs have failed to prove an anticompetitive effect from the joint sale of AdX and DFP. Plaintiffs’ experts have not opined that the joint sale of AdX and DFP has had an anticompetitive effect apart from their concerns with Google “denying comparable access” to real-time bids on AdX to rival ad servers. *Supra* § IV.A, B.3.b.

251. Plaintiffs’ argument also fails because they do not adequately define a market for the tying product, which depends on a claim about power in an undefined market of “advertiser demand.” *Infra* § IV.D.

**c. Limiting Dynamic Allocation to AdX**

252. Plaintiffs complain that the Dynamic Allocation feature in DFP, which was first developed by DoubleClick pre-acquisition, was available exclusively to AdX. They characterize this exclusivity as granting AdX “first look” and “last look” advantages over rival exchanges. FOF ¶ 715.3. As Plaintiffs’ experts agree, “first look” ceased to exist after publishers started using header bidding, FOF ¶ 934, and “last look” ceased to exist after 2019, FOF ¶ 982. At this point, what Plaintiffs complain about is that Google did not build new integrations to connect Dynamic Allocation to third-party exchanges while it was in effect or that Google did not render Dynamic

Allocation obsolete sooner by inventing header bidding or the Unified First Price Auction faster. FOF ¶¶ 927-935, 978-985. Neither is a viable antitrust claim.

253. Dynamic Allocation was an innovative feature in DFP first developed by DoubleClick before real-time bidding and before header bidding existed. It benefited publisher customers by providing them with higher returns in a risk-free way. FOF ¶¶ 903-909. Google improved on Dynamic Allocation even further because Google separately innovated real-time bidding on AdX. When combined with real-time bids from AdX, Dynamic Allocation in DFP increased publisher revenue even more. FOF ¶¶ 910-916.

254. Plaintiffs use the term “first look” to refer to the way publishers could set up Dynamic Allocation to work with real-time bidding in AdX. FOF ¶ 911. Publishers could, before offering impressions to the demand sources in the waterfall, first run a real-time auction in AdX using the highest predicted value from the waterfall as the price floor to see if any AdX bidders would be willing to pay more. FOF ¶ 911. Publishers were free not to give AdX any “first look,” FOF ¶¶ 917-919, or make even more money by giving AdX a “first look” but increasing the floor price for AdX to beat so that AdX would only win if a much higher bid was available, FOF ¶¶ 920-926. Publishers that chose to use “first look” made at least the same amount of money they otherwise would, if not more. FOF ¶¶ 920-926.

255. “First look” was an optional set-up that publishers could use to combine the benefits of Dynamic Allocation in DFP with Google’s real-time bidding innovation in AdX. Plaintiffs’ complaint is that Google did not immediately or within a certain undefined time write new code to make it possible for publishers to combine the benefits of Dynamic Allocation in DFP with real-time bids from rival exchanges. FOF ¶ 927. Significant technical work, by both Google and rival exchanges, would have been required to build this integration. FOF ¶¶ 929-931. Alternatively,

Plaintiffs complain that Google did not build technology in DFP to compare real-time bids from all exchanges simultaneously instead of giving publishers the option to give AdX bidders a “first look.” In essence, they complain that Google did not invent header bidding or Open Bidding sooner. FOF ¶¶ 932-935. Antitrust law does not require companies to innovate faster; nor does it require companies to either share their innovations with rivals or not innovate at all.

256. Antitrust laws also do not require a firm to offer rivals a “first look” or “last look” at the firm’s customers. A retail store for example is not required to refer customers to its rivals so they can make offers to those customers, or to facilitate connections so that such offers can be made.

257. Plaintiffs err in claiming that Dynamic Allocation gave AdX a “first look” akin to the type of “right of first refusal” courts have found anticompetitive. *See* Pls.’ FOF ¶ 82 (citing *MISO Transmission Owners v. FERC*, 819 F.3d 329, 333 (7th Cir. 2016) (Posner, J.); *Theme Promotions, Inc. v. News Am. Mktg. FSI*, 546 F.3d 991, 1002–03 (9th Cir. 2008)). “A firm blessed with a right of first refusal can by exercising its option exclude competition with it”—avoiding, for instance, the pressure “to bid down the prices at which they will build new facilities in order to remain competitive.” *MISO*, 819 F.3d at 333. Dynamic Allocation did not exclude competition, but fostered it by adding the auction pressure of a real-time auction in AdX to the old “waterfall” system. FOF ¶ 79. Far from maintaining their preferred price, AdX bidders could only compete to win an impression by offering a higher bid than the highest expected bid from other demand sources. Nor did “first look” solely advantage AdX bidders and exclude bidders on rival exchanges. When publishers used “first look,” AdX bidders often had to beat higher floor prices than rivals’ bidders. FOF ¶¶ 924.2-924.3. This is quintessential competition on the merits, nothing like a right of first refusal.

258. After publishers started using header bidding and “first look” no longer existed, Plaintiffs used the term “last look” to refer to one way publishers could set up Dynamic Allocation to work with a header bidding bid. FOF ¶ 940. A publisher could generate more competition for an impression by, in essence, entering the winning header bidding bid into DFP so that Dynamic Allocation would trigger an AdX auction with the header bid as the price floor. FOF ¶ 940. Publishers were free to not to give AdX any “last look,” FOF ¶¶ 939, 941, or make even more money by giving AdX a “last look” by increasing the floor price for AdX to beat so that AdX would only win if a much higher bid was available, FOF ¶¶ 943-952.

259. As Plaintiffs’ experts agree, publishers that chose to use “last look” made more money. FOF ¶ 953. This is analogous to the price-match guarantees made by countless retailers to beat the last and best price, which ultimately benefit customers.

260. Just as with “first look,” “last look” was an optional set-up that publishers could use, in conjunction with header bidding, to combine the benefits of Dynamic Allocation in DFP with Google’s real-time bidding innovation in AdX. Plaintiffs’ complaint is again that Google did not write new code to make it possible for publishers to combine the benefits of Dynamic Allocation in DFP with real-time bids from rival exchanges. FOF ¶ 979. When it was possible to do so because rival exchanges were integrated with DFP, Google did just that. After Google created Open Bidding on DFP, it extended “last look” to rival exchanges connected through Open Bidding. FOF ¶ 980. Alternatively, Plaintiffs complain that Google did not build technology in DFP to compare real-time bids from all exchanges simultaneously instead of calling the AdX auction after the header bidding auction. FOF ¶ 981-982. In essence, they complain that Google did not invent the Unified First Price Auction sooner. FOF ¶¶ 981-982. When Google transitioned to a Unified First Price Auction, the option of a “last look” set-up was also removed. FOF ¶ 982.

Here, too, antitrust law does not require that Google build the Unified First Price Auction earlier, or to either share its innovations with rivals or not innovate at all.

261. Plaintiffs also claim that “last look” impeded competition among rival exchanges when it worked in conjunction with sell-side Dynamic Revenue Sharing. FOF ¶ 962.2. No expert opined that sell-side Dynamic Revenue Sharing, which was designed to increase the number of auctions won, was itself anticompetitive. FOF ¶¶ 962, 965. Aggregating a lawful refusal to deal with a lawful act does not make Google’s conduct unlawful: “when anticompetitive conduct is alleged to be typical . . . refusing to deal,” for example, “ $0 + 0 = 0$  — is a proper approach.” *Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 2024 WL 3642432, at \*11 (4th Cir. 2024). Moreover, even were Plaintiffs’ claims about Dynamic Allocation valid antitrust claims, they have made no effort to demonstrate that “last look” with sell-side DRS actually impeded rival exchanges. FOF ¶ 964.

#### **d. Admeld Acquisition and Integration**

262. Plaintiffs’ Complaint also objected to Google’s acquisition of Admeld. Plaintiffs’ experts then complained that Google did not rebuild post-acquisition an Admeld feature called server-side integration that provided third-party ad servers access to real-time bids from Admeld. FOF ¶ 986. In essence, as Plaintiffs’ experts acknowledge, Plaintiffs’ Admeld claim is the same as their claim that it was anticompetitive for Google not to provide third-party publisher ad servers with comparable access to real-time bid amounts from AdX. FOF ¶¶ 1009, 1011. It fails for much the same reason. *Supra* § IV.B.3.b.

263. As an initial matter, only one of Plaintiffs’ experts suggested that the Admeld acquisition was anticompetitive because Google eliminated Admeld’s yield management business. FOF ¶ 986. Plaintiffs argue that Google acquired Admeld in order to “immobilize” a competitive threat “while Google had a chance to catch up.” FOF ¶ 1007. Dr. Abrantes-Metz obscured two

different Admeld technologies: access to bids from Admeld's ad exchange and traditional network yield management, only one of which (access to bids from the ad exchange) did not move forward. FOF ¶ 1011.

264. Rather than disabling yield management technology, the evidence shows the opposite. Google acquired Admeld to provide its publisher customers with an ad network yield management optimization feature to fill a gap in its product offering for publishers who were slower to switch to real-time bidding. FOF ¶¶ 999-1001. After the acquisition, Google expended considerable resources and investment to both maintain and improve the Admeld functionality for publishers in the short term while rebuilding the yield management on Google's own stack for the long term. FOF ¶¶ 1003-1005. Google eventually rebuilt the traditional yield management feature that Dr. Abrantes-Metz suggested that Google eliminated, and it competed against other traditional yield managers to offer that feature until the industry eventually shifted to real-time bidding instead. FOF ¶ 1008. The two major yield management competitors to Admeld at the time of the acquisition continue to operate today as real-time bidding exchanges. FOF ¶ 1008.

