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**A REVIEW OF ‘BIG TECH’ ANTITRUST LITIGATION IN THE
FEDERAL COURTS**

By: Sarah Oh Lam, J.D., Ph.D.*

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ABSTRACT

Antitrust litigation in state and federal courts against the so-called ‘Big Tech’ companies is currently ongoing between coalitions of state attorneys general, the U.S. Department of Justice, the Federal Trade Commission and four large American technology companies: Amazon, Apple, Facebook, and Google. In this paper, I review the complaints and the criteria that will be used by judges and juries to assess whether Amazon, Apple, Facebook, or Google engaged in anticompetitive conduct. The courts will use the consumer welfare standard, rule of reason analysis, and other legal precedents in antitrust law and competition policy to prove harm. In each case, litigants will be asked to present evidence and develop theories of market definition, market concentration, market structure, and exclusionary agreements for different components of the digital economy.

I. Introduction

[1] American firms operating digital platforms have been sued by antitrust enforcers and private plaintiffs in a half-dozen lawsuits over the past two years.¹ In this paper, I review the complaints and the criteria that will be used by judges and juries to assess whether Amazon, Apple, Facebook, and Google engaged in anticompetitive conduct.

[2] From 2020–21, antitrust lawsuits were filed in state and federal district court by coalitions of state attorneys general, the U.S. Department of Justice, the Federal Trade Commission, and private firms.² Each case focuses on a different product or service made by these companies. The criteria that will be used to prove harm will rely on the consumer welfare standard, rule of reason analysis, and other legal precedents in antitrust law and competition policy. In each case, litigants will be asked by the courts to present evidence and develop theories of market definition, market concentration, market structure, and exclusionary agreements in a digital economy.

[3] Federal officials, legislators, and the press have also been concerned with various aspects of the digital economy and online marketplaces. The Judiciary Committee of the U.S. House of Representatives held a series of public hearings last year, one of which took place on July 29, 2020 that included witness testimony from four chief executive officers: Jeff Bezos of Amazon, Sudhar Pichai of Google, Mark Zuckerberg of Facebook, and

¹ Nicolás Rivero, *A cheat sheet to all of the antitrust cases against Big Tech in 2021*, QUARTZ (Sep. 29, 2021), <https://qz.com/2066217/a-cheat-sheet-to-all-the-antitrust-cases-against-big-tech-in-2021/> [<https://perma.cc/9HT8-UR5R>].

² *Id.*

Tim Cook of Apple.³ To accompany the public hearings, the Subcommittee on Antitrust released a large number of business documents that included email communications and strategy plans that the members collected for its investigation.⁴ The documents alone are not sufficient to prove anticompetitive conduct but do reveal more context for the decisions made by these technology executives in the course of doing business in competitive markets.⁵ In October 2020, the majority staff of the Subcommittee released a report concluding its antitrust investigation of the four companies.⁶ In June 2021, several Subcommittee members introduced legislation in an effort to address these alleged harms discussed in the staff report and public hearings, and in the Senate, other members have

³ *Online Platforms and Market Power, Part 6: Examining the Dominance of Amazon, Apple, Facebook, and Google: Hearing Before the Subcomm. on Antitrust, Com., and Admin. L.*, 116th Cong. 2 (2020); see generally Sarah Oh, *Is There Evidence of Antitrust Harm in the House Judiciary Committee's Hot Docs?*, 37 SANTA CLARA HIGH TECH. L.J. 193, 193–229 (2021).

⁴ Steve Kovach, *Congress has the goods on Apple, Amazon, Facebook and Google*, CNBC: TECH (July 30, 2020, 12:25 PM), <https://www.cnbc.com/2020/07/30/apple-amazon-facebook-google-internal-emails-released-by-congress.html> [<https://perma.cc/SML2-CC62>].

⁵ House Committee on the Judiciary, *Online Platforms and Market Power: Examining the Dominance of Amazon, Apple, Facebook, and Google*, YOUTUBE (July 29, 2020), <https://www.youtube.com/watch?v=WBFDQvIrWYM> [perma.cc/B3JY-PAM2] [hereinafter *Hearing Video*]; see also *Online Platforms and Market Power*, U.S. H. COMM. ON JUDICIARY (2020), <https://judiciary.house.gov/online-platforms-and-market-power> [<https://perma.cc/2DV6-BC7B>] [hereinafter *Hearing Documents*].

⁶ STAFF OF H. COMM. ON JUDICIARY, SUBCOMM. ON ANTITRUST, COM., AND ADMIN. LAW, 116TH CONG., REP. ON INVESTIGATION OF COMPETITION IN DIGITAL MARKETS (2020) (summarizing findings after seven hearings and document requests) [hereinafter *Majority Staff Report and Recommendations*].

introduced legislation to strengthen antitrust laws and remedies, and empower enforcers.⁷

II. Antitrust Concerns

[4] Federal courts will decide whether technology firms caused antitrust harm to consumers after research and analysis of market definition, market structure, market concentration, and exclusionary agreements. In the following sections, I review the complaints and the criteria that will be used by judges and juries to assess whether Amazon, Apple, Facebook, and Google engaged in anticompetitive conduct.

A. Cases Against Amazon

[5] Antitrust enforcers and legislators have targeted Amazon's governance of the third-party seller marketplace, pricing strategies, and acquisitions of nascent or potential competitors.

1. Third-Party Seller Agreements

[6] The Attorney General of the District of Columbia alleged in May 2021 that Amazon raised prices for third-party sellers in violation of the

⁷ Press Release, U.S. H. Comm. on Judiciary, House Lawmakers Release Anti-Monopoly Agenda for "A Stronger Online Economy: Opportunity, Innovation, Choice" (June 11, 2021), <https://judiciary.house.gov/news/documentsingle.aspx?DocumentID=4591> [<https://perma.cc/FZZ8-SGJJ>]; *see also* Press Release, Sen. Mike Lee & Sen. Chuck Grassley, Sens. Lee, Grassley Introduce TEAM Act to Reform Antitrust Law (June 14, 2021), <https://www.lee.senate.gov/2021/6/sens-lee-grassley-introduce-team-act-to-reform-antitrust-law> [<https://perma.cc/Z9RC-4FC8>]; Leah Nysten, *House Democrats about to uncork 5-pronged assault on tech*, POLITICO (June 10, 2021, 10:52 AM), <https://www.politico.com/news/2021/06/09/house-democrats-announce-tech-bills-492703> [<https://perma.cc/8H9X-C5BH>].

District of Columbia Antitrust Act.⁸ The lawsuit alleges that several of Amazon’s terms for its third-party seller platform amount to horizontal and vertical agreements in restraint of trade.⁹ First, the lawsuit claims, Amazon dominates the online retail sales market, holding 50–70% of market share of all online retail sales.¹⁰ The lawsuit then alleges that the terms of the Business Solutions Agreement (BSA) with third-party sellers are anticompetitive because Amazon prohibited sales of the same goods on competing online sales platforms through the “price parity provision” (PPP) and “platform most favored nation agreement” (PMFN).¹¹ The theory is that these contract terms caused third-party sellers to incorporate Amazon’s fees into their product prices, thus raising prices for consumers and causing a loss of horizontal competition from the ban on selling the same products on other online retail sales platforms.¹² The PMFN also amounts to “unreasonable vertical agreements in restraint of trade” and creates artificially high prices for consumers, according to the lawsuit.¹³ In addition, Amazon imposes a “scheme of fees and extra charges—sometimes equaling up to 40% of the total product price” on third-party sellers.¹⁴

⁸ Complaint at 1, 5, 23, 25, *District of Columbia v. Amazon, Inc.*, No. 2021-CA-001775-B (D.C. Super. Ct. May 25, 2021) (claiming that Amazon is in violation of D.C. Code §§ 28-4501, 28-4502, and 28-4503).

