THE IMPLICATIONS OF FIXED/MOBILE CONVERGENCE FOR BROADBAND COMPETITION IN THE UNITED STATES

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I. INTRODUCTION

Most consumers purchase two types of broadband Internet service. "Fixed broadband" allows the user to access the Internet from home, and "mobile broadband" allows the user to access the Internet from a mobile device. In the United States, the leading providers of fixed broadband are different from the leading providers of mobile broadband. Cable companies sell approximately 70 percent of fixed broadband subscriptions nationwide, while three major wireless providers — Verizon, T-Mobile, and AT&T — sell around 98 percent of mobile broadband subscriptions.[2]

In recent years, however, a trend known as "fixed/mobile convergence" has caused the line between fixed broadband providers and mobile broadband providers to blur. The two largest cable companies — Comcast and Charter — have both launched *mobile* broadband services, which they now offer in bundles with their fixed broadband services. Comcast and Charter currently provide their mobile services over Verizon's network, but both have signaled that they may deploy their own wireless infrastructure in the future. Meanwhile, Verizon, T-Mobile, and AT&T have all launched *fixed* broadband services over their wireless networks and offer these services in competition with the cable companies. Many observers predict that the ongoing transition of wireless networks from 4G LTE to 5G will improve the quality and competitiveness of these services in the coming years. This trend of convergence through fixed and mobile broadband providers launching new products to compete with one another has the potential to bring more choice to American consumers.

But some see a different trend on the horizon. In other parts of the world, certain fixed and mobile broadband providers have pursued convergence not by launching new products, but by acquiring each other instead. The business case for a merger between a fixed broadband provider and a mobile broadband provider is clear — it allows the merged firm to offer bundles of fixed and mobile services without having to deploy expensive new infrastructure or launch risky new products. Thus, some commentators expect that the major fixed broadband providers in the United States may soon attempt to merge with the nation's major mobile broadband providers as their counterparts have done abroad.[3] Given the changing competitive dynamics in the industry, any attempt at such a transaction would introduce interesting analytical issues from an antitrust perspective. It would also raise important questions about the future of broadband competition in the United States.

2 See Press Release, Leichtman Research Group, "About 1,530,000 Added Broadband in 3Q 2020" (Nov. 18, 2020) (listing top U.S. fixed broadband providers by subscriptions), https://www.leichtmanresearch.com/about-1530000-added-broadband-in-3q-2020; Mike Dano, *US Wireless Snapshot: Subscribers, Market Share and Q3 Estimates*, Light Reading (Oct. 16, 2020), https://www.lightreading.com/4g3gwifi/us-wireless-snapshot-subscribers-market-share-and-q3-estimates/d/d-id/764688.

3 See, e.g. Alex Sherman, *Why T-Mobile's Deal with Sprint Could Be the Warmup to a Wild Decade of Mergers*, CNBC (Feb. 12, 2020) ("T-Mobile's deal with Sprint may usher in the next wave of major U.S. media and telecommunications consolidation: the merging of cable and wireless companies."), https://www.cnbc.com/2020/02/12/t-mobile-sprint-merger-is-a-warmup-to-more-wireless-cable-mergers.html.

In this article, I provide an overview of the mobile broadband services that cable companies have launched in recent years as well as the fixed broadband services that wireless providers have introduced. I then consider the analytical framework that would apply to a proposed merger between a fixed broadband provider and a mobile broadband provider in the United States under antitrust law. While I do not express a view on the outcome of such an analysis, I identify factors that would bear on it. The analysis of such a transaction would require a fact-specific inquiry into the degree to which fixed/mobile convergence has brought the merging parties into actual or potential competition with one another. The more the parties compete or plan to compete, the greater the risk that such a transaction would raise antitrust concerns.

II. CABLE COMPANIES' MOBILE BROADBAND SERVICES

In 2017 and 2018, Comcast and Charter each launched a mobile broadband service. They provide these services as mobile virtual network operators ("MVNOs"), which means that they do not own their own wireless networks. Instead, Comcast and Charter purchase access to Verizon's wireless network pursuant to agreements that they signed with Verizon in 2011 and expanded and extended in 2020.[4] Comcast's MVNO service is branded "Xfinity Mobile," and Charter's is branded "Spectrum Mobile."