265. Plaintiffs have not presented any evidence that Google's acquisition of Admeld and rebuilding of its yield management functionality eliminated competition in the yield management marketplace. Other than repeating their claims with respect to the sharing of real-time bids, Plaintiffs did not present evidence that the merger between Admeld and Google in 2011, long before Plaintiffs' experts believe that Google acquired significant market power, violated the antitrust laws. Plaintiffs presented no evidence that the 2011 merger increased concentration, created anticompetitive effects, or harmed customers or consumers. *E.g., Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 487 (1977) ("Every merger of two existing entities into one, whether lawful or unlawful, has the potential for producing economic readjustments that

adversely affect some persons. But Congress has not condemned mergers on that account; it has condemned them only when they may produce anticompetitive effects.” ).

266. Plaintiffs also complain that Google did not rebuild for AdX Admeld’s feature providing real-time bids from Admeld’s ad exchange to third-party publisher ad servers. Again, Plaintiffs admit this complaint is the same as their complaint that Google did not provide rival publisher ad servers “comparable access” to real-time bids from AdX. FOF ¶ 1011. They have identified no documents establishing that Google considered the feature a competitive threat to Google, and they are not arguing that Google’s failure to rebuild the feature eliminated a competitive threat. FOF ¶ 1010.

267. Requiring Google to rebuild this feature following the Admeld acquisition would have required Google to perform the technical work required to integrate with rivals. Even though not required to do so by antitrust law, Google did consider whether rebuilding the feature would be “truly economically viable,” but decided not to for multiple business reasons. FOF ¶ 1014. As Admeld had experienced with its own feature integrating real-time bids from its exchange to rival publisher ad servers, building new integrations with third-party publisher ad servers was challenging and raised ad safety and security concerns. FOF ¶¶ 1015-1017. The only reason Plaintiffs offer for why Google should have done this work was to enable third-party ad servers to have access to Google’s ad exchange comparable to DFP’s access, which the law does not require.

**e. Unified Pricing Rules**

268. Plaintiffs challenge Google’s implementation of the Unified Pricing Rules because Google impaired “the ability of its customers to work with competitor ad exchanges” within DFP. FOF ¶ 715.5.

269. Even after UPR, publishers using DFP still retain flexibility to use non-Google tools or even to favor non-Google exchanges. FOF ¶¶ 1062-1065 (*e.g.*, by inflating the value associated

with non-AdX exchanges in DFP so that AdX is effectively forced to beat a higher floor price). Directly contrary to *Trinko* and other decisions, what Plaintiffs want is that Google design DFP (or any Google ad tech) so that Google’s own publisher customers can use a particular functionality—exchange-specific price floors—to disadvantage Google’s advertiser customers using Google’s own systems on precisely the terms they want. FOF ¶ 1018. In other words, Plaintiffs believe that Google should make it more convenient for its publisher customers to subject Google’s AdX advertiser customers to higher price floors than bidders on rival exchanges, so that those rivals can win more business from Google. Perhaps rivals would prefer these terms but as now-Justice Gorsuch explained in *Novell*, the “Supreme Court and this one, however, have long and emphatically rejected this approach . . . . Forcing monopolists to ‘hold an umbrella over inefficient competitors’ might make rivals happy but it usually leaves consumers paying more for less.” *Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064, 1072 (10th Cir. 2013) (quoting *Olympia Equip. Leasing Co. v. W. Union Tel. Co.*, 797 F.2d 370, 375 (7th Cir. 1986)). Just as with Plaintiffs’ other refusal to deal claims, Plaintiffs’ claim asks the Court to superintend a design decision that balances purported benefits to some publishers from using exchange-specific price floors on DFP to discriminate against AdX advertisers against the benefits to Google’s other advertiser and publisher customers.

270. At bottom, each of the challenged acts concerned sharing with rivals and were undertaken with valid business justifications for any limitations on such sharing or the pace of such sharing. Requiring that Google change course would require overcoming the Supreme Court’s clear pronouncements on a firm’s broad right to choose with whom and on what terms it will deal. Further, remedying each of these acts would require Google to share its technological innovations with its rivals by undertaking considerable engineering work, renegotiation of



contracts, and additional investment in technological infrastructure—all of which reinforces that Plaintiffs’ claims are demands to deal.

**4. Plaintiffs’ Efforts To Evade Refusal To Deal Case Law Are Unavailing.**

271. Plaintiffs previously argued that the refusal to deal framework does not apply because this is a case about “conditions” on customers. Opposition to Motion for Summary Judgment at 22. The cases Plaintiffs invoke only reinforce the conclusion that Google was engaged in a lawful refusal to deal with rivals. In *Lorain J. Co. v. United States*, 342 U.S. 143, 152 (1951), for example, the Supreme Court held that a local newspaper could not refuse to accept ads from customers who advertised with other local media outlets. That case is entirely inapposite here. Google places no such restriction on publishers or advertisers nor prohibits them from doing business with its rivals. FOF ¶¶ 801, 803, 863, 876, 984, 1124. There is no evidence of long-term or exclusive contracts between Google and its customers limiting their transactions with Google rivals. Google customers routinely “multi-home” across Google’s and rivals’ ad tech tools. FOF ¶¶ 214, 453, 558, 646.4, 663, 875. Advertisers use multiple tools to purchase ads across channels and formats and publishers use multiple avenues to sell ad space including through direct deals, third-party exchanges, and header bidding tools. FOF §§ III.D-III.E.

272. Plaintiffs do not claim that Google told its customers they may not deal with rivals (as in *Lorain Journal*). Plaintiffs instead focus on Google’s refusal to provide rivals with comparable access to its technology and customers. But to fall within the *Lorain Journal* line of cases, the defendant must have “conditioned access” to its product on a customer “agreeing not to deal with” the defendant’s competitors. *New York v. Facebook, Inc.*, 549 F. Supp. 3d 6, 32 (D.D.C. 2021) (rejecting the same argument made by Plaintiffs here). That is true of all the other cases Plaintiffs look to for support. See *Chase Mfg., Inc. v. Johns Manville Corp.*, 84 F. 4th 1157, 1173

(10th Cir. 2023) (involving monopolist that “threatened to stop selling needed products to its customers if they bought from a new market entrant offering a superior product for less money”); *Viamedia, Inc. v. Comcast Corp.*, 951 F.3d 429, 444, 448-49 (7th Cir. 2020) (denying access to those who dealt with rival); *see also FTC v. Facebook, Inc.*, 560 F. Supp. 3d 1, 29 (D.D.C. 2021) (noting *Lorain Journal* involved “a very special form of exclusive dealing . . . a refusal to sell to end-user customers who purchase[d] from the monopolist’s competitor”).

273. Plaintiffs attempt to shoehorn this case into those precedents by advancing expert testimony about how Google conditions access. FOF ¶ 722.2. There was no evidence presented at trial of Google conditioning access to its ad tech products on whether a customer is doing business with any competitor. Customers, whether publishers or advertisers, may do business with Google and also do business with and use the ad tech of Google’s competitors. FOF ¶¶ 801, 803, 863, 876, 984, 1124. Unlike the newspaper in *Lorain Journal*, Google does not say: to do business with us, you cannot do business with Google’s competitors, and the evidence at trial established that most Google customers do. Applying Plaintiffs logic to *Lorain Journal*, the appropriate result would have been to require the newspaper to sell radio ads for its rivals to the newspaper’s customer base.

274. Google has taken affirmative steps to offer its customers numerous ways to deal with rivals or to disintermediate certain Google tools, but Plaintiffs want more. As detailed above, *supra* § IV.B.3, advertisers who purchase through DV360 can connect to over 100 exchanges. FOF ¶ 147. Advertisers on Google Ads can also connect to third-party exchanges through AwBid. FOF ¶ 795. Likewise, publishers who opt to use AdSense can access Google Ads advertisers without going through AdX or using any publisher ad server like DFP. FOF ¶ 47. Publishers who opt not to use DFP can still access AdX demand through AdX Direct tags. FOF ¶ 871. Publishers

who sell their inventory on AdX can connect with third-party buying tools in addition to Google's, which Google supports by encouraging those buying tools to bid on AdX. FOF ¶ 11231. Google has gone “out of its way” to enable publishers to use DFP and header bidding, and publishers can also use DFP and Google's Open Bidding feature to put real-time bids from multiple exchanges in head-to-head competition with AdX—and even use DFP to sell every single impression to rival exchanges and turn off AdX completely. FOF ¶¶ 184, 214, 877-878. Google specifically developed the Unified First Price Auction so that publishers can put all demand sources (Google and non-Google) in competition against each other under transparent rules that apply equally to all demand sources. FOF ¶¶ 258-262.