⁹ *Id.* ¶¶ 8–9.

¹⁰ *Id.* ¶ 1.

¹¹ *Id.* ¶ 3.

¹² *Id.* ¶ 3–4.

¹³ Complaint, *supra* note 8 at ¶ 9.

¹⁴ *Id.* ¶ 7.

[7] To prove these claims of horizontal and vertical restraints of trade, the D.C. attorney general will need to establish that Amazon indeed has market dominance in the relevant market, prove causal effects of the BSA on consumer prices, establish causal effects of fees and extra charges on consumer prices, and determine the extent to which there are barriers to entry and abuse of network effects in the Amazon third-party seller marketplace.¹⁵ The complaint is premised on state law claims, rather than federal law claims, and will be heard in the Superior Court of D.C., rather than in federal court.¹⁶ D.C. seeks a jury trial, as well as injunctions and damages as remedies for the alleged anticompetitive conduct.¹⁷

[8] The particular rules by which Amazon operates the third-party seller marketplace have not yet been the subject of a federal investigation, although some indications suggest the Federal Trade Commission and state attorneys general of New York and California may file a complaint in the near future.¹⁸

¹⁵ *Id.* at 23–27.

¹⁶ *Id.* at 1.

¹⁷ *Id.* at 27–29.

¹⁸ See Tyler Sonnemaker, *Amazon is reportedly facing a new antitrust investigation into its online marketplace led by the FTC and attorneys general in New York and California*, BUS. INSIDER (Aug. 3, 2020, 3:53 PM), <https://www.businessinsider.com/amazon-antitrust-probe-ftc-new-york-california-online-marketplace-2020-8> [<https://perma.cc/2ATM-XYNV>]; Karen Weise & David McCabe, *Amazon Said to Be Under Scrutiny in 2 States for Abuse of Power*, N.Y. TIMES (June 12, 2020), <https://www.nytimes.com/2020/06/12/technology/state-inquiry-antitrust-amazon.html> [<https://perma.cc/E2MY-89RF>].

2. Conflicts of Interest and Self-Preferencing

[9] In a public hearing on July 29, 2020, members of the Subcommittee on Antitrust of the Judiciary Committee of the U.S. House of Representatives also expressed concerns related to conflicts of interest between Amazon and its third-party sellers. Members of Congress appeared to be concerned about small sellers who compete in Amazon's marketplace. In one exhibit displayed during the hearing, a small bookseller, which claimed to be in compliance with the rules of the marketplace, pleaded with Amazon not to squash its business.¹⁹ The members of Congress appeared to be responding to a news report that outlined the ways that third-party sellers were being disadvantaged on the Amazon marketplace.²⁰ Jeff Bezos responded to the questioning by focusing on the opportunity created by Amazon for the 2.3 million active third-party sellers from around the world²¹ that, without Amazon's marketplace, would not have the same opportunity to reach Amazon's vast pool of retail consumers: "I'm very proud of what we've done for third-party sellers on this platform."²²

¹⁹ *Hearing Documents*, *supra* note 5 (referencing Exhibit B – Amazon Documents).

²⁰ *See* Oh, *supra* note 3, at 207 n.74 ("Several members of Congress focused on alleged harms to small sellers . . ."); *Hearing Video*, *supra* note 5 (questions by Rep. Pramila Jayapal (D-WA) at 01:51:00, Rep. Lucy McBath (D-GA) at 02:25:35, Rep. David Cicilline (D-RI) at 02:31:31, Rep. Kelly Armstrong (R-ND) at 03:43:00, and Rep. Joe Neguse (D-CO) at 04:06:11).

²¹ Majority Staff Report and Recommendations, *supra* note 6, at 249.

²² *Hearing Video*, *supra* note 5 (responding to Rep. Pramila Jayapal (D-WA) at 01:56:00).

[10] Conflicts of interest²³ and self-preferencing claims²⁴ will be assessed by the courts based on purported effects on consumer welfare, and not on whether smaller competitors are protected from rigorous competition. In its final staff report, the majority staff repeated the concern that Amazon considered third-party sellers “internal competitors” rather than “partners,” which amounts to a conflict of interest that disadvantages smaller firms.²⁵ The staff report noted that Amazon charges third-party sellers fees that may include “a monthly subscription fee, a high-volume listing fee, a referral fee on each item sold, and a closing fee on each item sold,”²⁶ as well as fees for fulfillment and delivery services and advertising.²⁷ Net sales from third-party seller fees amounted to \$23 billion in the first half of 2019 and \$32 billion in the first half of 2020.²⁸

[11] Whether these fees disadvantage consumers by raising prices is a question that will need to be answered with economic models and a battle of the experts. In litigation, Amazon will likely defend its management of

²³ Ending Platform Monopolies Act, H.R. 3825, 117th Cong. (2021) (comprising one of five bills introduced by House Democrats entitled “A Stronger Online Economy: Opportunity, Innovation, and Choice”).

²⁴ American Choice and Innovation Online Act, H.R. 3816, 117th Cong. (2021) (comprising one of five bills introduced by House Democrats entitled “A Stronger Online Economy: Opportunity, Innovation, and Choice”); *see, e.g.*, Press Release, U.S. H. Comm. on Judiciary, *supra* note 7 (describing a bill sponsored by Rep. David Cicilline (D-RI) to bar discrimination by platforms against rivals in self-preferencing of private label products and services); *U.S. v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001).

²⁵ Majority Staff Report and Recommendations, *supra* note 6, at 16.

²⁶ *Id.* at 251 n.1537.

²⁷ *Id.* at 251 n.1538.

²⁸ *Id.*

the third-party seller marketplace by showing how its rules promote innovation and entry for more third-party sellers who find efficiencies, in exchange for the fees, in order to reach more customers and increase sales volumes.²⁹

3. Predatory Pricing

[12] At the July 29, 2020 hearing, one member of the House Judiciary Committee’s Subcommittee on Antitrust asked Jeff Bezos about price competition with Diapers.com in 2009.³⁰ Representative Mary Scanlon stated that Amazon incurred \$200 million in losses in order to win market share in the diapers category, only to raise prices later to recoup their losses.³¹ This strategy to compete on lower prices was described in internal business emails.³²

[13] The question of whether this business strategy amounted to illegal predatory pricing, as some have asserted, would need to be answered in

²⁹ *How Amazon and third-party sellers together give customers more choice*, AMAZON (Aug. 23, 2021), <https://www.aboutamazon.eu/news/policy/how-amazon-and-third-party-sellers-together-give-customers-more-choice> [<https://perma.cc/CDT4-2FQA>].

³⁰ *Hearing Video*, *supra* note 5.

³¹ Oh, *supra* note 3, at 198 n.16 (“[Q]uestion by Mary Gay Scanlon, Representative, Pennsylvania at 02:14:00 for Jeff Bezos asking for his estimate of how much Amazon was willing to lose to compete with lower prices than Diapers.com after describing Amazon emails that outlined a plan to cut prices, referencing Email from Doug Herrington to Jeff Bezos. . . . [R]esponse from Jeff Bezos at 02:16:54 recollecting that Amazon invested \$350 million into Diapers.com after the acquisition for further development of the service”).

