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Antitrust and High Tech: A Tale of Two Mergers

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ANTITRUST AND HIGH TECH: A TALE OF TWO MERGERS

*Babette Boliek**

ABSTRACT

Between 2016 and 2019, two proposed mergers captured much of the attention and resources of the Antitrust Division of the Department of Justice (DOJ). The first was the vertical merger of AT&T Inc. and Time Warner Inc.—a merger of a communications, media, and content distribution company (AT&T) with a content provider (Time Warner). The second was the horizontal merger of Sprint and T-Mobile—a merger of two mobile telephone companies. In general, vertical mergers are reviewed with greater leniency than horizontal mergers because the latter, by definition, eliminate a competitor in the relevant marketplace, which is not a concern with the former. Moreover, merger-specific efficiencies may be easier to demonstrate when a company merges with another company in its own supply chain. Even so, the DOJ challenged the vertical merger of AT&T and Time Warner but permitted (with conditions) the horizontal merger of Sprint and T-Mobile. As this Article sets forth, these seemingly distinct mergers were destined to be linked.

Even though the DOJ unsuccessfully blocked the AT&T-Time Warner merger, the companies are separating again only a few short years after finalizing their merger. The stated reason for the unwinding is arguably linked to the DOJ's decision to permit the T-Mobile-Sprint merger. The competitive pressure created by the joined mobile telephone company—T-Mobile—has pressured AT&T to invest further in its own mobile telephone business. In other words, the DOJ's initial fear that the merged AT&T could use theoretical market power to anticompetitively charge higher consumer prices and raise rivals' costs in content distribution was never realized. In contrast, the DOJ's humility in assessing potential efficiencies for a merged T-Mobile in the growing 5G mobile telephone market is already paying competitive dividends. The tale of these two mergers, therefore, provides interesting insights into modern merger review policies.

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INTRODUCTION

Inside antitrust circles and even in popular press, there is renewed interest in antitrust law, policy, goals, and application.¹ In no arena is antitrust discussion more intense than with respect to treatment of high-tech industries²—a broad category that includes telecommunications, digital platforms, and digital application companies. More specifically, popular concerns with these companies and industries are that they are highly concentrated or dominant in

¹ See, e.g., Chris Cumming, *Antitrust Regulators Fix Their Sights on Private Equity*, WALL ST. J. (Sept. 30, 2021, 7:00 AM), <https://www.wsj.com/articles/antitrust-regulators-fix-their-sights-on-private-equity-11632999600?page=2> (“New federal antitrust enforcers want to toughen up regulation of the private-equity industry, putting a spotlight on ways that buyout firms might be warping competition.”); Brent Kendall, *FTC Moves Toward Stricter Antitrust Scrutiny of Vertical Mergers*, WALL ST. J. (Sept. 15, 2021, 5:33 PM), <https://www.wsj.com/articles/ftc-moves-toward-stricter-antitrust-scrutiny-of-vertical-mergers-11631741589?page=3> (“A divided Federal Trade Commission on Wednesday withdrew guidelines adopted just last year on how the government reviews so-called vertical mergers of companies that don’t directly compete with one another, the latest signal the agency is looking to escalate antitrust scrutiny of deal making.”).

² See, e.g., Tim Higgins, *Apple Filing Notice of Appeal in Epic Antitrust Case, Looks to Stay In-App Injunction*, WALL ST. J., <https://www.wsj.com/articles/apple-filing-notice-of-appeal-in-epic-antitrust-case-looks-to-stay-in-app-injunction-11633734000> (Oct. 8, 2021, 7:49 PM) (stating Apple’s plan to appeal the ruling in its antitrust suit against Epic Games, Inc.); Brent Kendall, *Facebook Seeks Dismissal of Government’s Do-Over Antitrust Lawsuit*, WALL ST. J. (Oct. 4, 2021, 4:59 PM), <https://www.wsj.com/articles/facebook-seeks-dismissal-of-governments-do-over-antitrust-lawsuit-11633381158?page=1> (“Facebook Inc. filed a new motion Monday seeking the dismissal of a government antitrust case alleging the company engaged in unlawful monopolization, four months after it succeeded in getting an earlier version of the complaint thrown out.”).

their field in such a way that consumers are left with few options—a position that may translate to higher consumer prices, lower quality or less variety of products, and less industry innovation. These concentration concerns translate into a renewed focus on merger analysis and a push for antitrust enforcers to slow industry concentration by imposing stricter limits on merger approval.³

Mergers are typically described as being horizontal or vertical in nature.⁴ By their very nature, horizontal mergers—mergers among and between rivals—result in the loss of one competitor in the relevant industry, which means the post-merger industry will be more concentrated.⁵ In part due to the recognition of this concern, horizontal mergers that reach certain concentration metrics have long faced more intensive scrutiny than some smaller horizontal mergers.⁶ In contrast, vertical mergers—mergers between and among companies in the upstream or downstream supply chain—may not create similar, immediate concentration concerns and often benefit consumers (for example, by increasing production and distribution efficiencies).⁷ Because a vertical merger does not have the same immediate and direct impact on competition as a horizontal merger, and procompetitive, merger-specific efficiencies from a vertical merger may be easier to demonstrate, vertical mergers have been challenged less aggressively than horizontal mergers.⁸

In recent years, however, all mergers, including vertical mergers, have received increasing interest from various, bipartisan circles.⁹ An example discussed here is the AT&T-Time Warner merger, first announced in 2016 and the first vertical merger challenged in decades by the then Republican-led

³ See Cecilia Kang, *Lawmakers, Taking Aim at Big Tech, Push Sweeping Overhaul of Antitrust*, N.Y. TIMES, <https://www.nytimes.com/2021/06/11/technology/big-tech-antitrust-bills.html> (June 29, 2021) (“House lawmakers . . . introduced sweeping antitrust legislation aimed at restraining the power of Big Tech and staving off corporate consolidation. If passed, the bills would be the most ambitious update to monopoly laws in decades.”).

⁴ For information on horizontal and vertical mergers, see generally U.S. DEP’T OF JUST. & FTC, HORIZONTAL MERGER GUIDELINES (2010), <https://www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hmg-2010.pdf>; U.S. DEP’T OF JUST. & FTC, VERTICAL MERGER GUIDELINES (2020), https://www.ftc.gov/system/files/documents/reports/us-department-justice-federal-trade-commission-vertical-merger-guidelines/vertical_merger_guidelines_6-30-20.pdf.

⁵ See HORIZONTAL MERGER GUIDELINES, *supra* note 4.

⁶ See *id.*

⁷ See VERTICAL MERGE GUIDELINES, *supra* note 4.

⁸ See, e.g., *Brown Shoe Co. v. United States*, 370 U.S. 294, 345–46 (1962); see *infra* notes 35, 36 and accompanying text.

⁹ See generally Brent Kendall, *U.S. Appeals Court Rejects Justice Department Antitrust Challenge to AT&T-Time Warner Deal*, WALL ST. J., <https://www.wsj.com/articles/u-s-appeals-court-rejects-justice-department-antitrust-challenge-to-at-t-time-warner-deal-11551194524> (Feb. 26, 2019, 6:55 PM) (describing the DOJ’s first vertical merger challenge in forty years).