275. Plaintiffs object that customers must operate under the “condition” that DFP is the only way to access real-time bids from AdX, which in turn is the only way to gain access to Google Ads demand. Even if that were the case (it is not, given that publishers multi-home and can be reached through other means), allegations that Google restricted how its own products interoperate with rivals (i.e., on its own technological platform) do not run afoul of *Lorain Journal* because customers may (and frequently do) deal with those rivals outside of Google's systems. *See New York v. Meta Platforms, Inc.*, 66 F.4th 288, 304 (D.C. Cir. 2023) (declining to apply *Lorain Journal* where Facebook's “policy limit[ed] only how canvas apps on Facebook operate, and [left] app developers entirely free to develop applications for Facebook's competitors”); *Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064, 1072, 1074 (10th Cir. 2013) (differentiating interference with “the abilities of third parties to deal with rivals (exclusive dealing)” from a firm's unilateral decision to “keep [technology] to itself”). Plaintiffs' interpretation of *Lorain Journal* would have required the newspaper there, as an alleged powerful local platform for advertisements, to place ads for its rivals alongside the ads of its own advertiser customers, a view inconsistent with both

*Lorain Journal* and *Trinko*. To the contrary, the law permits Google to design well-integrated products that render it “uniquely suited to serve” its customers. *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004).

276. *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) (en banc), is instructive on this point. Microsoft had developed software to operate Java programs faster on Microsoft’s system than on its competitors’ systems, and these programs were incompatible with rivals’ versions. *Id.* at 74-75. Rejecting the view that developing and promoting this software was “exclusionary conduct,” the D.C. Circuit held that “a monopolist does not violate the antitrust laws simply by developing a product that is incompatible with those of its rivals.” *Id.* at 75.

277. Similarly, Plaintiffs’ expert couches some claims as “exclusivity” or “exclusionary conduct” claims because Google is not providing its rivals access to Google ad tech (DFP or AdX) on terms “comparable” to what Google enjoys on its own products. “Generally, a prerequisite to any exclusive dealing claim is an agreement to deal exclusively.” *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 270 (3d Cir. 2012). Even exclusive dealing contracts are not and have never been illegal *per se*. *Tampa Elec. Co. v. Nashville Coal Co.*, 365 U.S. 320, 333 (1961). Absent anti-competitive market effects, an exclusive contract “may well be of economic advantage to buyers as well as to sellers.” *Id.* at 334 (quoting *Standard Oil Co. v. United States*, 337 U.S. 293, 306 (1949)).

278. Here, there are no exclusive agreements between Google and its customers, requiring customers to do business only with Google. A publisher doing business with Google may offer any of its impressions to any rival of Google and an advertiser bidding with Google may bid with any rival of Google. FOF ¶¶ 801, 876, 984. Dr. Abrantes-Metz testified about what she called the exclusivity provision of the Google Terms and Conditions, but those terms applied only

to a single impression offered to AdX. FOF ¶¶ 983-985. A publisher could offer its next impression to anyone, and the contract does not contain any exclusivity for any period of time or number of impressions. FOF ¶¶ 983-985. Consistent with this, Google’s ad tech customers multi-home, also using the ad tech tools of other providers. FOF ¶¶ 214, 646.4, 875. *E.g. Spinelli v. Nat’l Football League*, 96 F. Supp. 3d 81, 117 (S.D.N.Y. 2015) (contracts with “exclusivity periods of no more than three years . . . do not foreclose competition and are not anticompetitive as a matter of law”); *Mazda v. Carfax, Inc.*, 2016 WL 7231941, at \*14 (S.D.N.Y. Dec. 9, 2016), *aff’d sub nom. Maxon Hyundai Mazda, et al. v. Carfax, Inc.*, 726 F. App’x 66 (2d Cir. 2018) (no reasonable factfinder could find that three to five year exclusive website contracts were anticompetitive or even “particularly long-term”). Instead of exclusive agreements, customers can leave Google for competitors freely.

279. Plaintiffs also suggest this Court can ask if Google acted with “anticompetitive intent.” Setting aside that there is no such intent given the significant procompetitive rationales for Google’s conduct, *see supra* § IV.B.3; *infra* § IV.E.2, Plaintiffs’ approach would be squarely at odds with *Trinko*, which noted that the alleged monopolist “denied interconnection services to rivals in order to limit entry,” yet analyzed the case through the *Aspen Skiing* factors. *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004). Courts have rejected time and again Plaintiffs’ “anticompetitive intent” test as an excuse for establishing a duty to deal. *E.g., Aerotec Int’l, Inc. v. Honeywell Int’l, Inc.*, 836 F.3d 1171, 1184 (9th Cir. 2016) (rejecting argument that refusal to deal is unlawful because it was motivated by “intent to foreclose competition”); *Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064, 1078 (10th Cir. 2013) (Gorsuch, J.) (same); *Facebook, New York v. Facebook, Inc.*, 549 F. Supp. 3d 6, 26 (D.D.C. 2021), *aff’d sub nom. New York v. Meta Platforms, Inc.*, 66 F.4th 288 (D.C. Cir. 2023) (plaintiffs cannot establish

a duty-to-deal violation by pointing to a mere “intent to harm—or, the flip side of the same coin, to avoid helping—a rival or rivals”).

280. Plaintiffs also try to circumvent the obligation to prove that the individual challenged acts were unlawful by suggesting that it suffices to show a “broader anticompetitive enterprise.” However, when Plaintiffs allege acts that are *per se* lawful under controlling case law, aggregating them does not make them unlawful. *Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 111 F.4th 337, 354 (4th Cir. 2024).

281. As the Fourth Circuit recognized, this approach follows from the Supreme Court’s decision in *linkLine*, which evaluated plaintiffs’ claims “under . . . two relevant tests” (there predatory pricing and duty to deal). *Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 111 F.4th 337, 354 (4th Cir. 2024) (citing *Pac. Bell Tel. Co. v. linkLine Commc’ns, Inc.*, 555 U.S. 438, 449 (2009)); *see also linkLine*, 555 U.S. at 452 (rejecting “amalgamation” of two “meritless” claims of anticompetitive conduct). Other appellate courts and district courts have adopted the same approach. *See, e.g., United States v. Google LLC*, 687 F. Supp. 3d 48, 70 (D.D.C. 2023) (explaining “the court must disaggregate the exclusionary conduct into its component parts”); *In re EpiPen Mktg., Sales Practices & Antitrust Litig.*, 44 F.4th 959, 982 (10th Cir. 2022) (“courts disaggregate the exclusionary conduct into its component parts before applying the relevant law”); *Retractable Techs., Inc. v. Beckton Dickinson & Co.*, 842 F.3d 883, 891-93 (5th Cir. 2016); *Facebook, New York v. Facebook, Inc.*, 549 F. Supp. 3d 6, 47 (D.D.C. 2021), *aff’d sub nom. New York v. Meta Platforms, Inc.*, 66 F.4th 288 (D.C. Cir. 2023) (lawful refusals to deal are “not the sort of lawful conduct that the monopoly-broth theory is designed to account for and, to the extent that theory is viable, should be excluded from its reach”).

282. Nor is this the sort of case where Plaintiffs allege “a complex or atypical exclusionary campaign” with components that are not amenable to “pre-established categories” and where the focus on those categories would “prove too rigid.” *Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 111 F.4th 337, 354 (4th Cir. 2024). Rather, all of Plaintiffs’ alleged conduct is squarely a lawful refusal to deal that can be assessed under controlling Supreme Court law. *Id.* Furthermore, even if Plaintiffs’ allegations were to be assessed “holistically,” they would still fail to demonstrate a Section 2 violation. As the Fourth Circuit recently explained, “courts must take care not to aggregate acts that are procompetitive to produce only a semblance of an exclusionary effect when considered together,” especially when those aggregate acts are lawful individually. *Id.* at 355-56.

283. Unlike *Duke Energy*, there is no indication that any of the alleged acts were explicitly “executed simultaneously and *to the same [anticompetitive] effect*” or were part of a targeted, “singular, coordinated anticompetitive effort” more generally. *Duke Energy Carolinas, LLC v. NTE Carolinas II, LLC*, 111 F.4th 337, 356, 366 (4th Cir. 2024) (emphasis in original). There, a series of interrelated events were “timed . . . to achieve anticompetitive ends”: to drive a major competitor out of an important deal. *Id.* at 366. Here, each of the challenged acts was undertaken for “procompetitive” reasons to ensure product quality, respond to an evolving ad tech landscape, and address changing customer needs. Thus, when the alleged conduct is considered together, the result is no different: there has been no “foreclosure to competition . . . [t]hat Section 2 seeks to proscribe.” *Id.*

**C. Plaintiffs’ Claims of Anticompetitive Conduct Based on Google Ads Advertiser Demand Are Improper Tying Claims and Otherwise Meritless.**

284. To support the first two of their claims of anticompetitive conduct, Plaintiffs argue that publishers are coerced—as a practical matter—to use AdX or DFP due to the “unique” or

important advertiser demand through Google Ads. FOF ¶¶ 843, 895. That argument fails legally and factually.

285. Initially, regardless of whether Google has market power in some market for “advertiser demand,” antitrust law does not require that Google share its lawful advantage—its own customer list built by investing in a quality product, FOF ¶¶ 839-842—with rivals. *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 407-408 (2004). Plaintiffs cannot repackage a refusal to deal claim, which lies at the core of conduct protected by *Trinko*, as a de facto tying claim.