³² Oh, *supra* note 3, at 198 n.18.

litigation using an economic model of the market for diapers and Amazon's sequence of incurring losses and recouping profits later.³³

[14] In general, price discounts benefit consumers, enabling lower prices and therefore higher welfare. This consumer welfare standard means that antitrust enforcement focuses more on cases of anticompetitive injury that lead to higher prices and less quality or quantity for consumers than on cases where lower prices or higher quality or quantity benefit consumers. Amazon's economies of scale and ability to successfully execute in many areas of retail distribution has been questioned by lawmakers who are concerned by Amazon's ability to offer price discounts on popular products.³⁴

[15] Finding conduct that amounts to predatory pricing requires inquiries into key issues such as the frequency of the pricing changes and the occurrence of above-cost pricing, cost measures, and recoupment mechanisms.³⁵ Federal agencies, state attorneys general, or private plaintiffs

³³ See U.S. DEP'T JUST., COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT 54 (2015), https://www.justice.gov/sites/default/files/atr/legacy/2008/09/12/236681_chapter4.pdf [<https://perma.cc/3ZJS-HF4G>] (stating Section 2 investigations of predatory pricing by the U.S. Department of Justice include inquiries into six key issues: "(1) the frequency of predatory pricing, (2) treatment of above-cost pricing, (3) cost measures, (4) recoupment, (5) potential defenses, and (6) equitable remedies").

³⁴ Oh, *supra* note 3, at 200 n.28 (citing "statement of Mary Gay Scanlon, Representative, Pennsylvania at 02:14:00; statement of Jamie Raskin, Representative, Maryland at 02:56:18, asking Jeff Bezos if the Amazon Echo was priced below-cost, with response by Jeff Bezos that it is not priced below-cost at its list price, but on promotion, yes, it may be priced below-cost").

³⁵ See U.S. DEP'T JUST., *supra* note 33, at 54.

have yet to file a lawsuit on the Diapers.com acquisition.³⁶ However, the U.S. Federal Trade Commission has opened a § 6(b) investigation that would include a review of its past decisions to not challenge smaller acquisitions that may represent nascent or potential competition.³⁷

4. Acquisition of Nascent or Potential Competitors

[16] Lawmakers have also asked whether Amazon’s acquisitions of the home security systems Blink (for \$90 million in 2017) and Ring (for \$1.2 billion in 2018)³⁸ stifled potential or nascent competition. The House Judiciary Committee’s Subcommittee on Antitrust released documents that revealed Amazon’s internal assessment of Ring technology. In email communications, Amazon executives remarked that it was “willing to pay for market position as it’s hard to catch the leader.”³⁹ Jeff Bezos wrote that the Ring acquisition was about “buying market position – not technology. And that market position and momentum is very valuable.”⁴⁰

³⁶ Majority Staff Report and Recommendations, *supra* note 6, at 267 (citing Letter from April Tabor, Acting Sec’y, FTC to Thomas Barnett on Aug. 22, 2012 that describes the FTC’s investigation of Amazon’s acquisition of Quidsi, the parent company of Diapers.com, but the decision not to challenge the acquisition as a violation of antitrust law).

³⁷ Press Release, FTC, FTC to Examine Past Acquisitions by Large Technology Companies (Feb. 11, 2020), <https://www.ftc.gov/news-events/press-releases/2020/02/ftc-examine-past-acquisitions-large-technology-companies> [<https://perma.cc/9ZKW-26TZ>] (describing how the FTC is authorized under Section 6(b) of the FTC Act to conduct wide-ranging studies that do not have a specific law enforcement purpose).

³⁸ Majority Staff Report and Recommendations, *supra* note 6, at 265.

³⁹ Oh, *supra* note 3, at 203–04.

⁴⁰ *Hearing Documents*, *supra* note 5 (referencing Amazon email from Jeff Bezos to Dave Limp re Ring).

[17] While the statements may seem incriminating, the criteria for whether the acquisitions rise to the level of causing antitrust injury includes more than mere statements of business strategy in “hot docs.”⁴¹ To show that the acquisition harmed consumer welfare by eliminating a nascent or potential competitor, economists and attorneys will need to establish many facts related to market structure and trends in innovation in that particular product or service.⁴² A judge or jury would also need to eliminate the possibility that the acquisition of the nascent or potential competitor could have helped innovation by providing the incentive to the founders to build and sell a startup company in the first place.⁴³

B. Cases Against Apple

[18] Federal litigation has been the main avenue for increased scrutiny of Apple’s business decisions related to in-app payments in the Apple App

⁴¹ See generally Geoffrey A. Manne & E. Marcellus Williamson, *Hot Docs vs. Cold Economics: The Use and Misuse of Business Documents in Antitrust Enforcement and Adjudication*, 47 ARIZ. L. REV. 609, 611–13 (2005) (discussing the difference between business rhetoric and economic conduct in antitrust litigation).

⁴² See generally John M. Yun, *Potential Competition, Nascent Competitors, and Killer Acquisitions*, in THE GLOBAL ANTITRUST INSTITUTE REPORT ON THE DIGITAL ECONOMY 652, 658, 660–61, 675–77 (Joshua D. Wright & Douglas H. Ginsburg eds., 2020) (describing the inherently speculative and fact-based inquiry necessitated in antitrust case analyses). *But see* Nysten, *supra* note 7 (describing a bill sponsored by Rep. Hakeem Jeffries (D-NY) that would shift the burden to the acquiring firm to show by a “clear and convincing evidence” standard that a potential rival does not pose a competitive threat).

⁴³ FTC, PREPARED REMARKS OF CHAIRMAN JOSEPH J. SIMONS ABA SECTION OF ANTITRUST LAW FALL FORUM 2020 8 (Nov. 12, 2020), https://www.ftc.gov/system/files/documents/public_statements/1583022/simons_-_remarks_at_antitrust_law_fall_forum_2020.pdf [<https://perma.cc/SF9V-EXGF>] (“Large firms often acquire small firms, and the payout associated with the acquisition may incentivize individuals and small firms to engage in costly and risky innovation in the first place. If the law prohibits all acquisitions of this type, then we might expect a lower amount of such innovation.”).

Store and App Store commissions.⁴⁴ The wide-scale distribution of the iOS mobile operating system forms the basis of the theory of market dominance by Apple in the app economy.⁴⁵ Because the operating system has been successfully distributed to phones and computers in the United States and globally, the rules that govern the app ecosystem are viewed with more scrutiny by regulators and competitors.⁴⁶ The market dominance of Apple's App Store has not been conclusively determined, however. In *Apple Inc. v. Pepper*, the Supreme Court chose not to determine whether Apple's App Store has market power in the marketplace for mobile apps for developers or consumers, but rather deferred that question to fact-finding by the federal district courts.⁴⁷

1. In-App Purchase (IAP) System

[19] In a high-profile federal trial, Epic Games. Inc. alleges that Apple has market power in the app economy and has violated the Sherman Act, California's Cartwright Act, and California's Unfair Competition Law in

⁴⁴ See Reed Albergotti, *Judge's ruling may take a bite out of Apple's App Store, but falls short of calling the iPhone maker a monopolist*, WASH. POST (Sept. 10, 2021, 5:34 PM), <https://www.washingtonpost.com/technology/2021/09/10/apple-epic-decision-judge-market-monopoly/> [<https://perma.cc/6CF9-YV88>].

⁴⁵ Majority Staff Report and Recommendations, *supra* note 6, at 16 (claiming that Apple has market power emanating from its dominance in the mobile operating system market).

⁴⁶ See Adam Satariano, *Apple's App Store Draws E.U. Antitrust Charge*, N.Y. TIMES (May 17, 2021) <https://www.nytimes.com/2021/04/30/technology/apple-antitrust-eu-app-store.html> [<https://perma.cc/HC6B-F8TD>] (indicating increasing scrutiny over Apple's iOS system, specifically Apple Pay and the App Store, because of the concern that it hurts competition).