Xfinity Mobile and Spectrum Mobile are very similar offerings. When purchasing either service, customers can choose between plans that offer data on a per-gigabyte basis and unlimited data plans. All plans come with unlimited calls and texts. Comcast and Charter seek to differentiate their services from those of the major wireless providers by pricing the services more competitively and by offering subscribers a greater degree of flexibility, such as the ability to adjust the size of their data plans on an as-needed basis. Notably, both companies sell their mobile services only to subscribers of their fixed broadband services. Because Comcast's and Charter's fixed broadband services are available only within the footprints of their respective cable networks, this means that only customers in these parts of the country may purchase the companies' mobile services.[5]

Comcast and Charter both have quickly signed up subscribers since launching their mobile services. As of the third quarter of 2020, Xfinity Mobile had 2.5 million subscribers, and Spectrum Mobile had 2.1 million.[6] Comcast's leadership has explained to investors that the company is "committed to accelerating the wireless business" and sees Xfinity Mobile as "a really important product for us going forward."[7] Indeed, analysts project that the cable companies will increase their share of mobile broadband subscriptions nationwide by more than triple over the next five years.[8]

Reportedly, the cable companies' reliance on purchasing network access from Verizon has caused them to incur relatively high operating costs to provide their services. Some analysts believe that this cost structure will limit the services' growth — one explained that "if the cable industry is to mount a more serious threat to the wireless industry, they will have to significantly lower their costs."[9] Executives at Comcast and Charter have expressed a desire to lower their costs by increasingly "offloading" traffic from Verizon's network onto infrastructure that they own in order to reduce the amount that they pay Verizon under their MVNO agreements each month. Both companies already offload traffic onto Wi-Fi hotspots located in subscribers' homes and in public locations when subscribers are nearby, but their future plans are more ambitious. Both have

4 See Mike Dano, *An Inside Look at Cable's MVNO Business Model*, Light Reading (July 22, 2019), https://www.lightreading.com/cable/cable-wi-fi/an-inside-look-at-cables-mvno-business-model/d/d-id/752938; Mike Dano, *Verizon Inks 'Expanded and Extended' MVNO Deals with Comcast, Charter*, Light Reading (Nov. 11, 2020), https://www.lightreading.com/5g/verizon-inks-expanded-and-extended-mvno-deals-with-comcast-charter/d/d-id/765372.

5 See Xfinity Mobile Frequently Asked Questions, https://www.xfinity.com/mobile/support/article/frequently-asked-questions (last visited Dec. 1, 2020); Switching to Spectrum Mobile FAQs, https://mobile.spectrum.com/support/article/360000135828/switching-to-spectrum-mobile-faqs (last visited Dec. 1, 2020).

6 See Comcast 3Q 2020 Trending Schedule, Cable Customer Metrics, Total Wireless Lines, https://www.cmcsa.com/static-files/54cd5216-2f53-4b45-931c-3e00a1e-4d91a (last visited Dec. 1, 2020); Charter 3Q 2020 Trending Schedule, Customer Metrics, Total Mobile Lines, https://ir.charter.com/static-files/896bca93-a983-49e4-b710-6b2b7660a1b3 (last visited Dec. 1, 2020).

7 Comcast 3Q 2020 Earnings Call Transcript (Oct. 29, 2020), https://www.cmcsa.com/static-files/0c5830b3-632e-41c9-9e04-33cf57a1f71a.