286. Second, Plaintiffs’ argument fails because it is an improper attempt to assert a tying claim, with Google Ads as the tying product, without defining a market in the tying product. *Illinois Tool Works Inc. v. Independent Ink, Inc.*, 547 U.S. 28 (2006) (tying claim where plaintiff fails to define a market and market power for tying product fails as a matter of law);<sup>3</sup> *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 681 (4th Cir. 2016) (tying claim faces “the initial challenge of identifying exactly what market defendant is accused of monopolizing”); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 21 (1984) (a tying arrangement cannot exist “unless two separate product markets have been linked”); *see also Amey, Inc. v. Gulf Abstract & Title, Inc.*, 758 F.2d 1486, 1503 (11th Cir. 1985) (plaintiffs must prove “the seller” has “sufficient market power in the tying product market to force the buyer to accept the tied product” to succeed on a tying claim)); *Yentsch v. Texaco, Inc.*, 630 F.2d 46, 56-58 (2d Cir. 1980) (same). According to Professor Lee, Plaintiffs’ claim is that Google forecloses competition in the ad exchange market by restricting

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<sup>3</sup> In *Illinois Tool Works*, the plaintiffs relied on a presumption set forth previously in *United States v. Loew’s*, 371 U.S. 38, 45 n.5 (1962) and other cases that a copyrighted or patented product possessed market power in a relevant market because “requisite economic power may be found on the basis of uniqueness or consumer appeal.” The Court reversed that presumption and remanded the case for the plaintiff to present evidence on market definition and market power.



access to “demand for ads.” 9/20/24 PM Tr. 8:5-22 (Lee). Professor Lee testified that he has “not defined a market in this case for advertising”—i.e., a market for “demand for ads.” *Id.* at 8:23-9:2 (Lee) (“I’m not opining on a relevant market where the products are the underlying advertisements.”). Plaintiffs have done no work to define a market in “advertiser demand.” FOF ¶ 845. Just as the Supreme Court held in *Illinois Tool Works*, a substitute for market definition such as “uniqueness” does not meet the legal requirement for a tying claim. *Illinois Tool Works*, 547 U.S. at 45-46 (rejecting argument that plaintiff need not prove market power simply because a product was patented).

287. To compound this legal deficiency, Plaintiffs claim that Google’s market power comes from demand for ads for search ads that lie outside any of the offered market definitions in this case. According to Plaintiffs’ expert, “a key part of Google Ads’ market power” (in the undefined market of “advertising”) “comes from the search advertisers [that] used its product and are then available for purchasing display advertising.” 9/19/24 PM Tr. 99:18-22 (Lee); *see also* 9/11/24 PM Tr. 98:15-99:7, 153:13-154:20 (Dederick). Plaintiffs’ markets in this case—and all of their market power analyses—are defined based on “open-web display advertising,” which excludes search advertising. *Supra* § II.B; FOF ¶ 377. In other words, Plaintiffs claim that Google has abused market power in an advertising market they have not defined, and that Google’s market power comes from attracting demand for a type of advertising they explicitly excluded from their markets.

288. Third, as a factual matter, even if Plaintiffs’ tying claim were not legally deficient in multiple ways, the record evidence does not support Plaintiffs’ claim. What “distinguishes tying from ordinary market behavior is . . . the coercion of the consumer” to purchase “a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on

different terms.” *It’s My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 684 (4th Cir. 2016). Publishers are not coerced to choose AdX or DFP because Google Ads has control over some unique and important set of advertiser demand unavailable elsewhere.

289. One reason for the absence of coercion is that publishers can access Google Ads demand without using AdX or DFP, so no publisher is “coerced” to use AdX or DFP in order to access Google Ads demand. Publishers can use AdSense with a third-party publisher ad server, in-house ad server, or no ad server or they can use Google Ad Connector. FOF ¶ 847. Publishers can also access AdX demand without using DFP by using AdX Direct tags. FOF ¶¶ 871-873, 897.

290. Further, the overwhelming majority of ad spend is accounted for by advertisers that multi-home across buying tools and exchanges, so they are not accessible only through AdX or DFP. FOF ¶¶ 849-850. In 2022, 85 percent of AdX spend came from buyers who used more than one buying tool. FOF ¶ 850. Publishers seeking to connect to multi-homing advertisers can use many different pathways to do so.

291. Fourth, although documents and witnesses refer to Google Ads as having unique demand, the data do not support those statements. The undisputed data show that, even if Google Ads is referred to as having unique demand, that demand is not actually unique. The limited set of advertisers on Google Ads who may be purchasing only on Google Ads do not account for enough spend to be “must-have” demand. Any allegedly “unique” demand on Google Ads accounts for less than 5% of ad spend transacted through exchanges, FOF ¶ 853, and around 2.6% of publisher payout, FOF ¶ 855.

292. The term “unique demand” is a common term used for the rivals of Google. Numerous competitors market themselves and are described in business documents as having access to “unique demand.” FOF ¶¶ 858-859. The term “unique” demand, in the absence of data

to support it, does not show that the demand is unique. Here, Plaintiffs have relied on the term “unique” in documents and testimony which fails as a matter of law and fact to support their claims.

**D. Plaintiffs Have Not Shown that Google Lacked Valid Business Reasons for the Alleged Anticompetitive Acts.**

293. Plaintiffs have also not met their burden for a claim of monopolization to show that a factfinder “could find no valid business reason or concern for efficiency” for a defendant’s actions. *Oksanen v. Page Mem’l Hosp.*, 945 F.2d 696, 710 (4th Cir. 1991). Each of the five challenged acts involved product design decisions that were made to improve the quality of Google’s products, and the ad tech ecosystem, for Google’s publisher and advertiser customers and users of the Internet. As part of these efforts, Google built interoperability between its tools and those of third parties, but only when it could do so safely, securely, and reliably without undermining the quality of its own products. When that was not possible, Google prioritized preserving the quality of its own products—as, under *Trinko*, it is lawfully permitted to do. *Verizon Commc’ns Inc. v. L. Offs. of Curtis V. Trinko, LLP*, 540 U.S. 398, 404 (affirming firm’s right to fill orders from its own customer ahead of rival’s); *see also White v. Rockingham Radiologists, Ltd.*, 820 F.2d 98, 105 (4th Cir. 1987) (describing concern for “accountability, efficiency, and sound business practices” as valid business reasons sufficient to defeat section 2 claims).

294. Substantial evidence demonstrated that each of the features Plaintiffs challenge benefited Google customers by increasing publisher revenue, protecting the ecosystem for advertisers, or improving matches. As to several, Plaintiffs’ experts conceded that the acts benefited customers but opined that they hurt rivals and their ability to achieve scale. *E.g.*, FOF ¶ 953 (the option to use “last look” increased published revenue); FOF ¶ 1034 (Unified Pricing Rules reduced bidding error). Benefiting customers is a valid business justification, regardless of an adverse effect on rivals. *Oksanen v. Page Mem’l Hosp.*, 945 F.2d 696, 706 (4th Cir. 1991) (finding

that hospital’s concern for improving patient care defeated antitrust claim without evaluating any loss of business to plaintiff-physician). Accordingly, under Fourth Circuit law, evidence of diminishing rivals and their scale does not satisfy Plaintiffs’ burden of showing the absence of a valid business justification.

295. **Google Ads-AdX.** With respect to Google Ads bidding into AdX, Google’s interest in ensuring that its customers bid into environments with vetted publishers and quality inventory was a valid business reason because it helped protect customers, including their privacy and security. FOF ¶¶ 790-794. Google did gradually invest considerable resources to build AwBid capability for Google Ads to bid into third-party exchanges, FOF ¶¶ 828-836, but a firm may lawfully opt to restrict access to its platform in order to maintain the security and privacy of a product. *Epic Games, Inc. v. Apple*, 67 F.4th 946, 987 (9th Cir. 2023) (holding that prioritizing security and privacy in this manner is a way “tapping into consumer demand and differentiating its products from those of its competitors—goals that are plainly procompetitive”).

296. **AdX-DFP.** With respect to limiting real-time bids from AdX exclusively to Google’s ad server, integrating DFP and AdX in this manner ensures Google can offer customers the significant benefits that come with integration, including ensuring low latency and maintaining the safety and validity of publisher inventory. FOF ¶¶ 866-869. The integration also enabled revenue-increasing innovations like Dynamic Allocation, when other third-party ad servers showed reluctance to invest in integrations without being paid. FOF ¶¶ 868, 892, 894. *White v. Rockingham Radiologists, Ltd.*, 820 F.2d 98, 105 (4th Cir. 1987) (valid justifications include “efficiency, and sound business practices”); *FTC v. Qualcomm Inc.*, 969 F.3d 974, 1003 (9th Cir. 2020) (firm may foster a “novel business practice . . . that was beneficial to consumers in the long run”).

297. Google also had a valid business reason to offer DFP and AdX together because customers requested that integration. FOF ¶¶ 120-121. The integration also provided a common user interface that improved the customer experience. FOF ¶ 869. *See FTC v. Qualcomm Inc.*, 969 F.3d 974, 1003 (9th Cir. 2020) (listing enhanced “consumer appeal” as a legitimate procompetitive rationale).