⁴⁷ *Apple Inc. v. Pepper*, 139 S. Ct. 1514, 1519 (2019).

the governance of its in-app purchase (IAP) system and fee structure.⁴⁸ At issue are the agreements between app developers, such as Epic Games, and Apple as the provider of the App Store marketplace.⁴⁹ Third-party developers for popular games such as Fortnite agree to use the IAP system on the iOS platform and agree not to circumvent payments through other means.⁵⁰ Apps such as the Fortnite game are free to be sold on other mobile platforms and app stores, including Android, Windows, Sony PlayStation, Microsoft Xbox, Nintendo Switch, and directly from the developer's own web properties such as the Epic Games Store.⁵¹ The restriction on payments made on the iOS app applies only to the apps downloaded from the Apple App Store.⁵² Epic Games intentionally breached the Apple developer agreement and activated hidden code to allow Fortnite users to make payments directly through the Epic Games payment system to buy V-bucks, thus bypassing the Apple IAP system.⁵³ In response, Apple removed Fortnite from the Apple App Store for violation of the terms of the marketplace.⁵⁴ In concurrent litigation, Epic Games also sued Google which similarly removed Fortnite from the Google Play Store for violating the terms of the Google Play marketplace that barred the developer from

⁴⁸ Complaint for Injunctive Relief at 47, 52, 55, 57, 61, Epic Games, Inc. v. Apple Inc., 2021 U.S. Dist. LEXIS 172303 (N.D. Cal. 2021) (No. 4:20-cv-05640-YGR).

⁴⁹ *See id.* at 5–6, 10.

⁵⁰ *Id.* at 5–6.

⁵¹ Epic Games, Inc. v. Apple Inc., 493 F. Supp. 3d 817, 827 n.3 (N.D. Cal. 2020).

⁵² *Id.* at 843.

⁵³ Epic Games, Inc. v. Apple Inc., No. 4:20-cv-05640-YGR, 2021 WL 4128925, at *31, *38 (N.D. Cal. Sept. 10, 2021).

⁵⁴ *Id.*

allowing users to make payments directly to the Epic Games payment system.⁵⁵

[20] A public bench trial for *Epic Games, Inc. v. Apple Inc.* occurred between May 3, 2021 to May 25, 2021 in the U.S. District Court of the Northern District of California with hundreds of pages of exhibits and expert testimony.⁵⁶ Each side presented expert reports and submitted proposed findings of fact and conclusions of law.⁵⁷ The criteria that will determine whether Apple’s App Store policies are anticompetitive will focus on how the relevant market is defined, and whether Apple acted in a way to maintain monopoly power in how it structured its payment system agreement.⁵⁸ Ultimately, however, even after the federal district court judge

⁵⁵ Complaint for Injunctive Relief, *supra* note 48 at 2, 6–10.

⁵⁶ See *Epic Games, Inc. v. Apple Inc.*, US D. N. D. CAL. (Sept. 10, 2021), <https://cand.uscourts.gov/cases-e-filing/cases-of-interest/epic-games-inc-v-apple-inc/> [<https://perma.cc/GNZ8-HZ23>] (refencing the bench trial by Judge Yvonne Gonzalez Rogers in the “trial docket” section of the page); see generally *Exhibits*, BOX (Jan. 22, 2022, 6:24 AM), <https://app.box.com/s/6b9wmjvr582c95uzma1136exumk6p989> [<https://perma.cc/STA8-8WQ9>] (a database housing the hundreds of exhibit documents from the *Epic Games* case).

⁵⁷ See generally Findings of Fact and Conclusions of Law Proposed by Epic Games, Inc. at i, *Epic Games, Inc. v. Apple Inc.*, No. 4:20-cv-05640-YGR-TSH (N.D. Cal. Apr. 8, 2021) (demonstrating examples of the proposed facts and findings made by Epic Games); Defendant Apple Inc.’s Proposed Findings of Fact and Conclusions of Law, *Epic Games, Inc., v. Apple Inc.*, No. 4:20-cv-05640-YGR-TSH (N.D. Cal. Apr. 8, 2021) (presenting the facts proposed by defendant, Apple).

⁵⁸ See Consumer Plaintiff’s *Amicus* Brief Regarding Trial Elements, Legal Framework and Remedies at 2–3, *Epic Games, Inc., v. Apple Inc.*, No. 4:20-cv-05640-YGR-TSH (N.D. Cal. Feb. 5, 2021); Brief of *Amici Curiae* Developer Plaintiffs Regarding Trial Elements at 1, 9, *Epic Games, Inc. v. Apple Inc.*, No. 4:20-cv-05640-YGR-TSH (N.D. Cal. Feb. 5, 2021).

decides facts and law, the lower court decision will likely be appealed to the U.S. Ninth Circuit Court of Appeals for further review.

[21] The Subcommittee on Antitrust of the House Judiciary Committee of the U.S. House of Representatives also directed its attention to investigating App Store rules and questions of innovation in the app economy.⁵⁹ At the time of the July 29, 2020 public hearing of the chief executive officers, House staffers released email communications obtained from 2010 and 2011, when App Store policies were first formulated by Steve Jobs and Eddy Cue.⁶⁰ Since then, other app developers have disagreed with the IAP system policies and have resisted compliance with the App Store rules and standards.⁶¹ The findings of fact and conclusions of law in *Epic v. Apple* and *Epic v. Google* will be important precedents in the coming years for app developers and marketplace owners who operate in-app purchase systems.

2. App Store Fees

[22] Apple's App Store collects fees from app developers depending on the price of the app sold in the store.⁶² The 30% commission on paid apps

⁵⁹ Majority Staff Report and Recommendations, *supra* note 6, at 93, 98–100.

⁶⁰ See Oh, *supra* note 3 at 211; see generally *Hearing Documents*, *supra* note 5 (listing, among links to other documents from the Hearing on “Online Platforms and Market Power: Examining the Dominance of Amazon, Apple, Facebook, and Google,” a link to three distinct email chains involving Steve Jobs (then-Apple CEO) and Phillip Schiller (then-Apple Fellow) sent on November 23, 2010).

⁶¹ *Hearing Documents*, *supra* note 5 (referencing E-mail from Jai Chulani, Dir. of Worldwide Prod. Mktg: Apple TV & Dig. Media Prods., Airport Wi-Fi Prods., Apple Inc., to Eddy Cue, Senior Vice President of Internet Software & Servs., Apple Inc and Memorandum from Bruce Sewell, Vice President & Gen. Counsel, Apple Inc., to Horacio Gutierrez, Gen. Counsel & Sec’y, Spotify USA Inc.).

was a point of discussion in the United States Supreme Court case *Apple Inc. v. Pepper*, but was not the focus of the legal dispute.⁶³ Whether the commission rate is unfair or an abuse of market dominance, and whether that cost is passed along as higher prices for consumers,⁶⁴ remain questions to be answered as findings of fact in the current Epic Games litigation.

[23] Epic Games claims that the competitive level is about 3-5%, not 30%, and that Apple's ability to raise prices so substantially is evidence of monopoly power.⁶⁵ The 30% commission on paid apps, however, has become an industry standard in the Apple App Store, Google Play Store, Steam Store, and Microsoft Store.⁶⁶

⁶² See Majority Staff Report and Recommendations, *supra* note 6, at 98–99 (describing how 30% has become an industry-standard in the Google Play store as well, with 15% charged on subscriptions for the second year and beyond).

⁶³ Sarah Oh & Scott Wallsten, *The Law and Economics of Apple Inc. v. Pepper*, TECH. POL'Y INST. (Dec. 20, 2018), <https://techpolicyinstitute.org/publications/antitrust-and-competition/the-law-and-economics-of-apple-inc-v-pepper/> [<https://perma.cc/HL97-AJGV>].

⁶⁴ *Id.*

⁶⁵ Findings of Fact and Conclusions of Law Proposed by Epic Games, Inc., *supra* note 57 at ¶ 297(a) (demonstrating proposed facts and findings made by Epic Games).