8 See Dano, *supra* note 2.

9 Jeff Baumgartner, *Cable Must Cut Costs To Mount a Serious Mobile Treat – Analyst*, Light Reading (Aug. 19, 2020), https://www.lightreading.com/4g3gwifi/cable-must-cut-costs-to-mount-serious-mobile-threat---analyst/d/d-id/763328.

signaled that they may deploy their own cellular infrastructure in select, high-traffic parts of their cable footprints.[10]

If Comcast and Charter decide to do so, they could look to the efforts of another, smaller cable company as a model. Altice USA, which launched Altice Mobile in 2019, has successfully deployed more than 20,000 LTE small cells along its cable network in the New York City metropolitan area.[11] While Comcast and Charter have much larger networks than Altice, they presumably could pursue a similar strategy in the portions of their footprints where their subscribers' mobile traffic is most concentrated. Both companies have already made substantial investments in wireless spectrum licenses.[12] If they were to deploy new cell sites along portions of their networks, they could use this spectrum to transmit traffic directly to subscribers in these areas without relying on Verizon, which could make them more independent and perhaps more competitive in the long run.

Notably, the U.S. District Court for the Southern District of New York considered the extent to which the cable companies' mobile broadband services compete with those of the major wireless providers in *State of New York v. Deutsche Telekom AG*, 439 F. Supp. 3d 179 (S.D.N.Y. 2020). The parties in that case disagreed on whether MVNOs — including the cable companies — should be attributed market shares for purposes of the court's analysis of T-Mobile's acquisition of Sprint. *Id.* at 199. After considering the parties' arguments, the court concluded that MVNOs "should not be considered independent competitors" and that their market shares should instead be attributed to the wireless providers over whose networks the MVNOs offer service (Verizon, in the case of Comcast and Charter). *Id.* at 200. The court pointed to a number of factors in support of this conclusion, including the small fraction of mobile subscribers that are served by MVNOs, the fact that MVNOs face lower profit margins due to the need to pay their wholesale providers for connectivity, and the fact that MVNOs generally do not have control over the wireless networks underlying their services, which limits their flexibility. *Id.* at 200-01. If the cable companies are able to grow their subscriber bases, reduce their operating costs by deploying their own wireless infrastructure, and ultimately become more independent of their wholesale providers, a court may be more likely ascribe greater competitive significance to them in the future.

10 *See* Remarks of Comcast CEO Brian Roberts at Goldman Sachs Communicopia Conference (Sep. 15, 2020) (describing Comcast's "3-tiered strategy" to (1) offer mobile service over Verizon's network, (2) offload traffic onto Wi-Fi hotspots where possible, and (3) over time, deploy "our own wireless network or cellular infrastructure, which we might use to supplement our Verizon network to reap even higher cost savings in those highly dense mobile traffic areas"), https://www.cmcsa.com/static-files/e51a7371-7065-4a6a-89be-2f22305d92ec; Daniel Frankel, *Charter Moving Fast on CBRS*, Multichannel News (Nov. 11, 2019) (quoting Charter's SVP of Wireless Craig Cowden as explaining that the company sees "targeted opportunities for mobile offload" given that "something like 85% of outdoor mobile traffic takes place in 15% of geographic locations"), https://www.nexttv.com/news/charter-moving-fast-on-cbrs.

11 See Mike Dano, *What to Expect from Altice Mobile*, Light Reading (Sept. 10, 2019), https://www.lightreading.com/services/mobile-services/what-to-expect-from-altice-mobile-/d/d-id/754024. Altice offers Altice Mobile over the Sprint network pursuant to an MVNO agreement that provides Altice with the ability to leverage its own core infrastructure in providing the service. *Id.*

12 Comcast spent $1.7 billion on 600 MHz spectrum in the FCC's broadcast spectrum incentive auction in 2016-17, and Comcast and Charter spent $459 and $464 million respectively in the FCC's CBRS spectrum auction in 2020. See Colin Gibbs, *Mapping T-Mobile, Dish, Comcast and AT&T: Who Got How Much 600 MHz Spectrum and Where*, Fierce Wireless (Apr. 18, 2017), https://www.fiercewireless.com/wireless/mapping-t-mobile-dish-comcast-and-at-t-who-got-how-much-600-mhz-spectrum-and-where; Joan Engebretson, *Big CBRS Auction Winners: Verizon, Windstream, Dish, Cable Companies*, Telecompetitor (Sept. 2, 2020), https://www.telecompetitor.com/big-cbrs-auction-winners-verizon-windstream-dish-cox-comcast.