Department of Justice Antitrust Division (DOJ).¹⁰ Broadly stated, the DOJ became concerned that the combination of Time Warner's media content with AT&T's media distribution systems would lead AT&T to raise prices and deny other media distributors access to Time Warner content.¹¹ Although vertical strategies are often considered to have either procompetitive or neutral effects on competition, the DOJ decided to seek a court injunction to stop the merger.¹² This challenge, novel in certain regards, failed in court, and the DOJ did not secure an injunction; the resulting merger was consummated in 2018.¹³

But the merger was short lived. The post-merger entity, AT&T, announced in 2021 that it would unwind its Time Warner legacy division (WarnerMedia) and merge that division with Discovery to form a new, media-only company.¹⁴ AT&T stated that its reason for the sale of the recently purchased assets was to concentrate on its core mobile telecommunications business.¹⁵ In other words, competitive market pressures drove AT&T to abandon a vertical integration strategy that proved unsuccessful, even though that strategy had concerned the DOJ so much that it challenged the merger in court.¹⁶ The quick, post-merger divestiture evidenced that the DOJ suit was unnecessary—the DOJ had arguably committed a Type I error: it made a false prediction that the merger was likely to lessen competition.¹⁷

¹⁰ *See id.*

¹¹ *See id.*

¹² *See id.*

¹³ *See* United States v. AT&T Inc., 310 F. Supp. 3d 161, 254 (D.D.C. 2018); Edmund Lee & Cecilia Kang, *AT&T Closes Acquisition of Time Warner*, N.Y. TIMES (June 14, 2018), <https://www.nytimes.com/2018/06/14/business/media/att-time-warner-injunction.html> (announcing the completion of AT&T's \$85.4 billion acquisition of Time Warner).

¹⁴ Steve Kovach & Sam Meredith, *AT&T Announces \$43 Billion Deal to Merge WarnerMedia with Discovery*, CNBC, <https://www.cnbc.com/2021/05/17/att-to-combine-warnermedia-and-discovery-assets-to-create-a-new-standalone-company.html> (May 17, 2021, 4:03 PM) (“Telecom giant AT&T announced Monday a deal to combine its content unit WarnerMedia with Discovery, paving the way for one of Hollywood’s biggest studios to compete with media giants Netflix and Disney.”).

¹⁵ Press Release, AT&T, AT&T’s WarnerMedia and Discovery, Inc. Creating Standalone Company by Combining Operations to Form New Global Leader in Entertainment (May 17, 2021) (available at https://about.att.com/story/2021/warnermedia_discovery.html) (stating that AT&T and its shareholders will benefit from AT&T’s capital structure “as one of the best . . . 5G and fiber broadband companies in the United States” after AT&T’s closing with WarnerMedia).

¹⁶ Kovach & Meredith, *supra* note 14 (“If approved by regulators, the [WarnerMedia and Discovery] deal effectively reverses AT&T’s years-long plan to combine content and distribution in a vertically integrated company.”).

¹⁷ In the context of mergers, antitrust enforcers look to predict and prevent mergers that may “substantially . . . lessen competition, or . . . tend to create a monopoly.” *See* Clayton Act § 7, 15 U.S.C. § 18 (2021). When reviewing a merger, the enforcers may assess the potential merger correctly, or the enforcers may commit a Type I error (predict that a procompetitive merger is uncompetitive, or a false positive) or a Type II error (predict an anticompetitive merger is harmless, or a false negative). Joshua D. Wright & Murat C. Mungan,

Although market realities, not the DOJ, ultimately ended the AT&T-Time Warner merger, as set forward below,¹⁸ the DOJ arguably aided the competitive market forces that forced AT&T's hand by approving the T-Mobile-Sprint merger, which ultimately drove AT&T to compete more vigorously in the race to build a nationwide 5G network. Specifically, the DOJ assessed a large, horizontal merger close in time to the AT&T-Time Warner vertical merger. In 2018, the largest horizontal merger of two mobile telecommunications companies was announced: the T-Mobile-Sprint merger.¹⁹ As noted, while the DOJ challenged the AT&T-Time Warner vertical merger,²⁰ the DOJ ultimately approved the T-Mobile-Sprint horizontal merger.²¹ It is this second merger between T-Mobile and Sprint that arguably planted the competitive seeds that helped accomplish indirectly (by forcing AT&T to focus on building a 5G network) what the DOJ could not accomplish directly—the end of the AT&T-Time Warner merger.

Looking back at these two mergers with the benefit of hindsight, this paper provides an outline of the complexity of merger review and a humble reminder that while antitrust regulators may not be infallible, competition itself can step in as the ultimate discipliner of corporate aspiration. This paper is set forth as follows. Part I describes Merger One: the AT&T-Time Warner merger.²² This description provides the background of the merger, the underlying legal and economic theories that led to the DOJ's decision to file suit to enjoin the merger, and the final court results. Part II describes of Merger Two: the T-Mobile-Sprint

The Easterbrook Theorem: An Application to Digital Markets, 130 YALE L.J.F. 622, 623 (2021). Arguably, a Type I error is more problematic than a Type II error as it stops procompetitive mergers absolutely, but a Type II error might be ultimately corrected by competitive market forces. See generally Babette Boliek, *Type I vs Type II Errors: Antitrust Lessons for Communications Policy*, AEI (Feb. 5, 2014), <https://www.aei.org/technology-and-innovation/telecommunications/type-vs-type-ii-errors-antitrust-lessons-communications-policy/> (applying antitrust Type I and Type II error analysis to regulatory decision making).

¹⁸ See Lauren Feiner, *AT&T Battled the DOJ to Buy Time Warner, Only to Spin it Out Again Three Years Later*, CNBC, <https://www.cnbc.com/2021/05/17/att-fought-doj-for-time-warner-only-to-spin-out-three-years-later.html> (May 17, 2021, 1:30 PM).

¹⁹ See Press Release, T-Mobile, T-Mobile and Sprint to Combine, Accelerating 5G Innovation & Increasing Competition (Apr. 29, 2018) (available at <https://www.t-mobile.com/news/press/5gforall>).

²⁰ See Press Release, Dep't of Just., Justice Department Challenges AT&T/DirecTV's Acquisition of Time Warner (Nov. 20, 2017) (available at <https://www.justice.gov/opa/pr/justice-department-challenges-attdirectv-s-acquisition-time-warner>).

²¹ See Press Release, Dep't of Just., Justice Department Settles with T-Mobile and Sprint in Their Proposed Merger by Requiring a Package of Divestitures to Dish (July 26, 2019) (available at <https://www.justice.gov/opa/pr/justice-department-settles-t-mobile-and-sprint-their-proposed-merger-requiring-package>) (announcing an agreement between the DOJ, the Attorneys Generals for five states, and T-Mobile and Sprint to settle their case if the companies make a divestiture to Dish).

²² See *infra* Part I.

merger.²³ This description provides the background of the merger, the underlying legal and economic theories that led to the DOJ's decision (and the Federal Communications Commission's (FCC) decision) to approve the merger, and the post-merger progress. Part III provides a broad overview of the impact of the T-Mobile-Sprint merger on AT&T and its corporate decision to unwind its merger with Time Warner.²⁴ In particular, Part III looks at the "tech" in high-tech and shows that merger review is highly complicated and potentially more susceptible to Type I errors (false positives) in industries driven by capital-intensive, dynamic, technological innovation. Finally, the Conclusion provides observations of the difficulty of merger review and the harsh discipline of dynamic, high-tech, competitive markets.²⁵

I. THE DOJ AND MERGER ONE: AT&T AND TIME WARNER

A brief summary of the AT&T and Time Warner saga is as follows. On October 22, 2016, AT&T announced an agreement to acquire Time Warner.²⁶ The DOJ challenged this proposed merger, resulting in a multi-year inquiry.²⁷ Finally, on June 15, 2018, AT&T officially completed the merger and acquired Time Warner.²⁸ However, only three years later, AT&T announced a split with the rebranded WarnerMedia and sold the company to Discovery.²⁹ The speed of the unraveling begs some questions: Were the economic concerns regarding the merger incomplete or overblown? Was the decision to spend administrative time and money on litigating the merger flawed and overly aggressive? Part I takes a quick look at the transaction, the economic concerns of potential anticompetitive market power, and the DOJ litigation.

A. Background of the AT&T-Time Warner Merger

As noted, AT&T and Time Warner first announced their intent to merge in 2016.³⁰ AT&T is well known as a communications industry and Time Warner,

²³ See *infra* Part II.

²⁴ See *infra* Part III.

²⁵ See *infra* Part IV.