⁶⁶ See generally Sarah Bond, *Empowering PC game creators with new tools, greater opportunity*, LINKEDIN (Apr. 29, 2021), <https://www.linkedin.com/pulse/empowering-pc-game-creators-new-tools-greater-opportunity-sarah-bond/> [<https://perma.cc/6L4Z-CJYR>] (“We’re in awe of the incredible innovations that developers like Valve, Epic, Unity and so many others have brought, and continue to bring, to PC gaming. . . . Starting on August 1, the developer share of Microsoft Store PC games sales revenue will increase to 88%, from 70%. Having a clear, no-strings-attached revenue share means developers can bring more games to more players and find greater commercial success from doing so.”); Tom Warren, *Microsoft shakes up PC gaming by reducing Windows store cut to just 12 percent*, VERGE (Apr. 29, 2021, 9:00 AM), <https://www.theverge.com/2021/4/29/22409285/microsoft-store-cut-windows-pc-games-12-percent> [<https://perma.cc/PQ6L-KVSK>].

[24] Apple claims that the effective commission rate that they charge developers is actually closer to 3% with a downward trend toward 0%, because many of the apps on the App Store are free-to-download and have a 0% commission rate.⁶⁷ Furthermore, according to Apple, the 30% commission on paid apps has never been increased, and to the contrary, has been lowered for certain categories of apps, such as subscription services.⁶⁸ As the App Store has grown, an increasing share of apps in the App Store are free to download; in 2019, 66% of apps downloaded were downloaded for free.⁶⁹

[25] Epic Games also claims that the 30% commission enables Apple to achieve high profit margins which is evidence of monopoly power.⁷⁰ Apple defends its profit margins by comparing them with those of other marketplaces in the app economy.⁷¹ Prices above marginal cost are typical in software markets, where accounting profits do not reflect economic profits when companies reinvest in intellectual property, and joint costs need to be incorporated in any estimates of profit and loss which include other hardware products developed at Apple.⁷² In other words, in any

⁶⁷ Defendant Apple Inc.'s Proposed Findings of Fact and Conclusions of Law, *supra* note 57 at 101–02.

⁶⁸ *Id.*

⁶⁹ *Id.* at 102.

⁷⁰ *Id.* at 108.

⁷¹ *See id.* (describing the market structure and market outcomes when describing market power and profitability).

⁷² Defendant Apple Inc.'s Proposed Findings of Fact and Conclusions of Law, *supra* note 57 at 108–09.

industry with high fixed costs, prices must exceed marginal costs in order to be sustainable.⁷³

[26] In litigation, the answer to whether the 30% commission is evidence of supracompetitive pricing behavior will be a determination of fact, and it will be dependent on case-specific data regarding the actual scale and scope of Apple's App Store (and Google's Play Store, in concurrent litigation).

C. Cases Against Facebook

[27] Facebook's acquisitions of Instagram in 2012 and WhatsApp in 2014 have been the focus of much antitrust debate. These two acquisitions fall into the nascent or potential competition category.

1. Acquisition of Nascent or Potential Competitors

[28] The U.S. Federal Trade Commission, along with a coalition of 46 states' attorneys general, the District of Columbia, and Guam, sued Facebook in December 2020 in federal court alleging anticompetitive conduct and unfair methods of competition in violation of Section 5(a) of the Federal Trade Commission Act.⁷⁴

⁷³ See Steven Nickolas, *Understanding Economics of Scope v. Economics of Scale*, INVESTOPEDIA (June 29, 2021), <https://www.investopedia.com/ask/answers/042215/what-difference-between-economies-scope-and-economies-scale.asp> [<https://perma.cc/V4J2-DDSX>].

⁷⁴ Complaint for Injunctive and Other Equitable Relief at 1, *FTC v. Facebook, Inc.*, No. 1:20-cv-03590-JEB (D.D.C. Jan. 13, 2021); First Amended Complaint for Injunctive and Other Equitable Relief at 1, *FTC v. Facebook, Inc.*, No. 1:20-cv-03590-JEB (D.D.C. Aug. 19, 2021) (under its 13(b) authority, 15 U.S.C. § 53(b), the FTC sued Facebook for violation of 15 U.S.C. § 45(a)); dismissed and amended); see Press Release, FTC, *FTC Sues Facebook for Illegal Monopolization* (Dec. 9, 2010), <https://www.ftc.gov/news-events/press-releases/2020/12/ftc-sues-facebook-illegal-monopolization> [<https://perma.cc/K8L2-Q7D4>].

[29] The complaint alleges that Facebook dominates the market as an online social network and maintains a monopoly position by acquiring potential or nascent competitors and by imposing conditions that restrict third-party access to its platform.⁷⁵ The plaintiffs' theory is that Facebook utilizes its network effects and high barriers to entry to block innovation and competition.⁷⁶ Yet, at the same time, new entrants threaten competition which provides the motivation for aggressive acquisition strategies.⁷⁷

[30] In federal court, the parties will argue the facts and law about whether small acquisitions that fell below the Hart-Scott-Rodino Act size thresholds may have been competitive threats to the incumbent Facebook.⁷⁸ The court will assess evidence of market structure and market definition to determine the nature of the competitive threats posed by Instagram (2012) and WhatsApp (2014) at the time of acquisition. As a matter of theory, it will be important for the court to establish whether, at the time of acquisition, Facebook had strong network effects or whether Facebook faced an existential threat from Instagram or WhatsApp.

[31] The House Judiciary Committee's Subcommittee on Antitrust released documents it collected in 2020 that offer the public more context on the competitive position of Facebook at the time of these acquisitions.⁷⁹

⁷⁵ See Press Release, FTC, *supra* note 74.

⁷⁶ Complaint for Injunctive and Other Equitable Relief, *supra* note 74 at 3, 8.

⁷⁷ *Id.* at 3 (“Despite strong network effects, important competitive threats to a dominant personal social networking provider can emerge, particularly during periods of technological or social transition and particularly if the newcomer is differentiated from the incumbent in a manner that exploits the technological or social transition.”).

⁷⁸ See Hart-Scott-Rodino Antitrust Improvements Act of 1976, 18 U.S.C. § 18a.

⁷⁹ Majority Staff Report and Recommendations, *supra* note 6, at 24–25.

It had collected a list of Facebook’s top ten competitors and internal and external analyses of Facebook’s market share.⁸⁰ Facebook produced 41,442 documents in response, and provided an additional 83,804 documents from another ongoing litigation matter, including email communications describing its competition strategy.⁸¹ In a public hearing on July 29, 2020, members of Congress referred to email communications between Mark Zuckerberg and Kevin Systrom as evidence of the anticompetitive nature of the Instagram acquisition.⁸² In response to a question from Representative Jerrold Nadler, Mark Zuckerberg defended the company’s assessment of Instagram as both a competitor and a complement to the Facebook platform:

“in the growing space around—after smart phones started getting big, they competed with us in the space of mobile cameras and mobile photo sharing, but, at the time, almost no one thought of them as a general social network, and people didn’t think of them as competing with us in that space, and, I think that the acquisition has been wildly successful. We were able to, by acquiring them, to continue investing in it and growing it as a standalone brand that now reaches many more people than I think either Kevin, the co-founder, or I, thought would be possible at the time while also incorporating

⁸⁰ *Id.* at 25.