III. WIRELESS PROVIDERS' FIXED BROADBAND SERVICES

Each of the three major wireless providers — Verizon, T-Mobile, and AT&T — have begun offering fixed broadband services over their wireless networks.[13] Customers access these services through gateway devices in their homes that connect to nearby cell sites. Thus far, these services have been provided primarily over 4G LTE technology. Given the limitations of this technology, 4G LTE-based services generally offer download speeds of around 25 Mbps, and quality can vary significantly depending on factors like the distance to the nearest cell site and the congestion load of the cell site.[14] This puts these services at a significant disadvantage relative to the cable companies' fixed broadband services where they are available — Comcast's and Charter's featured service tiers currently offer download speeds of 200 Mbps.[15] For this reason, the wireless providers primarily market their 4G LTE-based fixed broadband services to households in rural areas that may not have access to higher-quality options.

As the wireless providers transition their networks from 4G LTE to 5G, however, many expect that the quality of their fixed broadband offerings will improve. For purposes of analyzing competition, an important question is whether these improvements will be sufficient to make these services competitive with the cable companies' fixed broadband offerings across the country. The wireless providers vary in their answers to this question. AT&T's CEO has explained that he "personally do[es] not believe that 5G is a replacement in the near term for suburban, residential, single-family living units" given their access to "embedded gigabit-capable fixed line networks," such as cable networks.[16] But the other providers' public statements have been more bullish. Verizon's CEO has called its 5G Home product "totally transformative," adding that "there's usually one player only in the cable area" and "we think we can definitely compete with that."[17] T-Mobile's CEO has more colorfully explained that, with its 5G Home Internet service, the company is "disrupting the status quo and mixing it up with bloated, over-confident incumbents that have never been forced to compete for customers."[18]

While Verizon and T-Mobile share in their ambition to compete with the cable companies' fixed offerings, they differ significantly in their plans for how to do so. Verizon has begun rolling out its 5G Home product over high-frequency spectrum known as "millimeter wave" or "mmWave" spectrum. This spectrum allows for the transmission of large volumes of data, which lets Verizon's 5G Home users achieve peak download speeds up to 1 Gbps (with typical speeds closer to 300 Mbps).[19] On the other hand, signals sent over mmWave spectrum generally cannot travel as far as those sent over lower-frequency spectrum, which restricts the geographic area over which Verizon can offer the service. As of this writing, the service is available only in select parts of 12 cities.[20]

In contrast, T-Mobile plans to offer its 5G Home Internet service over low- and mid-band spectrum, which would allow for broader coverage but could be more limited in terms of data transmission. This means that T-Mobile's service may not offer speeds as high as Verizon's. In connection with its acquisition of Sprint, T-Mobile made a binding commitment to the Federal Communications Commission to provide fixed broadband service "covering over half the country's households" over the next six years with average download speeds of at least 100 Mbps and

13 Verizon and AT&T also offer fixed broadband services over a combination of DSL and fiber-to-the-home technologies in the regions where they serve as incumbent telephone companies. Given the topic of this article, this discussion focuses on their newly deployed fixed wireless services rather than these wireline services.

14 See, e.g. AT&T Fixed Wireless, Frequently Asked Questions ("Expect speeds of at least 10 Mbps download and 1 Mbps upload. Customers typically experience download speeds of 25Mbps . . . . Service performance may be affected by the customer's proximity to a cell site, capacity of the cell site, number of other users connected to the same cell site, surrounding terrain, radio frequency interference, applicable network management practices, and applications used. Typical speeds are not guaranteed and individual results will vary."), https://www.att.com/internet/fixed-wireless (last visited Dec. 1, 2020).

15 For subscribers willing to pay higher monthly prices, Comcast and Charter offer service tiers with download speeds as fast as 2 Gbps in certain parts of the country. See Xfinity Internet, https://www.xfinity.com/learn/internet-service (last visited Dec. 1, 2020); Spectrum Internet, https://www.spectrum.com/internet (last visited Dec. 1, 2020).