298. **Dynamic Allocation.** Dynamic Allocation increased revenue for Google’s publisher customers. FOF ¶ 912. The option to call Dynamic Allocation with the highest value in the waterfall as the floor price was limited to Google’s exchange, AdX, because Google had not yet developed a secure, fast, reliable way for other exchanges to integrate with DFP. FOF ¶¶ 929-930. Once Google launched Open Bidding, which was a secure, efficient, and reliable way to compare real-time bids across exchanges, Google expanded Dynamic Allocation to other exchanges. FOF ¶ 980.

299. Both “first look” and “last look” increased publisher revenues and gave advertisers opportunities to bid on more inventory. FOF ¶¶ 920-922, 924, 953. Plaintiffs suggest a unified auction would have been even more beneficial but that does not dispute “first look” or “last look” offered a benefit to customers. *See Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 237 (1st Cir. 1983) (noting that a contract, which “guaranteed a stable source of supply” and “a stable, favorable price” had “legitimate business justifications”). One of Plaintiffs’ experts relied on the concept of whether the feature was “optimal,” but that standard bears no relationship to how courts define anticompetitive conduct and would leave courts in the unworkable position of supervising whether business decisions were optimal. FOF ¶ 932 (Prof. Ravi). In addition, Prof. Ravi reached no opinion on whether Google’s conduct as to Dynamic Allocation (and also UPR, discussed below) was a net good or bad for either advertiser or publisher customers, his only focus was on

Google's rivals. 9/11/24 PM Tr. 51:20-52:9 (Ravi). Even assuming there was some legal basis for requiring Google to build a unified auction, it would not change the analysis that a firm had a valid business reason to take an intermediate step to benefit customers.

300. **Admeld.** Google acquired Admeld to provide publisher customers with a traditional yield management feature that they requested and to integrate the expertise of the Admeld team into AdX's core team, both of which it did. FOF ¶¶ 999-1006. Google had valid business reasons to decline to integrate a server-side integration feature that Admeld's own former CEO said was plagued with security issues. FOF ¶¶ 1013-1017; *Epic Games, Inc. v. Apple*, 67 F.4th 946, 987 (9th Cir. 2023) (procompetitive to maintain security).

301. **Unified First Price Auction.** Google adopted a Unified First Price Auction (UFPA), including Unified Pricing Rules (UPR), to protect advertisers from price-fishing and improve matches by simplifying the increasingly confusing ad tech bidding landscape. FOF ¶¶ 1031-1033. These linked innovations, FOF ¶¶ 1040-1046, established a "level playing field" for all advertisers regardless of demand source, and made the auction more efficient and orderly for all participants, in turn increasing revenue for most publishers, FOF ¶¶ 258, 260, 1033-1037, 1055-1057. *White v. Rockingham Radiologists, Ltd.*, 820 F.2d 98, 105 (4th Cir. 1987) (valid business reasons include "concern for accountability, efficiency, and sound business practices").

302. Even viewed in isolation, UPR protected advertisers from predatory publishers who were taking advantage of variable exchange-specific price floors to "fish" for higher prices for the same impression. FOF ¶ 1033. As Plaintiffs' expert, Professor Ravi, testified, UPR minimized bidder error and improved bidder decision-making by simplifying bidding, FOF ¶ 1034, a concession of a valid business reason that is fatal to an antitrust claim. *See also* FOF ¶ 1030 (advertising agency representative replied "of course not" when asked whether he liked publishers'

variable price floors). At the same time, UPR helped publishers by simplifying the legacy system of pricing rules, which could create inefficient auction outcomes as well because publishers were not maximizing yield. FOF ¶¶ 1035-1036.

303. Multiple industry participants treat UPR as a best practice, FOF ¶ 1039, and gave Google positive feedback for the roll-out, FOF ¶¶ 1053-1054, 1058. Plaintiffs object that a handful of publishers were unhappy but offer no survey (or other empirical) evidence as to the balance of opinion. FOF ¶¶ 1059-1060. Evidence from one meeting discussing publisher opposition at the start of the UFPA and UPR launch does not suffice, given the evidence showed that the meeting was followed by more communication with publishers—and changes made in response to feedback—to address the issues publishers initially raised. FOF ¶¶ 1050-1052. Thus, Plaintiffs have failed to meet their burden of proving Google had no valid business reason.

304. **Other Acts Not Alleged to Be Anticompetitive.** The existence of valid business justifications for Google’s product design decisions was true not just of the challenged acts detailed above, but also for acts like Project Poirot and sell-side Dynamic Revenue Sharing, which Plaintiffs spent considerable time discussing through their experts, even though none claimed the acts were themselves anticompetitive.

305. Poirot was an optional feature that helped protect advertisers from overpaying and was available only on DV360 (which is outside Plaintiffs’ “advertiser ad network” market). FOF ¶¶ 156.2, 232-233. Confirming Google had a valid business justification, numerous rivals adopted similar features to help improve advertiser surplus. FOF ¶¶ 243-244. Plaintiffs suggest this feature—which helped detect when an ad exchange was not running a second-price auction and adjusted advertiser bids to prevent them from overpaying—was a way to undermine header bidding, but even Plaintiffs’ own expert agreed that this was a valid response to bidding into a

first-price auction or dealing with auctions that do not run transparent second-price auctions. FOF ¶ 246 (Professor Ravi). There was no evidence as suggested by Plaintiffs that Project Poirot had the purpose or effect of stopping header bidding rather than dirty-auctions, or that unclean rather than clean exchanges were the homes for header bidding. FOF ¶ 191. Plaintiffs also suggest that Poirot unfairly did not reduce bids into AdX, but the evidence confirmed that Google’s AdX ran a true second-price auction and had no reason to be affected by Poirot. FOF ¶¶ 247-249. Accordingly, there were valid business reasons for this feature since it improved advertiser surplus and encouraged more overall spending. FOF ¶¶ 236-239.

306. Sell-side Dynamic Revenue Sharing increased the number of successful matches so that publishers would make more revenue and advertisers win more impressions that are valuable to them, and therefore also had procompetitive benefits. FOF ¶¶ 962, 967-968, 973.

#### **VI. Plaintiffs Have Not Proven Anticompetitive Effects in any Market for Ad Tech Tools.**

307. When “assessing alleged antitrust injuries, courts must focus on anticompetitive effects ‘in the market where competition is [allegedly] being restrained.’” *FTC v. Qualcomm Inc.*, 969 F.3d 974, 992 (9th Cir. 2020) (quoting *Am. Ad Mgmt., Inc. v. Gen. Tel. Co. of Cal.*, 190 F.3d 1051, 1057 (9th Cir. 1999)); see also *United States v. Google LLC*, 2024 WL 3647498, at \*95 (D.D.C. Aug. 5, 2024) (“the next step in the analysis is to determine whether Google has engaged in exclusionary conduct with respect to” the specific markets in which the court determined that Google had monopoly power).

308. Evidence of anticompetitive effects includes “proof of actual detrimental effects on competition, such as reduced output, increased prices, or decreased quality in the relevant market.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 542 (2018). Courts “will not infer competitive injury from price and output data absent some evidence that tends to prove that output was restricted or prices were above a competitive level.” *Id.* at 549.



309. In markets that include two-sided transaction platforms, courts must consider “indirect network effects and interconnected pricing and demand.” *Ohio v. Am. Express Co.*, 585 U.S. 529, 545–46 (2018).

310. To the extent Plaintiffs are claiming that competitors have been injured by the success of Google’s ad tech, Plaintiffs’ claims also fail to state a Sherman Act violation for failure to show any anticompetitive effect. *Dickson v. Microsoft Corp.*, 309 F.3d 193, 211 (4th Cir. 2002) (“The offense of monopolization requires a showing of anticompetitive effect.”).

311. The antitrust laws “were enacted for the protection of competition, not competitors.” *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488 (1977). Conduct is actionable only if it “excludes rivals on some basis other than efficiency,” so that it “either does not further competition on the merits or does so in an unnecessarily restrictive way.” *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 605 & n.32 (1985).

312. Plaintiffs have not met their burden to show anticompetitive effects in any relevant market.

313. *First*, as discussed above *supra* § III.B, there is no evidence of reduced output or increased prices. Output has grown eighteen-fold (with only 10% of the growth going to Google), FOF ¶¶ 1104-1106, 1120, while ad tech fees as a percentage of display ad spending (and Google’s own fees) have been flat or declining from 2014 to 2022, FOF ¶¶ 1145-1146.

314. The increased output is not happenstance but driven in part by the innovations Google and others have advanced, such as real-time bidding to facilitate more valuable matches and ads.txt to increase trust in the overall ad tech ecosystem. FOF ¶¶ 1108-1114. Likewise, as even Plaintiffs’ expert acknowledges, prices may reflect quality, FOF ¶ 1149 (Professor Simcoe), so a product with higher fees may still be a better value because it delivers better quality matches

to publishers, advertisers, and users. This is true of Google’s products, which have offered more valuable matches, greater ad security and safety, and increasing revenues over time. FOF ¶¶ 1123-1143.