²⁶ See Press Release, AT&T, AT&T to Acquire Time Warner (Oct. 22, 2016) (available at https://about.att.com/story/att_to_acquire_time_warner.html).

²⁷ See Press Release, T-Mobile, *supra* note 19.

²⁸ See Press Release, AT&T, AT&T Completes Acquisition of Time Warner Inc. (June 15, 2018) (available at https://about.att.com/story/att_completes_acquisition_of_time_warner_inc.html); Nathan Reiff, *AT&T and Time Warner Merger Case: What You Need to Know*, INVESTOPEDIA (Dec. 7, 2018), <https://www.investopedia.com/investing/att-and-time-warner-merger-case-what-you-need-know/>.

²⁹ See Press Release, AT&T, *supra* note 15.

³⁰ See Press Release, AT&T, *supra* note 26.

Inc. is a household name in content production. Less well known is that AT&T also owns content distribution systems through its cellular network, its U-Verse fiber-optic service, and DirecTV's satellite subscription services.³¹ The closest competitor to DirecTV is Dish Network; the next closest competitors are the various cable distributors around the nation such as Comcast and Spectrum, amongst others, that compete with all the AT&T content distribution systems.³² The merger of AT&T, a holder of content distribution assets, and Time Warner, a content producer, is properly characterized as a vertical merger.³³ In many regards, vertical mergers have gone unchallenged unless there were strong concerns that the merger might "substantially lessen competition," for example, by foreclosing rivals' access to an essential input in the upstream supply chain or access to downstream distributors or customers.³⁴ The more concentrated the industry, and the more difficult it is for new entrants to enter the industry, the more heightened are these concerns. In the alternative, however, vertical mergers are often considered pro-competitive because a combined company may more efficiently serve consumers, whether by lowering prices, controlling quality, streaming distribution, or leveraging other innovations.³⁵

In this case, the proposed merger was overwhelmingly vertical in nature.³⁶ Applying the consumer welfare standard to review the merger for potential harm

³¹ See Thomas Gryta, *AT&T Closes \$49 Billion DirecTV Buy*, WALL ST. J. (July 24, 2015, 3:42 PM), <https://www.wsj.com/articles/at-t-closes-49-billion-directv-acquisition-1437766932> (stating AT&T acquired DirecTV for \$49 billion in 2015, "create[ing] the largest U.S. pay-television company" at the time). *But see* Catie Keck, *AT&T Has Officially Spun Off DirecTV, Which Is Now Its Own Business*, VERGE (Aug. 3, 2021, 7:46 PM), <https://www.theverge.com/2021/8/3/22608577/att-directv-tpg-deal-u-verse-att-tv-new-company> (noting AT&T's announcement from early 2021 to spin off DirecTV, AT&T TV, and U-verse into a separate new company that AT&T would co-manage alongside TPG Capital).

³² See *Dish Network Competitors*, CRAFT, <https://craft.co/dish-network/competitors> (last visited Apr. 22, 2022) ("Dish Network's top competitors include DIRECTV, Comcast, Sky, and Liberty Global.").

³³ See David Shepardson & Jessica Toonkel, *AT&T-Time Warner May Signal Start of New Media Industry Consolidation*, REUTERS (Oct. 23, 2016, 8:09 AM), <https://www.reuters.com/article/us-time-warner-m-a-at-t-consolidation-an/att-time-warner-may-signal-start-of-new-media-industry-consolidation-idUSKCN12N0GD> ("Media firms face pressure to access distribution as more younger viewers cut their cable cords and watch their favorite shows on mobile devices. Distribution companies, meanwhile, see acquiring content as a way to diversify revenue.").

³⁴ See 15 U.S.C. § 18 (2012) ("No person engaged in commerce or in any activity affecting commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital . . . where in any line of commerce . . . , the effect of such acquisition may be substantially to lessen competition . . .").

³⁵ See VERTICAL MERGER GUIDELINES, *supra* note 4, at 11. The FTC recently withdrew the Vertical Merger Guidelines on September 15, 2021, and plans to work with the DOJ to "review and update the agencies' merger guidance." Press Release, Fed. Trade Comm'n, Federal Trade Commission Withdraws Vertical Merger Guidelines and Commentary (Sept. 15, 2021) (available at <https://www.ftc.gov/news-events/press-releases/2021/09/federal-trade-commission-withdraws-vertical-merger-guidelines>).

³⁶ Some mergers exhibit both vertical and horizontal attributes. Scrutiny in those instances often focuses primarily on the horizontal aspects of the merger. *See, e.g.,* *Brown Shoe Co. v. United States*, 370 U.S. 294, 343,

to competition and consumers,³⁷ the DOJ exhibited strong concern over the content element of the merger.³⁸ Described in more detail below, the DOJ considered AT&T's control over Time Warner content to be a potential anticompetitive lever that it might exercise against rival content distributors to the advantage of its own content distribution interests.³⁹ This and other economic concerns led the DOJ to file a complaint in district court seeking an injunction to halt the merger.⁴⁰ This was a unique move, as the DOJ had not filed such a complaint to stop a vertical merger in over forty years.⁴¹

B. The DOJ's Decision to Enjoin AT&T and Time Warner

The DOJ's economic theory that the merger between AT&T and Time Warner would harm consumers and competition may be summarized in three main arguments. The first theory put forth by the DOJ in court was that the merged company would raise the price of Time Warner content charged to other distributors (cable companies) and that those higher costs would in turn be passed on to consumers.⁴² Specifically, the DOJ was concerned that the combination of Time Warner's content networks, such as CNN, TNT, and TBS, with AT&T's video distributors, U-verse and DirectTV, would allow the merged company to charge their rivals higher prices for this content.⁴³ The ultimate fear was that these higher costs would be felt by consumers.⁴⁴

The second theory centered on the potential of opportunistic use of content blackouts. All content distributors negotiate terms (payments) to content

346 (1962).

³⁷ For a description of the consumer welfare standard, see *infra* note 66 and accompanying text.

³⁸ See Complaint at 16–17, *United States v. AT&T, Inc.*, 310 F. Supp. 3d 161 (D.D.C. 2018) (No. 17-CV-02511). The DOJ expressed concern that if the merger between AT&T and Time Warner were to occur, “the merged company could ‘more credibly threaten to withhold’ Turner’s popular programming—including the hit shows and live sporting events carried by TNT, TBS, and Cartoon Network—as leveraged in its negotiations with MVPDs and virtual MVPDs.” *Id.*

³⁹ Interestingly, similar content and distribution concerns were raised in the 2011 merger between Comcast and NBC. In that case, the DOJ approved the merger with commitments made on mandatory content licensing, arbitration of content rights disputes, and non-discrimination conditions. See Press Release, Dep’t of Just., Justice Department Allows Comcast-NBCU Joint Venture to Proceed with Conditions (Jan. 18, 2011) (available at <https://www.justice.gov/opa/pr/justice-department-allows-comcast-nbcu-joint-venture-proceed-conditions>).

⁴⁰ See Complaint, *supra* note 38.

⁴¹ See *United States v. Hammermill Paper Co.*, 429 F. Supp. 1271, 1278–79 (W.D. Pa. 1977) (demonstrating how the DOJ was unsuccessful in stopping the merger).

⁴² *United States v. AT&T Inc.*, 310 F. Supp. 3d 161, 198 (D.D.C. 2018).