16 AT&T 2Q 2020 Earnings Call (July 23, 2020), https://investors.att.com/~/media/Files/A/ATT-IR/financial-reports/quarterly-earnings/2020/q2-2020/Final%202Q20%20earnings%20transcript%2072320.pdf.

17 Remarks of Verizon Chairman and CEO Hans Vestberg Presentation at Goldman Sachs Communicopia Conference (Sept. 15, 2020), https://www.verizon.com/about/sites/default/files/2020-09/GoldmanSachsConf-Transcript-091520.pdf.

18 Press Release, T-Mobile, "T-Mobile Expands Home Internet Pilot in Grand Rapids" (July 8, 2020), https://www.t-mobile.com/news/network/t-mobile-expands-home-internet-pilot-in-grand-rapids.

19 Verizon 5G Home Internet FAQs, https://www.verizon.com/support/5g-home-faqs (last visited Dec. 1, 2020).

20 *Id.*; see also Sascha Segan, *For Now, Verizon's 5G Home Internet Service Offers Very Little Coverage*, PCMag (Oct. 5, 2020), https://www.pcmag.com/news/for-now-verizons-5g-home-internet-service-offers-very-little-coverage.

minimum download speeds of at least 25 Mbps.[21] Despite the fact that these speeds are not as high as those offered by Verizon's mmWave-based service, T-Mobile contends that its offering will "forc[e] incumbent broadband providers to lower prices and improve services to respond to an aggressive new broadband competitor."[22]

As the wireless providers increasingly transition their networks to 5G, it will become apparent whether 5G-based fixed broadband services will in fact be competitive with the cable companies' offerings. The answer may well be different for different varieties of 5G. In the end, regardless of technical specifications, the competitiveness of these services will depend on the level of coverage the wireless providers can achieve and the levels of speed and reliability the services can offer.

IV. POTENTIAL MERGERS BETWEEN FIXED AND MOBILE BROADBAND PROVIDERS

While the trend of fixed and mobile broadband providers launching and investing in new product offerings to compete with one another has the potential to increase choice for consumers, certain providers in other countries have taken a different approach to convergence. In a 2017 interview with CNBC, Liberty Global CEO Mike Fries was asked about his company's broadband strategy in the European Union. Liberty Global had recently completed transactions that combined its cable operations with those of wireless providers in Belgium and the Netherlands.[23] Explaining the logic behind these transactions, Fries predicted that the European Union will ultimately have "two fixed/mobile players in every country, and we want to be one of them."[24] Fries's comments reflected the growing trend of mergers between fixed and mobile broadband providers in Europe, but they did not stop there. Fries went on to predict that "[t]he U.S. will ultimately go that direction" as well.[25]

If Fries's prediction comes true, this would represent a departure from the current trend in the United States, where broadband providers thus far have not pursued convergence through consolidation. Given the developments discussed in the prior section, a merger between a fixed broadband provider and a mobile broadband provider in the United States could eliminate budding competition between the merging parties in fixed or mobile broadband markets. Such a transaction would achieve the merging parties' goal of being able to offer bundles of fixed and mobile services, but it would also reduce the number of providers that could ultimately offer such bundles. Due to these effects, any transaction of this kind would likely generate controversy and could draw legal challenges from parties claiming that the transaction would violate antitrust law.

In this section, I consider the analytical framework that would apply to such a challenge. I briefly explore three legal theories on which a plaintiff could rely to challenge a transaction of this kind: (1) that the transaction would violate Section 7 of the Clayton Act by eliminating *actual* competition between the merging parties, (2) that the transaction would violate Section 7 of the Clayton Act by eliminating *potential* competition between the merging parties, and (3) that the transaction would violate Section 2 of the Sherman Act by allowing one merging party to unlawfully acquire or maintain a monopoly.[26] To streamline this discussion, I use the term "crossover merger" to refer to a merger between a fixed broadband provider and a mobile broadband provider. I use the term "crossover product" to refer to a mobile service that a fixed broadband provider has

21 T-Mobile committed that the service would provide "minimum speeds of 25 Mbps downlink and 3 Mbps uplink (more than fast enough for streaming 4K Ultra HD video); provide average speeds above 100 Mbps downlink; be priced significantly . . . below incumbent provider prices for service with comparable speeds; have no extra charge for the router; have no installation charge; have no contract; and provide customer care from T-Mobile's award-winning Magenta Glove Team." See Letter from Counsel to T-Mobile and Sprint to Marlene H. Dortch, Secretary, FCC, WT Docket No. 18-197 (May 20, 2019), https://ecfsapi.fcc.gov/file/10520302189557/Redacted%20FCC%20Commitments%20Ex%20Parte%20(05.20.2019).pdf.