315. Plaintiffs suggest there is nonetheless evidence of anticompetitive effects. This testimony fails, as a matter of law, to meet Plaintiffs’ burden because Plaintiffs’ expert, by his own admission, has declined to put forward a specific but-for world that would allow for a comparison of effects such as prices in the real world with prices as they would be free of the allegedly anticompetitive conduct. FOF ¶ 1103 (Professor Lee). Absent this but-for world, there is no valid evidentiary basis for sustaining Plaintiffs’ assertion of injury to competition. In the recent decision in *In re: NFL “Sunday Ticket” Antitrust Litig.*, 2024 WL 3628118, at \*6 (C.D. Cal. Aug. 1, 2024), the court vacated a jury verdict of antitrust liability after finding Plaintiffs’ expert relied on a “but-for world that was not based on a reliable methodology” but rather “opinion untethered to an economic analysis of what would have likely occurred in the but-for world.” Here, the situation is more stark: Unlike the expert in *NFL Sunday Ticket*, Plaintiffs’ expert Professor Lee does not offer any methodology for defining a but-for world and concedes he did not attempt to do so. *See also In re Live Concert Antitrust Litig.*, 863 F. Supp. 2d 966, 974–976 (C.D. Cal. 2012) (excluding testimony where expert “simply assumed—without further examination—that the [yardstick damages were] due entirely to Defendants’ allegedly anticompetitive conduct”).

316. *Second*, the evidence of business justifications for each of the alleged challenged acts discussed above shows that the conduct at issue here had pro-competitive benefits for publishers and advertisers.

317. Ultimately, as detailed above, *supra* §§ III.A, III.B, the resulting ad tech tools market has the hallmarks of a healthy, competitive market. Throughout the entire time period

Plaintiffs allege Google engaged in anticompetitive conduct, Google has faced dynamic, intense competition that pushes it to innovate and invest in competing on product quality. FOF ¶¶ 299-303. The display advertising landscape has been described—not just by Google, but also by its competitors—as “competitive and complex ” with “rapidly changing technology, evolving industry standards and consumer preferences,” FOF ¶ 302.8 (PubMatic); “highly competitive and rapidly changing,” FOF ¶ 302.5 (The Trade Desk); and “dynamic and unpredictable,” FOF ¶ 1207.2 (Index Exchange).

318. *Third*, competitor ad tech tools are constantly emerging to exert competitive pressures on Google. As a result, Google often loses display advertising spend to competitors that develop ways to serve the new needs of advertisers, publishers, and users. *E.g.*, FOF ¶ 1083 (AdX win rate dropping from 50% to under 20% between 2015 and 2022). Larger trends in the ad tech ecosystem also demonstrate the continuing innovation—not just by Google, but also its competitors—in order to more effectively compete for advertising dollars. *E.g.*, FOF ¶¶ 185-189 (header bidding), 272-279 (supply path optimization). The success of these competitive initiatives demonstrate that Google’s conduct has not foreclosed competition in the ad tech industry. Header bidding is perhaps the clearest illustration of how competition has pushed the ad tech industry forward. Although Plaintiffs spent significant time at trial introducing evidence about Google’s response to header bidding, the fact that it drove Google to develop a new technology (Open Bidding) that attempts to address concerns with header bidding such as security and latency is proof that competition in this market is well and works. FOF ¶ 215.

319. Plaintiffs argue that the ad tech market has nonetheless been harmed because Google’s conduct has prevented rival ad tech providers from attaining scale. FOF ¶ 1070. But Plaintiffs fail to distinguish effects on rivals from effects on competition. FOF ¶¶ 1085-1086;

*Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488 (1977). Contrary to the arguments of Plaintiffs, growth in customers and scale are not anticompetitive effects because they involve harm to competitors from legal competitive conduct by Google, including innovation and enhanced product quality.

320. Plaintiffs' scale argument is also wrong on the facts given the evidence of numerous ad tech providers who have attained sufficient scale to compete against Google. The number of ad tech offerings has exploded over the last two decades, FOF ¶ 1068, and new entrants have become dominant players in the blink of an eye, FOF ¶ 1070.1 (TikTok has a 50% annual growth rate and between 2019 and 2022 went from nothing to nearly half the size of Google in terms of total ad dollars facilitated). One after the other, Google's competitors that testified at trial have achieved sufficient scale to compete. FOF ¶¶ 1072-1080 (testimony from Microsoft, Equativ, The Trade Desk, Meta, and others).

321. Plaintiffs' scale argument is also legally flawed because they have failed to prove that whatever limits its rivals faced in achieving scale were due to Google's conduct. *See United States v. Google LLC*, 2024 WL 3647498, at \*104 (D.D.C. Aug. 5, 2024) ("Anticompetitive effects analysis involves establishing a causal link. The exclusionary conduct must cause the anticompetitive harm."). Rather, testimony from Plaintiffs' expert revealed that the scale arguments were premised on the faulty assumption that every new impression won by Google came at the cost of a rival exchange (rather than by enabling matches that would not have otherwise existed), FOF ¶ 1097.3 n.19, and even that evidence suggests the effects on scale were limited (paling in comparison to the size of the market), FOF ¶ 1099.

**VII. Google’s Product Innovations Were Procompetitive, Taking into Account the Interests of the Digital Advertising Ecosystem.**

322. Plaintiffs’ failure to show anticompetitive effect ends the case under well-settled antitrust law. *Supra* § V. If, however, the Court finds that Plaintiffs have made the required showing of anticompetitive effect, their claims still fail because each of the challenged acts was motivated by a procompetitive justification.

323. In the Fourth Circuit, the burden to show that a factfinder “could find no valid business reason or concern for efficiency” in a defendant’s actions falls on the plaintiff as part of its burden to prove a defendant “willfully acquired [monopoly] power or sought to maintain it.” *Oksanen v. Page Mem’l Hosp.*, 945 F.2d 696, 710 (4th Cir. 1991) (quoting *White v. Rockingham Radiologists, Ltd.*, 820 F.2d 98, 105 (4th Cir. 1987)). Where there are valid business reasons, Plaintiff cannot “demonstrate the monopolistic intent necessary for a section two claim.” *Id.*

324. Other circuits have adopted a burden-shifting framework that requires a plaintiff to show “anticompetitive effect” and then shifts the burden to the defendant to “proffer a procompetitive justification for its conduct.” *FTC v. Qualcomm Inc.*, 969 F.3d 974, 991 (9th Cir. 2020). If the defendant puts forward procompetitive justifications, the burden then shifts back to plaintiff to “rebut an asserted business justification by demonstrating either that the justification does not legitimately promote competition or that the justification is pretextual.” *Image Technical Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1212 (9th Cir. 1997); *see also Morris Comms. Corp. v. PGA Tour, Inc.*, 364 F.3d 1288, 1295 (11th Cir. 2004) (once the defendant has shown a “valid business justification, the burden shifts to the plaintiff to show that the proffered justification is pretextual”)

325. Although Fourth Circuit law places the burden to show the lack of a procompetitive justification on Plaintiffs, we note the variation in the interest of thoroughness. Here, the

distinction is ultimately academic given the significant evidence Google has put forward of non-pretextual procompetitive justifications for each of the challenged acts.

326. Examples of procompetitive justifications include, among other things, “safety and quality of [] products,” *Cont’l T. V., Inc. v. GTE Sylvania Inc.*, 433 U.S. 36, 55 n.23 (1977); “improv[ing] device security,” *Epic Games, Inc. v. Apple*, 67 F.4th 946, 986-89 (9th Cir. 2023); “concern for accountability, efficiency, and sound business practices,” *White v. Rockingham Radiologists, Ltd.*, 820 F.2d 98, 105 (4th Cir. 1987); fostering a “novel business practice . . . that was beneficial to consumers in the long run,” *FTC v. Qualcomm Inc.*, 969 F.3d 974, 1003 (9th Cir. 2020); improving product performance, *United States v. Microsoft*, 253 F.3d 34, 75 (D.C. Cir. 2001); and winning a counterparty’s business by “guarantee[ing] a stable source of supply” at “a stable, favorable price,” *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 237 (1st Cir. 1983).

327. Contrary to Plaintiffs’ suggestion, there is no blanket rule that courts afford “little weight” to the testimony of a defendant’s employees in the course of antitrust litigation. Nor would such a rule make much sense given that a firm and its employees are best situated to lay out the procompetitive justifications for its business decisions. The cases Plaintiffs cite for this proposition only suggest that subjective evidence (such as employee testimony) “cannot overcome any directly conflicting objective evidence.” *Fed. Trade Comm’n v. Meta Platforms Inc.*, 654 F. Supp. 3d 892, 928 (N.D. Cal. 2023). This is consistent with Supreme Court’s guidance that testimony “in conflict with contemporaneous documents” is afforded little weight. *United States v. U.S. Gypsum Co.*, 333 U.S. 364, 396 (1948). Beyond that, “assessing the weight of evidence and the credibility of witnesses is within the sole province of the fact-finder.” *SG Homes Assocs., LP v. Marinucci*, 718 F.3d 327, 338 (4th Cir. 2013).

328. Contrary to Plaintiffs’ claim, Google does not argue that “anticompetitive effects in one market can be justified by procompetitive justifications in another market.” PCOL ¶ 102. The evidence shows that there is a single ad tech market matching advertisers and publishers, FOF ¶¶ 527-542, and any evaluation of procompetitive effects therefore must account for the effects throughout the ad tech ecosystem.