⁴³ *Id.*

⁴⁴ *Id.*

providers for the right to carry that content.⁴⁵ If there is a failure to meet a negotiated price before the current contract expires, the content is “blacked out.”⁴⁶ Basically, the DOJ’s blackout theory was that if a rival content distributor was negotiating prices for Time Warner content, AT&T could strategically use any Time Warner blackout period on that distributor’s system to lure away that rivals’ customers.⁴⁷ In addition, AT&T could directly discourage its own customers from switching to distributors that did not carry Time Warner content.⁴⁸ The DOJ’s economic expert, the University of California Berkeley professor, Carl Shapiro, estimated that under the second theory, AT&T’s rival distributors could cause rival companies to lose an estimated nine to fourteen percent of their customers over time.⁴⁹ However, the court found that “blackouts are negative events for both programmers and distributors” and “there ha[d] never been a long-term blackout of the Turner networks.”⁵⁰

The third theory was that AT&T and rival distributor Comcast could coordinate access restriction to Time Warner and NBC content to stifle competition.⁵¹ In particular, coordination might look to limit competition from online cable content distributors like Dish Network’s Sling TV or Sony’s PlayStation Vue.⁵² Professor Shapiro theorized that even indirect (tacit) coordination to limit online alternatives would harm consumer choice.⁵³

C. *The Results*

Judge Leon of the United States District Court for the District of Columbia court wrote a ninety-four-page brief rejecting the DOJ’s complaint.⁵⁴ Judge Leon’s opinion has drawn both praise and criticism for its analysis of the economic testimony.⁵⁵ The criticism tends to lay in some unfortunate dicta,

⁴⁵ *See id.* at 200.

⁴⁶ *Id.* (“In the event an affiliate negotiation is unsuccessful, the distributor will lose the rights to display the programmer’s content to its customers. . . . known in the industry as a programming ‘blackout’ . . .”).

⁴⁷ *See id.*

⁴⁸ *See id.* at 201.

⁴⁹ *Id.* at 225.

⁵⁰ *Id.* at 200.

⁵¹ *Id.* at 194.

⁵² *Id.* at 242.

⁵³ *Id.* at 246 (“[T]he Government further asserts [that] the companies could ‘mutually forbear’ from licensing their programming content ‘without any communication between them.’” (citation omitted)).

⁵⁴ *See* *United States v. AT&T Inc.*, 310 F. Supp. 3d 161 (D.D.C. 2018), *aff’d sub nom.* *United States v. AT&T, Inc.*, 916 F.3d 1029 (D.C. Cir. 2019).

⁵⁵ *Compare* Steven C. Salop, *The AT&T/Time Warner Merger: How Judge Leon Garbled Professor Nash*, 6 J. ANTITRUST ENFORCEMENT 459 (2018) (questioning Judge Leon’s critiques and description of the DOJ’s economic analyses), *with* Joshua D. Wright & Jan Martin Rybnicek, *AT&T/Time Warner Decision: The Triumph of Economic Analysis*, FEDERALIST SOC’Y (June 27, 2018), <https://fedsoc.org/commentary/fedsoc-blog/at-t->

including an apparent dismissal of the DOJ's use of common economic bargaining models.⁵⁶ But regardless of Judge Leon's dicta, the economic theory was arguably found too difficult and too sensitive to changes in underlying assumptions to establish empirically. That, in the end, may have been the death knell to the DOJ's case. As for the blackout theory, economists at the FCC have studied similar types of opportunistic use of blackouts among content distributors and providers.⁵⁷ For a public example, when analyzing the impact of broadcaster mergers and retransmission fees, FCC economists have considered how broadcaster consolidation increased broadcasters' ability to credibly use a "blackout" threat to increase retransmission fees (the fees broadcasters charge cable and satellite companies).⁵⁸ Even talented economists with access to extensive industry reporting data acknowledge that conclusions in this area are complicated and open to interpretation.⁵⁹

time-warner-decision-the-triumph-of-economic-analysis (praising Judge Leon's emphasis on "sound economic analysis").

⁵⁶ See generally Ken Binmore, Ariel Rubinstein & Asher Wolinsky, *The Nash Bargaining Solution in Economic Modelling*, 17 RAND J. ECON. 176 (1986) (clarifying that "certain interpretive ambiguities in the axiomatic approach . . . provide a more solid grounding for applications of the Nash bargaining solution in economic modelling"). The economic model in question was a Nash-bargaining model. As one writer describes a Nash bargaining situation, imagine two parties are at an impasse. What is the right solution for reaching an agreement?:

[Assume] [e]ach party has a disagreement point (also known as a threat point) which is a payoff level in case no agreement is reached. Each party also has a utility function for how the party feels about an outcome. . . . [As John Nash proved,] the outcome is the point that maximizes the product of the two players utility over their disagreement point.

Presh Talwalkar, *Nash Bargaining Solution—Game Theory Tuesdays*, MIND YOUR DECISIONS (Mar. 1, 2016), <https://mindyourdecisions.com/blog/2016/03/01/nash-bargaining-solution-game-theory-tuesdays/>; see Salop, *supra* note 55, at 462 ("Judge Leon did not reject Nash bargaining theory outright, but he strongly criticized the premise that Time Warner executives would work to maximize the 'joint profits' of the vertically integrated company, as if this were just an 'economists' assumption' made for convenience, rather than a good description of the real world.").

⁵⁷ See, e.g., Babette Boliek, Kim Makuch, Catherine A. Matraves & Aleks Yankelevich, *Economics at the FCC 2018-19: Competition, Broadband Deployment, and Transaction Review*, 55 REV. INDUS. ORG 625, 633-36 (2019). The FCC regulates the communications industries, including cable, satellite, and cellular companies. COMMUNICATIONS ACT OF 1934, 47 U.S.C. § 151. Relevant for this discussion, as part of its regulatory rule, the FCC analyzes mergers when they involve a common carrier or the transfer of spectrum licenses. 15 U.S.C. § 21.

⁵⁸ See Boliek et al., *supra* note 57, at 633. Broadcasters arguably have "unique" content in that distributors are required by law to carry their content. The findings showed that under certain conditions, the consolidation of broadcasters might lead to higher retransmission rates. *Id.* at 637. However, another explanation for the finding might also have been higher content production costs or the ability to push back on the pre-existing market power of distributors. *Id.* at 638.

⁵⁹ See *id.* at 633, 638 (discussing limitations on studies by the FCC).

In sum, the DOJ's challenge to the AT&T-Time Warner merger was unsuccessful,⁶⁰ and the companies finalized the merger in 2018. To outside observers, the DOJ's challenge was always a long shot. Past economic and judicial treatment of vertical mergers was overwhelmingly procompetitive, and the overwhelming vertical nature of this merger was too high a hurdle for the DOJ.⁶¹ Ultimately, even though the DOJ's challenge did not succeed, the market itself stepped in only a few years later to accomplish what antitrust regulators could not.⁶² When antitrust regulators failed to find anticompetitive harm, there was still another, more organic, line of defense in the market. This demonstrates that while antitrust regulators are beneficial when they encourage market investment, innovation, and growth, they are not the sole avenue for antitrust enforcement.

II. THE DOJ, THE FCC, AND MERGER TWO: T-MOBILE AND SPRINT

In contrast, while the DOJ challenged the AT&T-Time Warner merger, the DOJ analyzed and ultimately approved the merger between T-Mobile and Sprint. A brief summary of the T-Mobile and Sprint merger is as follows. In the middle of 2018, T-Mobile and Sprint announced their decision to merge.⁶³ In the press and to regulators, T-Mobile and Sprint claimed that the merger would allow the merged company to rapidly create a nationwide 5G network, lower costs, and provide better quality than either company could on its own.⁶⁴ Because the merger involved transferring multiple spectrum licenses and authorizations, it required FCC review along with the DOJ's traditional merger review.⁶⁵ Both FCC and DOJ merger reviews involve extensive economic and legal analyses to predict the potential effects of the proposed merger. Notably, the DOJ applies the traditional consumer welfare standard of review that focuses on limiting adverse impacts on consumers rather than on competitors. The DOJ employs objective economic analysis to predict potential consumer harms and consumer benefits, and to develop remedies or strategies to reduce or prevent

⁶⁰ See *United States v. AT&T Inc.*, 310 F. Supp. 3d 161, 165 (D.D.C. 2018).