22 *Id.*

23 See Press Release, Liberty Global, "Liberty Global and Vodafone Complete Dutch Joint Venture, Creating a Fully-Converged National Communications Operator" (Dec. 31, 2016), https://www.libertyglobal.com/pdf/press-release/12-31-2016-Closing-NL-JV-transaction-FINAL.pdf; Press Release, Liberty Global, "Liberty Global's Subsidiary Telenet to Acquire BASE" (Apr. 19, 2015), https://www.libertyglobal.com/pdf/press-release/Liberty-Global-BASE-Acquisition-FINAL.pdf.

24 Giovanni Bruno, *'We Believe in Fixed Mobile Convergence,' Liberty Global CEO Fries Says*, TheStreet (Jan. 18, 2017), https://www.thestreet.com/investing/stocks/we-believe-in-fixed-mobile-convergence-liberty-global-ceo-fries-says-13957608.

25 *Id.*

26 Some have questioned the usefulness of distinguishing between "actual" and "potential" competition for purposes of forward-looking Section 7 cases. See, e.g. Gregory J. Werden & Kristen C. Limarzi, *Forward- Looking Merger Analysis and the Superfluous Potential Competition Doctrine*, 77 Antitrust L.J. 109, 110 (2010) ("The 'actual' and 'potential' labels have not been used to make a meaningful distinction. With unconsummated mergers, the assessment of effects on competition termed 'actual' has been no less future oriented, and no less predictive, than the assessment of effects on competition termed 'potential.'"). For purposes of this article, however, I use these terms in the way that courts have traditionally used them.

launched or a fixed service that a mobile broadband provider has launched, such as the services discussed in the prior section.[27]

A. Elimination of Actual Competition

First, a plaintiff could claim that a crossover merger would violate Section 7 of the Clayton Act by eliminating *actual* competition between the merging parties. This claim would likely be focused on geographic areas in which one merging party has launched a crossover product that competes with the other merging party, such as areas in which a merging wireless provider has launched a 5G-based fixed broadband service in competition with a merging cable company, or areas in which a merging cable company has launched a robust mobile broadband service in competition with a merging wireless provider. A court assessing such a claim would follow the familiar burden-shifting framework that courts apply in horizontal merger cases. See *Chi. Bridge & Iron Co. N.V. v. Fed. Trade Comm'n*, 534 F.3d 410, 423 (5th Cir. 2008).[28]

A plaintiff pursuing this theory would likely allege harm in markets for fixed broadband services, markets for mobile broadband services, or both, depending on which of the merging parties have launched crossover products. A plaintiff could also allege harm in markets for bundles of service. For example, if both of the merging parties have launched crossover products and sell them in competing bundles that include both fixed *and* mobile broadband services, a plaintiff could allege harm in a market for such bundles. In order to sustain such a market definition, the plaintiff would likely try to prove that the market has evolved to the point that a sufficient number of consumers demand such bundles and would not switch to purchasing standalone products in response to a small but significant increase in price. See *United States v. Aetna*, 240 F. Supp. 3d 1, 20-21 (D.D.C. 2017) (explaining the standard for market definition).