329. Even if the Court finds that Plaintiffs have established three different product markets, evaluating procompetitive effects throughout the ad tech ecosystem would remain appropriate. Plaintiffs claim that “the Supreme Court has cautioned that courts are ill-equipped ‘to weigh, in any meaningful sense, destruction of competition in one sector of the economy against promotion of competition in another sector.’” PCOL ¶ 103 (quoting *United States v. Topco Assocs., Inc.*, 405 U.S. 596, 609–10 (1972)). But Plaintiffs’ truncate the *Topco* quotation, which in context undermines their argument. *Topco*, unlike this case, involved a “a *per se* violation” of the Sherman Act, and the Court rejected the argument that a defendant could justify a *per se* violation in one market on the basis of procompetitive effects in a different market. *Id.* at 609. The Court explained that the difficulty of weighing “destruction of competition in one sector of the economy against promotion of competition in another sector *is one important reason we have formulated per se rules.*” *Id.* at 609-10 (emphasis added). As this discussion shows, evaluating procompetitive effects throughout the relevant ecosystem is entirely appropriate in rule-of-reason cases that do not involve a *per se* violation.

330. To rebut a procompetitive business justification as pretextual, the plaintiff must adduce evidence that directly undermines the veracity of the defendant’s proffered justification. *See Image Technical Servs. v. Eastman Kodak Co.*, 903 F.2d 612, 618–19 (9th Cir. 1990); *see also ACT, Inc. v. Sylvan Learning Sys., Inc.*, 296 F.3d 657, 668 (8th Cir. 2002) (evaluating whether the

“declared business reasons for [the conduct] were pretext for [the defendant’s] true goal”). It is not sufficient to show that the challenged conduct was motivated only in part by anticompetitive intent—if the evidence “at most shows that a secondary motivation of the [challenged conduct] was to disadvantage the competition,” the existence of other procompetitive justifications for the conduct precludes a Section 2 claim. *Universal Analytics, Inc. v. MacNeal-Schwendler Corp.*, 914 F.2d 1256, 1259 (9th Cir. 1990). Plaintiffs have failed to show that any of Google’s justifications for its product design decisions were pretextual, nor could they given the increasing value Google has delivered for both its advertiser and publisher customers and the growth across the industry.

**VIII. Plaintiffs’ Alternative Claim for Attempted Monopolization of the Ad Exchange Market Also Fails Because It is a Lawful Refusal to Deal and There Is No Dangerous Probability of Google Achieving Monopoly Power.**

331. At Count II of the Complaint, Plaintiffs’ tack on a claim “in the alternative” for attempted monopolization of the “Ad Exchange Market. FAC ¶¶ 324-329. “A plaintiff seeking to establish attempted monopolization under § 2 of the Sherman Act must show three things: (i) the defendant formed a specific intent to monopolize the market, (ii) the defendant engaged in anticompetitive or predatory conduct designed to further that intent, and (iii) a dangerous probability of success.” *Abcor Corp. v. AM Int’l, Inc.*, 916 F.2d 924, 926 (4th Cir. 1990).

332. The attempted monopolization claims fail due to the failure to define a market and the absence of market power in the proposed markets here. *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993) (“In order to determine whether there is a dangerous probability of monopolization, courts have found it necessary to consider the relevant market and the defendant’s ability to lessen or destroy competition in that market.”).

333. Both monopolization and attempted monopolization claims have been interpreted to require similar showings of “predatory or anticompetitive conduct.” *Imaging Ctr., Inc. v. W. Md. Health Sys., Inc.*, 158 F. App’x 413, 421 (4th Cir. 2005). Plaintiffs’ alternative attempted



monopolization claim fails because all the challenged acts at issue here were lawful refusals to deal. *Supra* § IV.A.1. And, even if Plaintiffs were able to evade the conclusion required by *Trinko* and its progeny, the claim also fails because the challenge acts lack anticompetitive effect and have procompetitive justifications. *Supra* § IV.V.

334. Plaintiffs also fail to prove the elements that are unique to an attempted monopolization claim. First, Plaintiffs have not shown “a specific intent to destroy competition or build monopoly.” *Times–Picayune Pub. Co. v. United States*, 345 U.S. 594, 626 (1953). As the Fourth Circuit has cautioned, “a desire to increase market share or even to drive a competitor out of business through vigorous competition on the merits is not sufficient.” *Abcor Corp. v. AM Int’l, Inc.*, 916 F.2d 924, 927 (4th Cir. 1990) (citing *United States Steel Corp. v. Fortner Enters.* 429 U.S. 610, 612 n.1 (1977)). To the contrary, as set forth above, considerable evidence demonstrates that Google introduced each of the challenged features to benefit the ad tech ecosystem—and its participants. Plaintiffs even equate increasing customers or market share with anticompetitive conduct because of the acquisition of scale, but all firms are allowed and expected to compete for more success and scale.

335. Second, Plaintiffs have failed to show a dangerous probability of successful monopolization. The Fourth Circuit has reasoned that, where a defendant’s “market share” has “been in steady decline,” it counsels against a conclusion that there is a “dangerous probability” a defendant will achieve monopoly power. *Kolon Indus. Inc. v. E.I. du Pont de Nemours & Co.*, 748 F.3d 160, 178 (4th Cir. 2014). That is precisely the case here with Google.

336. Google’s ad tech tools—even in a market limited to “ad exchanges for open web display advertising”—has never been higher than 50 percent of the U.S. spend on display advertising, with Google’s share dropping below 35 percent in 2020 (and even lower in the actual

market for display ad transactions). FOF ¶ 640. That is insufficient to establish an attempted monopolization claim. See *M & M Med. Supplies & Serv., Inc. v. Pleasant Valley Hosp., Inc.*, 981 F.2d 160, 168 (4th Cir. 1992) (attempted monopolization “claims involving between 30% and 50% shares should usually be rejected, except when conduct is very likely to achieve monopoly or when conduct is invidious, but not so much so as to make the defendant per se liable”); *Advanced Health-Care Servs. v. Giles Memorial Hosp.*, 846 F. Supp. 488, 497 (W.D. Va. 1994) (similar); *Arthur S. Langenderfer, Inc. v. S.E. Johnson Co.*, 917 F.2d 1413, 1432 (6th Cir. 1990) (collecting cases rejecting attempted monopolization claims where market share was approximately 50% or lower).

#### **IX. Plaintiffs Are Not Entitled To An Adverse Inference.**

337. Rule 37(e) of the Federal Rules of Civil Procedure governs requests for sanctions involving electronically-stored information. As a prerequisite to severe sanctions, such as any request that the Court “presume that the lost information was unfavorable” to Google, Plaintiffs have the burden of demonstrating that Google “acted with the intent to deprive another party of the information’s use in the litigation.” Fed. R. Civ. P. 37(e)(2)(A).

338. To carry their heavy burden of showing that the severe remedy of an adverse inference is appropriate in this case, Plaintiffs must demonstrate by clear and convincing evidence that Google “acted with the intent to deprive” Plaintiffs “of the information’s use in the litigation.” Fed. R. Civ. P. 37(e)(2); *Steves & Sons, Inc. v. JELD-WEN, Inc.*, 327 F.R.D. 96, 104 (E.D. Va. 2018); *Haysbert v. Bloomin’ Brands, Inc.*, 2021 WL 5003284, at \*4 (E.D. Va. July 9, 2021). The evidence shows the opposite.

339. To act with deliberate intent, a party must “act willfully or intentionally to delete, discard, or hide evidence”—that is, the party must “destroy evidence *specifically for the purpose of preventing its disclosure* in this litigation.” *In re Ethicon, Inc. Pelvic Repair Sys. Prod. Liab. Litig.*, 299 F.R.D. 502, 521 (S.D.W. Va. 2014). “Negligent or even grossly negligent behavior”

does not suffice. Fed. R. Civ. P. 37(e)(2) advisory committee’s note to 2015 amendment. Nor does “a ‘lack of reasonable steps’ to preserve equate with an ‘intent to deprive.’” *Gov’t Emps. Health Ass’n v. Actelion Pharms. Ltd.*, 343 F.R.D. 474, 483 (D. Md. 2023); *Auer v. City of Minot*, 896 F.3d 854, 858 (8th Cir. 2018) (holding an adverse inference instruction was “unavailable as a matter of law” where there was no evidence the defendant “consciously permitted” relevant evidence to be destroyed). The “intent standard is stringent and does not parallel other discovery standards.” *Borum v. Brentwood Village, LLC*, 332 F.R.D. 38, 48 (D.D.C. 2019).

340. Plaintiffs do not come close to meeting this demanding standard. As the evidence demonstrates, Google timely issued broad legal hold notices and instructed employees subject to those holds to preserve Chat messages about the covered topics. Witnesses FOF ¶ 74.<sup>4</sup> Plaintiffs instead challenge the sufficiency of the process Google employed to preserve Chat messages between late October 2019, the earliest date Google could possibly have been under a duty to preserve, and February 8, 2023, when Google changed its Chat retention processes. ECF No. 1116 at 1-2.