⁶¹ *Id.* at 199 (“[T]he Government has not pointed to *any* prior trials in federal district court in which the Antitrust Division has successfully used this increased-leverage theory to block a proposed vertical merger as violative of Section 7.”).

⁶² See Kovach & Meredith, *supra* note 14.

⁶³ See Press Release, T-Mobile, *supra* note 19.

⁶⁴ See *id.*

⁶⁵ See Harold Feld, *The Need for FCC Merger Review*, 18 COMM’N LAW. 20, 20 (2000) (stating the FCC has played a large role in regulating mergers in the telecommunication industry); Christopher S. Yoo, *Merger Review by the Federal Communications Commission: Comcast-NBC Universal*, PENN. L.: LEGAL SCHOLARSHIP REPOSITORY 5 (2014) (stating the FCC’s authority for merger review comes from the Communications Act of 1934).

harms that outweigh the benefits.⁶⁶ The FCC's review uses similar analyses but, in accordance with its governing statute, the FCC applies the more broadly defined public interest standard of review. Namely, the FCC determines whether the merger serves public interest, convenience, and necessity.⁶⁷ Ultimately, both the FCC and the DOJ approved the merger under their respective standards, and each applied various conditions and requirements to the merger approval.⁶⁸ This Part II takes a closer look at the evolution of that decision.⁶⁹

A. Background of the T-Mobile-Sprint Merger

T-Mobile and Sprint completed their merger in 2019.⁷⁰ This merger was significant, as it involved the combination of two of the four largest national mobile networks.⁷¹ There was concern from the DOJ, FCC, and the general public that the decrease from four to three national carriers could harm competition and consumers. Arguably, however, the U.S. market for cellular networks was already bifurcated into two separate markets—Verizon-AT&T and T-Mobile-Sprint. Under this view, the merger could be seen as facilitating T-Mobile's move into a pre-existing duopoly—increasing that market from two main participants up to three.⁷² In particular, the spectrum license holdings⁷³ and

⁶⁶ See Samuel Bowman, *TL;DR—Consumer Welfare Standard*, INT'L CTR. L. & ECON. (Feb. 9, 2021), <https://laweconcenter.org/resource/tldr-consumer-welfare-standard/> (“In antitrust law, the Consumer Welfare Standard (CWS) directs courts to focus on the effects that challenged business practices have on consumers, rather than on alleged harms to specific competitors.”). For a description of the consumer welfare model, see ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 107–115 (1978).

⁶⁷ 47 U.S.C. §§ 214(a), 310(d) (2018); see also Babette E.L. Boliek, *FCC Regulation Versus Antitrust: How Net Neutrality Is Defining the Boundaries*, 52 B.C. L. REV. 1627, 1633 n.21 (2011) (“The FCC mandate of regulating telecommunications for the ‘public interest, convenience, and necessity’ is a standard praised by some for its adaptability and central focus on the public wellbeing.”).

⁶⁸ See Memorandum Opinion and Order, Declaratory Ruling, and Order of Proposed Modification, Applications of T-Mobile US, Inc., and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, 34 FCC Rec. 10578, at 5, ¶11 (Nov. 5, 2019); Proposed Conclusions of Law of the United States at 56–57, *United States v. AT&T, Inc.*, No. 17-CV-02511 (D.D.C. May 8, 2018), <https://www.justice.gov/atr/case-document/file/1061066/download>.

⁶⁹ See Parts II.A, II.B.

⁷⁰ See *supra* notes 21, 68.

⁷¹ See Edmund Lee, *T-Mobile and Sprint Are Cleared to Merge as the Big Get Bigger*, N.Y. TIMES (Feb. 11, 2020), <https://www.nytimes.com/2020/02/11/business/media/t-mobile-sprint-merger.html> (“The long-in-the-works merger would combine the nation’s third- and fourth-largest wireless carriers, creating a telecommunications giant to take on AT&T and Verizon.”).

⁷² GUS HURWITZ, GEOFFREY A. MANNE, JULIAN MORRIS & KRISTIAN STOUT, INT'L CTR. L. & ECON., COMMENTS OF THE INTERNATIONAL CENTER FOR LAW AND ECONOMICS IN OPPOSITION TO PETITIONS TO DENY 4 (2018), <https://ecfsapi.fcc.gov/file/10918839300242/ICLE%20-%20Comments%20-%20T-Mobile-Sprint%20Merger.pdf> (“[I]n the market for nationwide 5G networks, this transaction amounts to a 2-to-3 merger, resulting in the creation of a viable, new market entrant, instead of the 4-to-3 transaction as characterized by opponents.”).

⁷³ See *infra* note 112.

capital investments required to maintain a future-proof market presence, was a main consideration that factored into the DOJ's and FCC's merger analysis.⁷⁴ T-Mobile and Sprint's spectrum combination were determined to work cohesively and would make deploying a national 5G network more likely.⁷⁵ According to the companies, the merger would facilitate the development of a nationwide 5G network, improve network coverage in rural areas, and increase competition with providers of wired broadband.⁷⁶

T-Mobile and Sprint put forth that the merger's main benefit would be the ability to offer consumers a network that could provide expanded coverage, more capacity, and faster data rates.⁷⁷ The companies argued that by merging and combining their respective spectrum, they could remove any potential network redundancy and reduce costs of deploying the network.⁷⁸ More specifically, the companies emphasized that the combination of their respective low-band and mid-band spectrum would allow for increased coverage in rural areas.⁷⁹ Both companies also claimed that T-Mobile's 5G network would facilitate faster data rates that could compete with wired broadband.⁸⁰

As part of their assessment of the various comments about the merger, FCC economists analyzed whether and how much the horizontal merger between T-Mobile and Sprint would decrease competition.⁸¹ There was concern about the

⁷⁴ See Memorandum Opinion and Order *supra* note 68, at 42, ¶ 98 (“[The FCC] note[s] that Sprint has not widely deployed its 2.5 GHz spectrum assets and our technical analysis predicts that on a standalone basis it would fail to cover nearly half of the country with 5G services on its 2.5 GHz spectrum, even assuming it has the financial ability to reach its previously planned deployment level. The transaction will therefore significantly increase the overall utilization of the 2.5 GHz spectrum. [The FCC] further notes that as a condition to consent, the Commission is requiring a certain amount of mid-band spectrum to be deployed for 5G, which in turn will benefit American consumers.”).

⁷⁵ *Id.*

⁷⁶ Boliek et al., *supra* note 57, at 643.

⁷⁷ *Id.* at 640.

⁷⁸ *Id.* at 640 n.22 (“To support their claims, the Applicants compared their Network Build Model’s predictions for New T-Mobile’s network and associated costs relative to the networks of the stand-alone companies.”).

⁷⁹ *Id.* at 640 n.23 (“For instance, whereas T-Mobile had been deploying its low-band 600 MHz spectrum in rural areas, the Applicants claimed that New T-Mobile’s access to complementary mid-band access would enable improved speeds and more consistent signal levels.”).

⁸⁰ *Id.* at 641 n.24 (“The Applicants also made various additional public interest claims: For instance, they asserted that the proposed transaction would enable New T-Mobile to offer higher quality wholesale services at lower prices to mobile virtual network operators (MVNOs); it would improve New T-Mobile’s ability to offer appealing terms to roaming partners; it would permit the Applicants to achieve non-network savings in retail distribution, advertising, equipment costs, repair and logistics, IT and billing, and other fixed general and administrative costs; and it would enable New T-Mobile to be a more significant competitor for enterprise customers.”).