⁸¹ *Id.*

⁸² See Oh, *supra* note 3, at 215; Paige Leskin, ‘The wrath of Mark’: Never-before-seen messages show Instagram’s cofounders felt intimidated by Mark Zuckerberg to sell their company for \$1 billion, *Bus. Insider* (July 30, 2020, 6:56 PM), <https://www.businessinsider.com/facebook-emails-reveal-how-zuckerberg-persuaded-instagram-to-sell-2020-7-t> [<https://perma.cc/RC4Q-W64H>].

some of the technology into making Facebook’s photo sharing products better.”⁸³

[32] The majority staff report cites additional internal documents as evidence that Instagram was acquired to help Facebook compete with other companies in a rapidly changing global social networking environment.⁸⁴ In an October 2018 memorandum that outlined Facebook’s growth strategy, the executives debated how to position Instagram and Facebook as internal competitors after the acquisition was completed.⁸⁵ If Instagram was viewed as a nascent competitor to quash, it appears that the threat emerged as late as 2018, four years after the acquisition:

The question was how do we position Facebook and Instagram to not compete with each other. The concern was the [sic] Instagram would hit a tipping point . . . There was brutal in-fighting between Instagram and Facebook at the time. It was very tense. It was back when Kevin Systrom was still at the company. He wanted Instagram to grow naturally and as widely as possible. But Mark was clearly saying “do not compete with us.” . . . It was collusion, but within an internal monopoly. If you own two social media utilities, they should not be allowed to shore each other up. It’s unclear to me why this should not be illegal. You can collude by acquiring a company.⁸⁶

⁸³ *Hearing Video, supra* note 5.

⁸⁴ *See* Majority Staff Report and Recommendations, *supra* note 6, at 12–13.

⁸⁵ *Id.* at 13.

⁸⁶ *Id.* at 13–14.

[33] In both the public hearing and the majority staff report, these “hot docs” offer context for the competitive landscape in global social networking for Facebook and Instagram at various times of interest, first in 2012 at the time of acquisition, and again in 2018 in the years after integrating the service and team. While these internal communications may reveal assessments of rapid changes in the global markets for social networking, they do not rise to the level of economic proof that such an acquisition actually prevented growth in the market for social networking services.⁸⁷

[34] In cases of nascent or potential competition, firms and regulators are predicting future outcomes based on uncertain present conditions.⁸⁸ A new bill recently introduced in Congress seeks to shift the burden for “covered platform[s]” to prove by “clear and convincing evidence” that they are not acquiring another firm for the purpose of quashing nascent or potential competition.⁸⁹ The *FTC v. Facebook* litigation in the U.S. District Court of the District of Columbia will generate an important record defining the scope of nascent or potential competition as both sides rigorously argue over their characterizations of market structure and market dominance. The determination that an acquisition is made to quash “nascent or potential

⁸⁷ See Manne & Williamson, *supra* note 41, at 647–49.

⁸⁸ See Yun, *supra* note 42, at 658.

⁸⁹ Platform Competition and Opportunity Act, H.R. 3826, 117th Cong. (2021) (one of five bills introduced by House Democrats as part of an anti-monopoly agenda entitled “A Stronger Online Economy: Opportunity, Innovation, Choice”); Jon Swartz, *House Democrats just introduced 5 antitrust bills aimed at reining in Big Tech*, MARKETWATCH (June 11, 2021, 3:04 PM), <https://www.marketwatch.com/story/house-democrats-just-introduced-5-antitrust-bills-aimed-at-reining-in-big-tech-11623436959> [<https://perma.cc/EMY7-ZWQM>].

competition” requires a close analysis of markets and trends, with counterfactual analysis.⁹⁰

D. Cases Against Google

[35] Antitrust litigation initiated by federal and state enforcers is underway in the federal courts. These lawsuits focus on exclusionary agreements in default search and the mechanics of Google’s advertising servers, exchanges, and marketing tools. Google’s acquisition of YouTube in 2006 has also been the subject of scrutiny as an example of a possible attempt to quash nascent or potential competition.

1. Exclusionary Agreements in Default Search

[36] The U.S. Department of Justice along with 11 state attorneys general filed a lawsuit against Google in October 2020 in the U.S. District Court of the District of Columbia alleging a violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.⁹¹ The lawsuit alleges that Google unlawfully maintains monopolies in “general search services, search advertising, and general search text advertising in the United States through anticompetitive and exclusionary practices.”⁹² According to the DOJ, exclusionary agreements and tying arrangements are used to lock-in distribution channels.⁹³ These exclusionary agreements establish default search placement for Google on browsers and devices sold by wireless carriers, and, in some cases, require

⁹⁰ See Yun, *supra* note 42, at 660–61.

⁹¹ Complaint at 2, United States v. Google LLC, No. 1:20-cv-03010 (D.D.C. Oct. 20, 2020) (including the States and Commonwealths of Arkansas, Florida, Georgia, Indiana, Kentucky, Louisiana, Mississippi, Missouri, Montana, South Carolina, and Texas).

⁹² *Id.* at 2.

⁹³ *Id.* at 3.

prime placement and installation of bundles of default apps.⁹⁴ The complaint alleges that 60% of all searches are generated under these exclusionary arrangements, as are 80% of all searches when including owned-and-operated properties,⁹⁵ amounting to a foreclosure of competition in general search.⁹⁶ The market dominance of Google Search ensures an advantage that grows as data grows, and, when combined with algorithms, an advantage that plaintiffs conclude amounts to unlawful maintenance of monopoly.⁹⁷

[37] The complaint describes alleged exclusionary agreements that Google has developed to manage the quality of the Android ecosystem, which is open source and subject to the risk of forking, an outcome that would diminish the user experience across 70% of mobile devices across the globe.⁹⁸ These exclusionary agreements include anti-forking agreements,⁹⁹ preinstallation agreements,¹⁰⁰ and revenue sharing

⁹⁴ *See id.* at 3–4.

⁹⁵ *Id.* at 18.

⁹⁶ Complaint, *supra* note 91 at 4.

⁹⁷ *Id.* at 5.

⁹⁸ *Id.* at para. 64 (“Today, Android represents over 95 percent of licensable mobile operating systems for smartphones and tablets in the United States and accounts for over 70 percent of *all* mobile device usage worldwide. The only other mobile operating system with significant market share in the United States is Apple’s iOS, which is not licensable.”).

⁹⁹ *Id.* at 22 (showing the anti-forking agreements: AFA (Anti-Forking Agreement), CDD (Compatibility Definition Document), ACC (Android Compatibility Commitment)).

¹⁰⁰ *Id.* (showing the preinstallation agreements: MADA (Mobile Application Distribution Agreement), GMS (Google Mobile Service), GPS (Google Play Service), Core Apps).

agreements.¹⁰¹ In this case, the United States will need to prove that the exclusionary agreements have denied rivals from access to distribution channels in an anticompetitive manner. The DOJ asks the court to consider the mobile environment apart from the personal computer environment.¹⁰² In the mobile environment, Google's deal to be the default search engine on the Apple mobile operating system, combined with Android's licensing terms, forms the basis of the complaint's main argument that Google acted to maintain a monopoly position in general search.¹⁰³

[38] The plaintiffs will bear the burden of proving that these exclusionary distribution agreements were illegal and caused harm to consumer welfare. The complaint alleges that the agreements caused Google's revenue-sharing partners to "turn down opportunities to preinstall or otherwise enable innovative, search-related apps because those new partnerships could violate Google's demand for exclusivity."¹⁰⁴ Whether those other opportunities existed at the time or would have, in the counterfactual, enabled greater innovation than actual outcomes, is a matter that will be scrutinized in court.¹⁰⁵

¹⁰¹ Complaint, *supra* note 91 at 22 (showing the revenue sharing agreements: RSA (Revenue Sharing Agreement), MIA (Mobile Incentive Agreement)).

¹⁰² *Id.* at 55.

¹⁰³ *Id.* at 37.

¹⁰⁴ *Id.* at 48, 56.

¹⁰⁵ *Cf. id.* at 49. (assertions about the harms of these agreements will be subject to cross-examination and likely a battle of the experts on whether "the Android distribution agreements—taken together—are self-reinforcing, depriving rivals of the quality, audience, and financial benefits of scale that would allow them to mount an effective challenge to Google" and whether "[p]articularly for newer entrants, the revenue sharing agreements present a substantial barrier to entry;" as a matter of fact, it's uncertain whether "they are relegated to inferior forms of distribution that do not allow them to build scale, gain brand recognition, and generate momentum to challenge Google").