341. Plaintiffs at trial had the opportunity to ask every Google witness about the witness’s usage of Google Chat and whether the witness complied with the preservation instructions they received. No testimony remotely suggests an intent to deprive Plaintiffs of evidence in this case. The testimony shows that some witnesses turned chat history on when discussing substantive matters—the exact opposite of what Plaintiffs allege. Witnesses FOF ¶ 77. Other witnesses who did not turn chat history on overwhelmingly used chats to discuss “logistical” or “ad hoc” matters or to have “hallway-like discussions.” Witnesses FOF ¶ 76. While some

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<sup>4</sup> The Proposed Findings of Fact relating to Plaintiffs’ motion for adverse inference, ECF No. 1116, are set forth in the Proposed Findings of Fact Relating to Trial Witnesses (“Witnesses FOF”).

witnesses acknowledged the possibility that they occasionally discussed substantive matters via chat without turning history on over the course of many years at Google, their testimony reveals that these were inadvertent mistakes, and certainly not efforts to deprive Plaintiffs of information. Witnesses FOF ¶ 78. Witnesses also explained that substantive decisions generally would not have been made over chat messages and, to the extent chat messages contained substantive discussions, the same substantive information usually would have been captured in emails, presentations, and other documents. Witnesses FOF ¶ 79. That testimony is consistent with the weight of the evidence presented at this trial, including numerous internal emails, product design documents, slide decks, and other documentation containing candid discussions about the display ads business.

342. Plaintiffs have cited a memorandum issued in 2008 to support their assertion about “Google’s intent to deprive litigants of evidence.” ECF No. 1116 at 24. But this memorandum states: “If you’ve received notice that you’re subject to a litigation hold, and you must chat regarding matters covered by that hold, please make sure that those chats are ‘on the record.’” ECF No. 1116-3, Pls.’ Br. Ex. 2 at -619 (emphasis added). A company does not “act unreasonably in assuming that its employees complied with [a] policy.” *In re Keurig Green Mountain Single-Serve Coffee Antitrust Litig.*, 341 F.R.D. 474, 520 (S.D.N.Y. 2022).

343. Nor do non-lawyers adding a “Privileged and Confidential” legend to a document demonstrate an intent to deprive Plaintiffs of information. The witnesses who testified explained that they used the legend when they thought the content of a document involved a legal issue on which they intended to seek legal advice, or if they were gathering information for a lawyer. Witnesses FOF ¶ 80. Google witnesses understood that, as non-lawyers, they did not bear responsibility for deciding which documents would be privileged and withheld in production.

Witnesses FOF ¶ 81. Google’s attorneys, in producing documents to Plaintiffs, reviewed each document for its substance and whether it satisfied the legal standard for privilege, and produced to Plaintiffs documents even if they were labeled “Privileged and Confidential.” Witnesses FOF ¶ 82.

344. The amount of material that Google did produce to Plaintiffs, including over 6 million documents and voluminous transactional data, “belies an intentional plan to deprive Plaintiff[s] of relevant ESI in this litigation.” *Gov’t Emps. Health Ass’n v. Actelion Pharms. Ltd.*, 343 F.R.D. 474, 483-84 (D. Md. 2023) (defendant produced “hundreds of thousands of other ESI ‘documents,’ amounting to approximately 1.6 million pages, including from fifteen other . . . custodians”).

345. Plaintiffs’ fallback request for sanctions under Rule 37(e)(1) also fails. Plaintiffs have provided no evidence that their ability to litigate this case has been prejudiced by the absence of any history-off Chat messages between October 2019 and February 2023. Rule 37(e)(1) requires a specific “finding” of “prejudice . . . from loss of the information” before any sanction may be issued.<sup>5</sup> Fed. R. Civ. P. 37(e)(1). Any “evaluation of prejudice from the loss of information necessarily includes an evaluation of the information’s importance in the litigation.” Fed. R. Civ. P. 37(e) advisory committee’s note to 2015 amendment. The information alleged to be missing must be more than simply relevant; instead, the information must serve a “unique and

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<sup>5</sup> Plaintiffs previously conflated the requirement that the moving party demonstrate a breach of the duty to preserve with the requirement that the moving party demonstrate prejudice pursuant to Rule 37(e)(1). ECF No. 1202 at 4-5. As explicitly stated in the case cited by Plaintiffs, *E.I. du Pont de Nemours & Co. v. Kolon Indus., Inc.*, 803 F. Supp. 2d 469, 499 (E.D. Va. 2011), bad faith by the spoliating party “establishes, without more, that the destroyed documents or materials were relevant.” Once relevance, and thus a breach of the duty to preserve, was established, the same court went on to separately evaluate “the degree of culpability and the extent of the prejudice, if any.” *Id.* at 499-500.

vital role.” *Steves & Sons, Inc. v. JELD-WEN, Inc.*, 327 F.R.D. 96, 110 (E.D. Va. 2018); *see also In re Delta/AirTran Baggage Fee Antitrust Litig.*, 770 F. Supp.2d 1299, 1310 (N.D. Ga. 2011) (Where “the moving party is not able to establish that the allegedly destroyed evidence is critical to the case, courts have consistently refused to impose spoliation sanctions.”).

346. Mere speculation about the value of any messages alleged to be lost does not demonstrate the necessary prejudice. A “finding” of prejudice requires “concrete evidence” of prejudice, *In re Ethicon*, 299 F.R.D. at 524, not “speculative” argument, *Steves & Sons, Inc.*, 327 F.R.D. at 110; *see also Eisenband v. Pine Belt Auto., Inc.*, 2020 WL 1486045, at \*9 (D.N.J. Mar. 27, 2020) (no prejudice where movant offered “no specifics about what” the evidence “might show”); *Simon v. City of New York*, 2017 WL 57860, at \*7 (S.D.N.Y. Jan. 5, 2017) (no prejudice based on “pure speculation”). The mere possibility that the destroyed evidence could have been a “message containing some type of ‘smoking gun’” is not enough. *Burns v. Medtronic, Inc.*, 2017 WL 11633260, at \*6 (M.D. Fla. Aug. 9, 2017) (no prejudice from deleted messages given “Plaintiffs has had ample opportunity to depose the custodians and the decision-makers in this case about their motivations”).

347. Plaintiffs cannot show the loss of information critical to their case—and therefore demonstrate prejudice—for two independent reasons.

347.1. *First*, any Chat messages that were not preserved due to an employee’s inadvertence would have likely had little material relevance to the key allegations in this case. The product design decisions that Plaintiffs challenge all took place before October 2019, the earliest date a duty to preserve arose. Rule 37(e) “does not apply when information is lost before a duty to preserve arises.” Fed. R. Civ. P. 37(e) advisory committee’s note to 2015 amendment.

347.2. *Second*, Plaintiffs have not established that Chat messages were the “only evidence available to prove” Plaintiffs’ claims. *Pugh-Ozua v. Springhill Suites*, 2020 WL 6562376, at \*4 (S.D.N.Y. Nov. 9, 2020). A number of witnesses testified that Chat messages were unlikely to contain unique substantive information that was not also contained in emails, presentations, and other documents. Witnesses FOF ¶ 79. Moreover, at trial Plaintiffs had the opportunity to examine numerous Google employees about their motivations and decision-making relating to the conduct at issue. It is implausible that—despite the massive record available to Plaintiffs after voluminous discovery—the narrow universe of history-off Chat messages between October 2019 to February 8, 2023 would have altered the course of this case. *See FTC v. DirectTV, Inc.*, 2016 WL 7386133, at \*4 (N.D. Cal. Dec. 21, 2016) (Plaintiffs must demonstrate the information that has been produced “is inadequate for its purposes”); *Does 1-5 v. City of Chicago*, 2019 WL 2994532, at \*8 (N.D. Ill. July 9, 2019).

347.3. The evidence at trial established that neither industry sources like eMarketer nor documents and testimony from Google competitors recognize a market for “open-web display advertising.” FOF ¶¶ 398-402. Given the extensive evidentiary record in this case—including documents and testimony from both Google and industry participants about the competitive landscape—there is no reason to believe that any Chat conversation would contain information that would prove Plaintiffs’ markets.

347.4. Google employees—as the documentary and testimonial evidence at trial showed—vigorously debated the extent to which Google should interoperate with its rivals, with varying perspectives in that debate. *E.g.*, Witnesses FOF ¶¶ 27, 30. To the extent any of this debate took place over Chat, Plaintiffs have not explained how those conversations could alter Supreme Court precedent that holds that Google has no duty to deal with—or interoperate with—its rivals.

348. Plaintiffs’ final request for sanctions imposed pursuant to the Court’s inherent powers also fails. “Rule 37(e) governs the spoliation analysis for electronically stored information (‘ESI’).” *Steves & Sons, Inc. v. JELD-WEN, Inc.*, 327 F.R.D. 96, 103 (E.D. Va. 2018). As the Advisory Committee Notes to the 2015 amendments to Rule 37(e) state: “New Rule 37(e) replaces the 2006 rule. It authorizes and specifies measures a court may employ if information that should have been preserved is lost, and specifies the findings necessary to justify these measures. It therefore *forecloses reliance on inherent authority* or state law to determine when certain measures should be used.” (emphasis added). In any event, Plaintiffs’ burden for establishing its entitlement to sanctions pursuant to the inherent authority are similar to those under Rule 37(e), and Plaintiffs fail to meet that burden for the reasons described above. *Steves & Sons Inc.*, 327 F.R.D. at 104.



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