⁸¹ See Memorandum Opinion and Order, *supra* note 68, at 75–77, ¶¶ 171–77.

merger of two companies that compete in the same geographic and product markets.⁸² Additionally, the FCC evaluated whether potential harms resulting from the transaction would be balanced or outweighed by potential benefits.⁸³ During the evaluation, the FCC looked at how customers viewed the companies and whether they saw them as direct competitors. Additionally, the FCC analyzed how quickly the new merged company could achieve any benefits compared to the individual companies. Ultimately, the FCC approved the transaction in May 2019, in part due to the parties' commitments to divest Sprint's Boost Mobile business to Dish.⁸⁴

B. The DOJ and FCC Decisions to Approve the T-Mobile-Sprint Merger

T-Mobile and Sprint filed their applications with the FCC on June 18, 2018, seeking consent for T-Mobile to acquire Sprint's FCC authorizations.⁸⁵ The companies filed certain commitments with the FCC on May 20, 2019. These commitments included the divestiture of Boost Mobile to Dish to reduce concerns about reduced competition resulting from the merger.⁸⁶ On July 26, 2019, as part of the companies' agreement with the DOJ, Dish agreed to acquire Boost.⁸⁷ The terms of the merger between T-Mobile and Sprint largely focused on the development of a 5G network. To receive merger approval, T-Mobile needed to agree to expand their 5G network to rural areas covering "[ninety-seven] percent of the [U.S.] population in three years and [ninety-nine] percent in six years."⁸⁸

One of the reasons the DOJ agreed to the T-Mobile-Sprint merger was because of the divestiture to Dish, which had the potential to move Dish into position to become a potential facilities-based provider of prepaid services (wholesale and retail) in order to increase competition in a market exited by Sprint.⁸⁹ Dish would acquire Sprint's prepaid brand in addition to Boost Mobile

⁸² *Id.* at 28–29, ¶ 66.

⁸³ *Id.* at 168–69, ¶¶ 384–86.

⁸⁴ Boliek et al., *supra* note 57, at 640.

⁸⁵ See Public Notice, Commission Opens Docket for Proposed Transfer of Control of Sprint Corporation to T-Mobile US, Inc., 33 FCC Rcd. 6046 (June 15, 2018) (announcing that T-Mobile and Sprint planned to file with the FCC on June 18, 2018).

⁸⁶ See generally Letter from Sprint Corp. and T-Mobile U.S., Inc., to Marlene H. Dortch, Sec'y, Fed. Comm'n Comm'n (May 20, 2019) (available at <https://www.fcc.gov/sites/default/files/t-mobile-us-sprint-letter-05202019.pdf>).

⁸⁷ In the Matter of Applications of T-Mobile US, Inc., and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, Order of Modification and Extension of Time to Construct, 35 FCC Rcd. 9580, 9581, ¶ 2 (Sept. 11, 2020) [hereinafter Applications of T-Mobile and Sprint].

⁸⁸ Julian Chokkattu, *What the T-Mobile and Sprint Merger Means for You*, WIRED (Aug. 31, 2020, 8:00 AM), <https://www.wired.com/story/t-mobile-sprint-merger-guide/>.

⁸⁹ See Press Release, Dep't of Just., *supra* note 21 ("Under the terms of the proposed settlement, T-Mobile

and would take over some of Sprint's retail stores. Dish would utilize T-Mobile's network for seven years while it would work to build its own service and 5G network.⁹⁰ The terms of the DOJ's proposed settlement with T-Mobile and Sprint required the divestiture of Sprint's prepaid business, Boost Mobile, Virgin Mobile, and Sprint prepaid to Dish Network.⁹¹ The settlement also required certain spectrum assets to be divested to Dish. T-Mobile and Sprint also were required to allow Dish to utilize "at least 20,000 cell sites and hundreds of retail locations" and allow Dish to access T-Mobile's network for seven years to develop its own 5G network.⁹²

C. *The Results*

After two years of scrutiny by the FCC, the DOJ, various state attorney generals, and state regulators, including a legal challenge in district court, the T-Mobile-Sprint merger was completed.⁹³ All merger review involves some speculation as to the post-merger world.⁹⁴ Review is particularly difficult when it includes calculating the impact of the merger in an industry that itself is changing rapidly.

and Sprint must divest Sprint's prepaid business, including Boost Mobile, Virgin Mobile, and Sprint prepaid, to Dish Network Corp. . . .).

⁹⁰ *Id.*; see Applications of T-Mobile and Sprint, *supra* note 87, at 9581, ¶ 2.

⁹¹ See Press Release, Dep't of Just., *supra* note 21.

⁹² See *id.* Assistant Attorney General Makan Delrahim of the Justice Department's Antitrust Division issued this statement:

With this merger and accompanying divestiture, we are expanding output significantly by ensuring that large amounts of currently unused or underused spectrum are made available to American consumers in the form of high quality 5G networks Today's settlement will provide Dish with the assets and transitional services required to become a facilities-based mobile network operator that can provide a full range of mobile wireless services nationwide. I want to thank our state partners for joining us in this settlement. . . . In crafting this remedy, we are also mindful of the significant commitments T-Mobile, Sprint, and Dish have made to the Federal Communications Commission.

Id.

⁹³ For example, both the FCC and DOJ scrutinized the potential impact the merger would have on the prepaid mobile market. Although arguably a separate market from the larger, subscription market to be combined by the merger, because AT&T and Verizon provided little wholesale services compared to Sprint and T-Mobile, both the FCC and DOJ required the merged company to make spinoff commitments of licenses and business divisions that might support the entry of a new facilities-based wholesaler. See Babette Boliek, *Competition, Regulation, and 5G*, in THE GLOBAL ANTITRUST INSTITUTE REPORT ON THE DIGITAL ECONOMY 837, 850–53 (2020).

⁹⁴ By its nature, merger review is "guessing" what a post-merger world might look like. That fact does not change by the imposition of bright-line rules that shift burdens to prevent mergers of certain structural characteristics. Bright-line rules are arguably a greater pre-merger "guess" as to the post-merger analysis than case-by-case analyses.

Here, the great weight given to the historic architectural shift of the mobile industry known as 5G was particularly evident in both the DOJ and FCC reviews of the T-Mobile merger.⁹⁵ To distill it to a granular level, it could be argued that if 5G (largely undeployed at the time of the merger) is indeed the technology of the future—that which will drive competition and contribute to consumer welfare—then there was much to recommend the merger to regulators. If it proves not to be so, there is much more to criticize about the merger decision. As noted, and further described below, AT&T appears to echo the FCC's and DOJ's conclusions about the importance of high-cost, 5G infrastructure investment.

III. HOW ANTITRUST ACTION HELPED END THE AT&T-TIME WARNER MERGER

Although the DOJ attempted to stop the AT&T-Time Warner merger by litigation, the approval of the T-Mobile merger seems to have been part of AT&T's undoing.⁹⁶ AT&T's CEO John Stankey outlined multiple reasons for the split, including AT&T's desire to focus on building up its 5G network.⁹⁷ Telecommunication companies have been motivated by 5G for multiple years, starting with the T-Mobile merger with Sprint on April 1, 2020.⁹⁸ This merger successfully allowed the merged company, New T-Mobile, to focus its attention on expanding 5G coverage for its customers.⁹⁹ After the T-Mobile-Sprint merger, other wireless carriers, including AT&T, were left trailing in the 5G race. After AT&T's split with WarnerMedia, AT&T refocused its efforts on increasing its 5G coverage.¹⁰⁰

⁹⁵ See Memorandum Opinion and Order, *supra* note 68, at 3, ¶¶ 2–3 (“Building leading 5G networks is of critical importance for our nation.”).

⁹⁶ See Press Release, AT&T, *supra* note 15.

⁹⁷ *Id.* It should be noted that on the content side, the merged company also faced very real competition from already established over-the-top content providers. Far from being a dominant threat to these over-the-top operators as argued by the DOJ, the merged company was best understood to be an entrant to the market. See Feiner, *supra* note 18.

⁹⁸ Boliek, *supra* note 93, at 851–52; Drew Fitzgerald, *T-Mobile Absorbs Sprint After Two-Year Battle*, WALL ST. J., <https://www.wsj.com/articles/t-mobile-absorbs-sprint-after-two-year-battle-11585749352> (Apr. 1, 2020, 12:10 PM) (“T-Mobile US Inc. closed its takeover of Sprint Corp. Wednesday after a nearly two-year battle with federal and state authorities.”).