2. Search Engine Marketing Tools and Specialized Vertical Search

[39] In December 2020 the attorney general of the state of Colorado, along with 38 other state attorneys general, filed a lawsuit in the U.S. District Court of the District of Columbia alleging Google’s violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.¹⁰⁶ The lawsuit defines the markets within which Google allegedly restrains trade and maintains monopolies as the markets for “general search services, general search text advertising, and general search advertising in the United States.”¹⁰⁷ The complaint asserts that “[c]lose to 90 percent of all internet searches done in the United States use Google,” and that the nearest competitor has no more than 7% of the share of remaining searches.¹⁰⁸

[40] The complaint includes many of the same data points as the lawsuit filed by the United States,¹⁰⁹ but goes into more detail around Google’s SA360 search engine marketing tool.¹¹⁰ This SA360 tool automates many

¹⁰⁶ Complaint at 4–5, *Colorado v. Google LLC*, No. 1:20-cv-03715 (D.D.C. Dec. 17, 2020) (including the States and Commonwealths of Colorado, Nebraska, Arizona, Iowa, New York, North Carolina, Tennessee, Utah, Alaska, Connecticut, Delaware, District of Columbia, Guam, Hawaii, Idaho, Illinois, Kansas, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Dakota, Vermont, Virginia, Washington, West Virginia, Wyoming); *see also* Press Release, Colorado Attorney General Phil Weiser Leads Multistate Lawsuit Seeking to End Google’s Illegal Monopoly in Search Market (Dec. 17, 2020), <https://coag.gov/press-releases/12-17-20/> [<https://perma.cc/CET6-HQSM>].

¹⁰⁷ Complaint, *supra* note 106 at 5.

¹⁰⁸ *Id.* at 5–6.

¹⁰⁹ Complaint, *supra* note 91.

¹¹⁰ Complaint, *supra* note 106 at 50.

tasks that advertisers rely on for sophisticated, high-spend campaigns.¹¹¹ The complaint alleges that the SA360 tool is advertised as interoperable and neutral, allowing advertisers to manage ad campaigns on other search engines such as Bing, but in effect, is operated in a way that grants Google more ad transactions due to faster connections with Google's auction bidding service and data.¹¹² The SA360 tool allows advertisers to connect with Bing's real-time auctions, but only allows seamless integration with Google's real-time auctions, according to the lawsuit.¹¹³ That the SA360 tool "steers ad spend away from Bing and towards Google" is a competitive harm since it causes advertisers to use Bing less, prevents the opportunity for Bing to improve, and creates pricing power for Google's ad network.¹¹⁴ The lawsuit concedes, however, that other independent search engine marketing tools are available to advertisers that offer "superior support for Bing features," even though SA360 may not.¹¹⁵

[41] The Colorado lawsuit also sets forth more detailed claims of anticompetitive conduct in Google's treatment of specialized vertical search results.¹¹⁶ Specialized vertical search results are query results for commercial segments such as travel, shopping, and restaurants.¹¹⁷ As opposed to general search, these results are more commercial in nature, where users seek to make transactions to purchase goods or services, and

¹¹¹ *Id.*

¹¹² Complaint, *supra* note 91 at 19, 54–55.

¹¹³ *Id.* at 53.

¹¹⁴ *Id.* at 54.

¹¹⁵ *Id.* at 56.

¹¹⁶ *See generally id.* at 20–21.

¹¹⁷ Complaint, *supra* note 91 at 58.

advertisers seek to obtain traffic in order to sell products and services.¹¹⁸ The lawsuit states that specialized vertical ad buyers rely on Google for 30 to 40% of their traffic, fostering reliance by these advertisers on traffic flow.¹¹⁹ The complaint also alleges that, in its presentation of general search results alongside vertical search ads, Google acts in exclusionary ways that disadvantage vertical providers.¹²⁰

[42] Members of the House Judiciary Committee’s Subcommittee on Antitrust raised concerns about the vertical search results that Google allegedly uses to leverage and abuse its monopoly position in general search.¹²¹ The majority staff report summarizes the theory supporting the claim that Google abuses its market dominance by the way it displays vertical search results on its search pages.¹²² The criteria by which the courts will determine whether Google violated antitrust laws in its operation of SA360 and vertical search results will depend on an analysis of alternative venues for advertisers to reach users and whether Google’s conduct has generated harms to consumers or competition.¹²³ As a Sherman Act Section

¹¹⁸ *Id.* at 58.

¹¹⁹ *Id.* at 58–59.

¹²⁰ *Id.* at 61.

¹²¹ See Oh, *supra* note 3, at 224 n. 170 (“question by David Cicilline, Representative, Rhode Island at 00:51:45, regarding Google’s fear of competitors in vertical search and the ‘proliferating threat’ of certain websites getting ‘too much traffic,’ with response from Sudhar Pichai that ‘when we look at vertical searches, it validates the competition we see’”).

¹²² See Majority Staff Report and Recommendations, *supra* note 6, at 83–84.

¹²³ Press Release, Dep’t. Just., Justice Department Sues Monopolist Google For Violating Antitrust Laws (Oct. 20, 2020) <https://www.justice.gov/opa/pr/justice-department-sues-monopolist-google-violating-antitrust-laws> [<https://perma.cc/GU9V-CLLP>].

2 case, the Colorado litigation will rely on expert reports that establish the relevant markets for search engine marketing tools and vertical search engines.¹²⁴

3. Ad Servers, Display Ad Exchanges, and Display Ad Networks

[43] The attorney general of the state of Texas, along with ten other state attorneys general, filed a lawsuit against Google in December 2020 in the U.S. District Court of the Eastern District of Texas alleging violation of federal and state antitrust laws and deceptive trade practice laws.¹²⁵ Since its acquisition of DoubleClick in 2008, Google has exerted leverage in the ad exchange market for display advertising, according to the complaint.¹²⁶ According to the lawsuit, Google engaged in unlawful agreements and anticompetitive conduct in routing inventory to the DoubleClick ad servers in violation of Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1, 2.¹²⁷

[44] Publishers' inventory management systems (ad servers), which display ad exchanges and include the ad networks for mobile in-app inventory and ad buying tools, are the subject of the Texas lawsuit.¹²⁸ At

¹²⁴ Complaint, *supra* note 106.

¹²⁵ See Complaint at 1–8, *Texas v. Google LLC*, No. 4:20-cv-00957 (E.D. Texas, Dec. 16, 2020); see also Press Release, Ken Paxton, Att'y. Gen., AG Paxton Leads Multistate Coalition in Lawsuit Against Google for Anticompetitive Practices and Deceptive Misrepresentations (Dec. 16, 2020), <https://www.texasattorneygeneral.gov/news/releases/ag-paxton-leads-multistate-coalition-lawsuit-against-google-anticompetitive-practices-and-deceptive> [<https://perma.cc/5ZJX-E6RA>].

¹²⁶ Complaint, *supra* note 125 at 3.

¹²⁷ See *id.* at 102–03, 106–07.

¹²⁸ See *id.* at 12–13.

issue are the ways that Google discourages “header bidding,” restricts information on ad exchanges, forces advertisers to use Google’s ad buying tools, and forces publishers to use Google’s ad server and use Google’s ad exchange.¹²⁹ This litigation includes more technical analysis of the mechanics of the publisher ad server market, exchange market, and market for ad buying tools, as well as theories of how Google’s business decisions generate harm to consumers and harm to competition.¹³⁰

[45] The complaint goes into detail describing the emergence of “header bidding,” an innovation introduced by publishers to route ad inventory to “multiple neutral exchanges each time a user visited a web page in order to return the highest bid for the inventory.”¹³¹ Header bidding threatened to undermine Google’s advantages in operating ad exchanges.¹³² The Texas lawsuit describes how Facebook and Google collaborated to quash the growth of header bidding, amounting to an unlawful agreement to diminish competition in ad bids.¹³³ The market power that Google maintains in the ad server, ad exchange, and ad tools results in “a very high tax” on online publishers and content producers, which “invariably [is] passed onto the advertisers themselves and then to American consumers,” according to the complaint.¹³⁴

¹²⁹ *Id.* at 103.