⁹⁹ See Fitzgerald, *supra* note 98.

¹⁰⁰ See *AT&T Chief Executive Officer John Stankey Updates Shareholders*, AT&T (May 24, 2021) [hereinafter *AT&T CEO Updates Shareholders*], https://about.att.com/story/2021/att_chief_executive_officer_updates_shareholders.html (published on AT&T's Newsroom).

A. *AT&T Split With WarnerMedia*

In May of 2021, AT&T announced that it was selling the recently acquired WarnerMedia to Discovery.¹⁰¹ This announcement came only three short years after AT&T won a hard-fought battle against the DOJ.¹⁰² The reasons for combining WarnerMedia and Discovery cited by AT&T CEO John Stankey included the following: the success of media and communications operations of AT&T supported this separation, the combination of WarnerMedia and Discovery would increase AT&T's financial flexibility, and the combination would provide the opportunity to improve AT&T's market position and increase its investment in the communication business; in other words, 5G.¹⁰³ AT&T also stated that after the deal closed, the capital structure improvements would place AT&T as one of the "best capitalized 5G and fiber broadband companies" in the country.¹⁰⁴ AT&T expected about \$24 billion in annual capital expenditures and expects "its 5G C-band network to cover 200 million people in the U.S. by year-end 2023."¹⁰⁵

B. *The Importance of Tech in High-Tech Industries*

The technology central to the T-Mobile-Sprint merger and also to the AT&T-Time Warner breakup is 5G. 5G is more than an update to 4G. 5G is a major change in architecture that has the potential to facilitate the development of other innovations.¹⁰⁶ As compared to 4G, 5G offers increased bandwidth, increased upload and download speeds, better input efficiencies, and decreased latency.¹⁰⁷ Data rates are expected to be in the 100s of Megabits per second (Mbps), as compared to 4G's current 10s of Mbps.¹⁰⁸ 5G improvements will hopefully also bring increased efficiencies leading to decreased costs, increased quality, and increased competition.¹⁰⁹

To achieve these potential 5G benefits, Mobile Network Operators (MNOs) will need to undergo architectural innovation such as increased spectral efficiency, densification, increased data capacity, and potentially the transition

¹⁰¹ Press Release, AT&T, *supra* note 15.

¹⁰² See *United States v. AT&T Inc.*, 916 F.3d 1029, 1031–32 (D.C. Cir. 2019).

¹⁰³ *AT&T CEO Updates Shareholders*, *supra* note 100.

¹⁰⁴ Press Release, AT&T, *supra* note 15.

¹⁰⁵ *AT&T CEO Updates Shareholders*, *supra* note 100.

¹⁰⁶ Boliek, *supra* note 93, at 839.

¹⁰⁷ WILLIAM LEHR, THE FUTURE OF BROADBAND COMPETITION IN A 5G WORLD 6–7 (2018), <https://ssrn.com/abstract=3240191>.

¹⁰⁸ *Id.* at 6.

¹⁰⁹ Boliek, *supra* note 93, at 840.

from the current Radio Access Network (RAN) to Open Radio Access Networks (O-RAN).¹¹⁰ First, 5G allows for increased spectral efficiency.¹¹¹ 5G can use levels of spectrum previously unavailable to other generations.¹¹² Spectrum ranges from low-band (below 1 gigahertz (GHz))¹¹³ to mid-band (between 1 and 6 GHz)¹¹⁴ to high-band (above 24 GHz).¹¹⁵ Low-band spectrum covers a larger geographic area, which makes it ideal for rural coverage, but at lower speeds of about 30–250 Mbps.¹¹⁶ Mid-band spectrum covers a smaller area than low-band but at slightly faster speeds of about 100–900 Mbps.¹¹⁷ High-band spectrum provides high speed mobile broadband between 1 and 3 gigabits per second (Gbps) but covers a very small area.¹¹⁸ T-Mobile and Sprint cited combining their spectrum levels to facilitate a larger 5G network as one of the main benefits to come from their merger.¹¹⁹ The merger allowed T-Mobile to acquire over 100 MHz of mid-band (2.5GHz) spectrum, which the companies anticipated facilitating the spread of 5G.¹²⁰

Another architectural innovation of 5G is the densification of the mobile networks by MNOs.¹²¹ This densification will involve the installation of numerous small cells on tall buildings or telephone towers, resulting in higher quality mobile broadband for consumers, especially in urban areas where buildings are so close together.¹²² A third 5G benefit is increased data capacity of the 5G network. This increased capacity will allow more than one network to run on a single infrastructure and utilize the same spectrum. This will increase efficiency while at the same time decrease costs.¹²³

¹¹⁰ *Id.* at 840–42.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ GSMA, 5G SPECTRUM: PUBLIC POLICY POSITION 6 (2021), <https://www.gsma.com/spectrum/wp-content/uploads/2020/03/5G-Spectrum-Positions.pdf>.

¹¹⁴ *5G Spectrum Bands Explained—Low, Mid and High Band*, NOKIA, <https://www.nokia.com/networks/insights/spectrum-bands-5g-world/> (last visited Apr. 23, 2022).

¹¹⁵ GSMA, *supra* note 113.

¹¹⁶ Jeremy Horwitz, *The Definitive Guide to 5G, Low, Mid, and High Band Speeds*, VENTURE BEAT (Dec. 10, 2019, 1:29 PM), <https://venturebeat.com/2019/12/10/the-definitive-guide-to-5g-low-mid-and-high-band-speeds/>.

¹¹⁷ *Id.*

¹¹⁸ GSMA, *supra* note 113.

¹¹⁹ See Boliek, *supra* note 93, at 848 n.36.

¹²⁰ Monica Allevan, *T-Mobile CEO Touts Mid-Band Spectrum Lead in 5G*, FIERCE WIRELESS (Dec. 9, 2020, 11:38 PM), <https://www.fiercewireless.com/operators/t-mobile-ceo-boasts-mid-band-spectrum-lead>.

¹²¹ See Boliek, *supra* note 93, at 840.

¹²² Christopher S. Yoo & Jesse Lambert, *5G and Net Neutrality*, PENN. L.: LEGAL SCHOLARSHIP REPOSITORY 6 (2019), https://scholarship.law.upenn.edu/faculty_scholarship/2089.

¹²³ Boliek, *supra* note 93, at 841.

5G may also facilitate the potential move from the standard Radio Access Network (RAN) technology to Open Radio Access Networks (O-RAN).¹²⁴ With current RAN technology, the hardware provider also provides the software; however, with O-RAN, there are two different providers for hardware and software.¹²⁵ This facilitates flexibility in the network design and could decrease costs to consumers while increasing network efficiencies and competition.¹²⁶

C. AT&T's Focus on 5G

AT&T's quick turnaround—from purchasing Time Warner to focus on their media and content business to selling WarnerMedia only three years later to focus on 5G—demonstrates 5G's continued importance to telecom companies. AT&T's focus on 5G comes almost a year after the approved merger between T-Mobile and Sprint in June 2020.¹²⁷ Interestingly, the importance of 5G's potential had to be assumed by the DOJ and FCC for merger review. This assumption, based on experience, has yet to be fully realized in consumer demand. Indeed, in one survey only 25% of wireless consumers feel that the 5G network is better than their current 4G LTE service and “only 5% said they are willing to switch [from 4G] to 5G.”¹²⁸ Even so, all three mobile companies are racing to develop a 5G network. In 2021, T-Mobile offered lower prices than both AT&T and Verizon and was the closest of the three telecommunication companies to offering a nationwide 5G network.¹²⁹ Prior to the COVID-19 pandemic, AT&T and Verizon planned to increase their 5G advertising with the hope of attracting more customers to their respective networks.¹³⁰ Currently, T-Mobile has the fastest 5G download speed of the three companies, with an average of 87.5 Mbps ahead of AT&T and Verizon, which both had 52.3

¹²⁴ *Id.* at 842.

¹²⁵ *Id.*

¹²⁶ *Id.*; CHIH-LIN ET AL., O-RAN ALLIANCE, O-RAN: TOWARDS AN OPEN AND SMART RAN 6 (2018), <https://static1.squarespace.com/static/5ad774cce74940d7115044b0/t/5bc79b371905f4197055e8c6/1539808057078/O-RAN+WP+Final+181017.pdf>.

¹²⁷ See Roger Conrad, *T-Mobile US: The Sprint Merger So Far*, FORBES (June 23, 2020, 9:26 AM), <https://www.forbes.com/sites/greatspeculations/2020/06/23/t-mobile-us-the-sprint-merger-so-far/?sh=3d5efeac271b>.

¹²⁸ Sophie Webster, *Verizon and AT&T Pushes for More 5G Campaign as Pandemic Caused Consumers to Question its Benefits*, TECH TIMES (Aug. 7, 2021, 12:08 PM), <https://www.techtimes.com/articles/263883/20210807/verizon-t-shelves-5g-campaign-pandemic-caused-consumers-question-benefits.htm>.

¹²⁹ See Martyn Warwick, *T-Mobile's Lead in US 5G Is Causing Increasing Concern at AT&T and Verizon*, TELECOMTV (Aug. 10, 2021), <https://www.telecomtv.com/content/5g/t-mobile-s-lead-in-us-5g-is-causing-increasing-concern-at-at-t-and-verizon-42158/>.

¹³⁰ See Alan Friedman, *Battling T-Mobile, Verizon and AT&T Plan on Showing in New Ads Why Consumers Need 5G Service*, PHONEARENA (Aug. 7, 2021, 1:40 PM), https://www.phonearena.com/news/verizon-and-at-t-plan-on-changing-the-focus-of-their-5g-ads-to-consumers_id134188.

Mbps.¹³¹ Additionally, T-Mobile is ahead of AT&T and Verizon on 5G availability and 5G reach.¹³² T-Mobile also leads the other two companies on 5G download and upload speed.¹³³ However, AT&T is ahead of the other two companies regarding the 5G video experience and Verizon leads the 5G gaming experience for consumers.¹³⁴ All three telecom companies are still attempting to expand and develop their respective 5G network; however, they are all struggling to engage consumers, especially during the COVID-19 pandemic.

In March 2021, at AT&T's Analyst & Investor Day, AT&T announced some of its long-term goals to bring "fast, reliable and secure 5G to more consumers, businesses and first responders."¹³⁵ AT&T's focus is to bring 5G to "sports and venues, entertainment, travel and transportation, business transformation, and security and public safety."¹³⁶ According to AT&T, their 5G network covers 230 million Americans in about 14,000 cities and towns.¹³⁷ AT&T plans to bring 5G+ to seventeen sports venues including stadiums, arenas, and practice areas, across the United States by the end of 2021.¹³⁸ Additionally, AT&T plans to bring 5G to universities, including the University of Miami, Purdue University, and others by the end of 2021.¹³⁹ Furthermore, in February 2021, AT&T announced a public-private partnership with the U.S. Department of Veterans Affairs (VA) where AT&T provided 5G capabilities to the VA Puget Sound Health Care System in Seattle, Washington.¹⁴⁰ This partnership will provide the VA Puget Sound with "real-time, high-bandwidth, low-latency access to latency dependent mobile applications."¹⁴¹ These 5G goals came slightly before AT&T's announcement to combine WarnerMedia with Discovery in May 2021. This decision further highlights AT&T's focus on and dedication to expanding its 5G network.

¹³¹ FRANCESCO RIZZATO, OPENSIGNAL, 5G USER EXPERIENCE REPORT (2021), <https://www.opensignal.com/reports/2021/07/usa/mobile-network-experience-5g>.

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ Press Release, AT&T, AT&T Unveils 2021 5G Strategy (Mar. 12, 2021) (available at https://about.att.com/story/2021/5g_strategy.html).

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *AT&T and U.S. Department of Veterans Affairs Will Test 5G-Powered Healthcare Innovations*, AT&T (Feb. 2, 2021), https://about.att.com/story/2021/att_va_5g_healthcare_innovations.html.

¹⁴¹ *Id.*

CONCLUSION

Over the past year, two mergers have occurred in the high-tech industry of telecommunication—T-Mobile-Sprint and AT&T-Time Warner—and both received much scrutiny from antitrust authorities. In both cases, the merger ultimately went forward—one with regulatory and DOJ approval, the other by judicial decision. The first merger between T-Mobile and Sprint is still in effect, while AT&T and Time Warner recently decided to split on their own after a short time. What these two transactions share is a focus on expanding a 5G network nationwide. The T-Mobile-Sprint merger and subsequent AT&T-WarnerMedia split both prove that the tech in the industry, 5G, is a dynamic, competitive challenge facing all participants in the telecommunications industry today.¹⁴²

Here are two examples of a majority of the large telecommunication companies making monumental business decisions in part to facilitate the development of a nationwide 5G network. Even the antitrust regulators view a 5G network as a worthy goal, as demonstrated by their approval of the T-Mobile Sprint merger. Only a few short years after T-Mobile and Sprint merged, AT&T has also made impactful business decisions to narrow their focus on 5G. Even though customers may be slow to appreciate 5G's full benefits,¹⁴³ telecom companies and antitrust regulators have both seen that 5G is the way of the not-so-distant future.

Additionally, although both mergers went forward, they each had different market outcomes. This result illustrates the market's important role in the success or failure of a merger. Despite the DOJ's objections, Time Warner merged and then split on their own. The resulting AT&T and Time Warner combination was not as successful as the companies hoped. Therefore, they separated.¹⁴⁴ While this likely would have occurred without DOJ interference, it just may have happened a few years earlier and saved administrative resources

¹⁴² See *13 Big Impacts 5G Has Already Had on Business and Consumer Life*, FORBES (July 8, 2021, 8:10 AM), <https://www.forbes.com/sites/forbestechcouncil/2021/07/08/13-big-impacts-5g-has-already-had-on-business-and-consumer-life/?sh=3bd2a6c62b75> (outlining the benefits of 5G for businesses and consumers as enabling remote work, improving the quality of rural connectivity, and improving video consumption, amongst others).

¹⁴³ See Webster, *supra* note 28.

¹⁴⁴ Meg James & Stephen Battaglio, *AT&T to Spin Off HBO, Other WarnerMedia Assets in a Huge Deal with Discovery: What Went Wrong?*, L.A. TIMES (May 16, 2021, 5:05 PM), <https://www.latimes.com/entertainment-arts/business/story/2021-05-16/why-att-is-spinning-off-hbo-cnn-warner-media-discovery> (“Daunted by the challenges of competing in the streaming age and shackled by a mountain of debt, the Dallas telecommunications behemoth is poised to spin off its entertainment assets into a new venture with cable programming company Discovery . . .”).

and taxpayer money spent litigating the case.¹⁴⁵ There is no doubt that merger review is an essential tool for both regulators and antitrust enforcers who are entrusted to protect the public interest and competition for the American consumers' benefit. Ex ante merger review, even when done with meticulous care, can provide only the experts' best prediction for the ultimate post-merger world. These two mergers provide a reminder of the difficulty of the analysis, the good faith of the reviewers, and the humility even an educated hypothesis can render.

¹⁴⁵ See, e.g., Knowledge at Wharton Staff, *Can AT&T Avoid the Merger Mistakes of AOL-Time Warner?*, KNOWLEDGE AT WHARTON (Mar. 19, 2019), <https://knowledge.wharton.upenn.edu/article/att-and-hbo-merger/> (describing the failure of the AOL-Time Warner merger and analogizing it to the combination of AT&T, "a conduit business," and Time Warner, "a content company").