¹³⁰ *Id.* at 101.

¹³¹ Complaint, *supra* note 125 at 4.

¹³² *Id.* at 4.

¹³³ *Id.* at 5.

¹³⁴ *Id.* at 7.

[46] This litigation is brought under Sections 1 and 2 of the Sherman Act, with an unlawful agreement claim under Section 1, and monopolization, attempted monopolization, and unlawful tying claims under Section 2.¹³⁵ The ad-tech suite has been investigated by the House Judiciary Committee's Subcommittee on Antitrust,¹³⁶ but will undergo more focused scrutiny in the Texas litigation in federal court. How the buy- and sell-side markets are affected by Google's decisions to manage the ad marketplace will require economic analysis of the ad server, ad exchange, and ad buying tool marketplaces.

4. Acquisition of Nascent or Potential Competitors

[47] The members of the Subcommittee on Antitrust of the House Judiciary Committee directed attention to Google's acquisition of YouTube in 2006. At the July 29, 2020 public hearing, a member of the Subcommittee expressed concerns that Google's acquisition of the video streaming platform may have quashed competition, rather than improving Google's product or services.¹³⁷ Representative Mary Gay Scanlon asked Sudhar Pichai about the disparity between other offer prices and the final valuation of YouTube to explore the motivations for the acquisition.¹³⁸ Business documents released with the public hearing showed that YouTube had

¹³⁵ *Id.* at 100, 102, 104, 106.

¹³⁶ Majority Staff Report and Recommendations, *supra* note 6, at 129.

¹³⁷ See *Hearing Video*, *supra* note 5 (showing Rep. Mary Gay Scanlon (D-PA) asking a question at 03:58:40 for Sudhar Pichai about her concerns over the consequences of that transaction for consumer privacy and competition).

¹³⁸ See *id.* (showing Rep. Mary Gay Scanlon (D-PA) at 03:58:55 ask Sudhar Pichai about the disparity between the first bid and final acquisition price of \$1.65 billion for YouTube which was nearly 30 times the initial bid of \$50 million).

rejected offers of \$200 million and \$500 million but accepted the \$1.65 billion acquisition offer.¹³⁹

[48] At the time of the YouTube acquisition, the Federal Trade Commission and U.S. Department of Justice reviewed the proposed merger, issued an early termination notice, and declined to challenge the acquisition with further action.¹⁴⁰ The value of YouTube appeared to include a \$1 billion premium that was difficult to explain for the popular press.¹⁴¹ This disparity between a company's internal valuation of an acquisition target and the external public's valuation is not in itself proof that the small firm was indeed a nascent or potential competitor, however.

[49] The majority staff report includes a discussion of the YouTube acquisition, including its sale price, after an investigation which yielded 1,135,398 documents from Alphabet in response to a request for the information, which also included many other corporate documents.¹⁴² The

¹³⁹ *Hearing Documents*, supra note 5 (referencing the E-mail from Susan Wojcicki, Senior Vice President of Advertising & Commerce, Google, to Jonathan Rosenberg, Senior Vice President, Google and the E-mail from Eric Schmidt, Chief Exec. Officer, Google, to Sean Dempsey, Principal Corp. Dev., Google).

¹⁴⁰ See *Early Termination Notices: 20070088, Google Inc.; YouTube, Inc.*, FTC, <https://www.ftc.gov/enforcement/premerger-notification-program/early-termination-notices/20070088> [<https://perma.cc/9WHY-DJ2D>]; see also Press Release, FTC, FTC to Examine Past Acquisitions by Large Technology Companies (Feb. 11, 2020), <https://www.ftc.gov/news-events/press-releases/2020/02/ftc-examine-past-acquisitions-large-technology-companies> [<https://perma.cc/VHD7-NUXG>].

¹⁴¹ See generally Greg Sandoval, "Schmidt: We paid \$1 billion premium for YouTube," CNET (Oct. 6, 2009, 7:09 AM), <https://www.cnet.com/news/schmidt-we-paid-1-billion-premium-for-youtube> [<https://perma.cc/Z52W-47WV>] ("Since 2006, many observers have scratched their head over what prompted Google to pay \$1.65 billion for the video site YouTube. We're now a little closer to the answer.").

¹⁴² See Majority Staff Report and Recommendations, supra note 6, at 22–23.

report shows that Google has engaged in hundreds of acquisitions between 2001 and 2020, of which YouTube was only one of many.¹⁴³ A determination of whether the Federal Trade Commission and U.S. Department of Justice erred in declining to block the YouTube acquisition would require a sophisticated counterfactual analysis. An economic study would need to include data on the full set of acquisitions both completed and rejected, along with an analysis that estimates whether competition would have been better off without the acquisition in a counterfactual environment. This exercise of reviewing merger decisions is ongoing and regularly conducted by federal agencies through the Merger Retrospective Program¹⁴⁴ and 6(b) studies.¹⁴⁵

5. In-App Payment (IAP) System

[50] The attorney general of the state of Utah, along with 36 other state attorneys general, filed a lawsuit in July 2021 in the U.S. District Court of the Northern District of California alleging violation of Sections 1 and 2 of the Sherman Act for the Android app store and the Android In-App Payment

¹⁴³ See *id.* at 431–50.

¹⁴⁴ See *Overview of the Merger Retrospective Program in the Bureau of Economics*, FTC, <https://www.ftc.gov/policy/studies/merger-retrospectives/overview> [<https://perma.cc/782Y-9BRF>] (describing the agency’s effort to evaluate its internal analytical tools and models in premerger notification reviews by comparing predicted results with actual results and measuring the efficacy of analytical thresholds and empirical methods used by antitrust economists to predict merger effects and counterfactual scenarios).

¹⁴⁵ Press Release, FTC, FTC to Examine Past Acquisitions by Large Technology Companies (Feb. 11, 2020), <https://www.ftc.gov/news-events/press-releases/2020/02/ftc-examine-past-acquisitions-large-technology-companies> [<https://perma.cc/6LLH-P2K7>] (citing special orders approved by a 5-0 commission vote with authority to conduct a 6(b) study under the Federal Trade Commission Act).

(IAP) policy.¹⁴⁶ This lawsuit includes similar allegations as were made in the *Epic v. Apple* litigation described above.¹⁴⁷

III. Conclusion

[51] The criteria by which American technology firms will be judged for antitrust violations depends on matters of fact and law that are relevant to each digital good or service under investigation. Antitrust enforcers have focused attention on alleged anticompetitive conduct by Amazon, Apple, Facebook, and Google in their production of general search services, advertising networks, social networking, app stores, third-party marketplaces, and acquisitions of nascent or potential competitors in video streaming and home security systems. Legislators have recently introduced bills that attempt to curb perceived harms, but the main advances in antitrust law and policy will arise from legal precedent that will be generated by several large lawsuits that have been filed in federal court in 2020–21, as discussed in this article. Even after lower courts establish findings of fact and conclusions of law, it is likely that the antitrust enforcers and private firms will appeal to the federal appellate courts.

¹⁴⁶ Complaint at 9, *Utah v. Google LLC*, No. 3:21-cv-05227 (N.D. Cal. Civ. 2021).

¹⁴⁷ See Complaint for Injunctive Relief, *supra* note 48 at 2, 6–10.