Regardless of how the relevant market is defined, a critical factor in a court's analysis would be the level of success that the crossover product or products have achieved at the time of the merger. The larger the share of the relevant market a crossover product has captured, the more likely the merger would result in a significant increase in concentration and trigger a presumption of anticompetitive effects. Notably, however, even if a crossover product has not captured a large share of the market at the time of the merger, this fact would not be dispositive. If the parties project that the product would capture a larger share in the future, a plaintiff could argue that it would be more appropriate to use this projected market share for purposes of analyzing competitive effects. In making this argument, the plaintiff would find support in the U.S. Department of Justice and Federal Trade Commission's Horizontal Merger Guidelines, which state that "[i]n analyzing mergers between an incumbent and a recent or potential entrant, to the extent the Agencies use the change in concentration to evaluate competitive effects, they will do so using projected market shares."[29] The question of whether to assign more weight to a crossover product's actual share at the time of a merger or to its projected share in future years would be up to the court, but in any event, both metrics would likely be relevant to the analysis.

B. Elimination of Potential Competition

Second, a plaintiff could allege that a crossover merger would violate Section 7 of the Clayton Act by eliminating *potential* competition between the merging parties. This claim would likely focus on geographic areas in which neither merging party has yet launched a crossover product to compete with the other party. Potential competition theories "address mergers between firms that are not actual competitors because they produce different products or operate in different geographic markets." *Ginsburg v. InBev NV/SA*, 623 F.3d 1229, 1233 (8th Cir. 2010). A merger of such firms "does not reduce the number of competitors or raise concentration in the markets of either." Id. As courts have explained, however, Section 7 was "designed to arrest the creation of monopolies 'in their incipiency'" and to "nip monopoly in the bud." See *United States v. Gen. Dynamics Corp.*, 415 U.S. 486, 505 n.13 (1974); *Transamerica Corp. v. Bd. of Governors of Fed. Reserve Sys.*, 206 F.2d 163, 169 (3d Cir. 1953). In keeping with this purpose, courts have identified at least two ways in which mergers of this kind may reduce competition in violation of Section

27 Given the topic of this article, this discussion does not address any potential competitive effects involving wireline businesses affiliated with mobile providers, such as the Verizon and AT&T wireline businesses in the regions where they serve as incumbent telephone companies.

28 "Typically, the [plaintiff] establishes a *prima facie* case by showing that the transaction in question will significantly increase market concentration, thereby creating a presumption that the transaction is likely to substantially lessen competition. Once the plaintiff establishes the *prima facie* case, the [defendant] may rebut it by producing evidence to cast doubt on the accuracy of the [plaintiff's] evidence as predictive of future anti-competitive effects. Finally, if the [defendant] successfully rebuts the prima facie case, the burden of production shifts back to the [plaintiff] and merges with the ultimate burden of persuasion, which is incumbent on the [plaintiff] at all times." *Id.*

29 U.S. Department of Justice & Federal Trade Commission, Horizontal Merger Guidelines § 5.3 (issued Aug. 19, 2010).

7: by eliminating "perceived potential competition" and by eliminating "actual potential competition." *Ginsburg*, 623 F.3d at 1234.[30]

Under the "perceived potential competition" doctrine, a merger may be found to violate Section 7 if one of the merging parties is "so positioned on the edge of the market that it exert[s] beneficial influence on competitive conditions in that market." *United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 532-33 (1973). In other words, this doctrine is focused on the elimination of a present competitive constraint rather than the elimination of a *future* one. The Supreme Court has referred to this constraint as the "wings effect" because the mere fact that the potential entrant is perceived to be waiting in the wings influences the behavior of market participants. See *United States v. Marine Bancorporation, Inc.*, 418 U.S. 602, 625 (1974).

In contrast, under the "actual potential competition" doctrine, a merger may violate Section 7 if it would eliminate a *future* competitive constraint by removing a merging firm that would "probably have entered" the other's market but-for the merger. See *Yamaha Motor Co. v. Fed. Trade Comm'n*, 657 F.2d 971, 977 (8th Cir. 1981). Courts have identified two preconditions that a plaintiff must satisfy to prove a violation of this kind: "First, it must be shown that the alleged potential entrant had 'available feasible means' for entering the relevant market, and second, 'that those means offer[ed] a substantial likelihood of ultimately producing deconcentration of that market or other significant procompetitive effects.'" *Id.* at 977-78 (quoting *Marine Bancorporation*, 418 U.S. at 633). The Supreme Court has not expressly endorsed the "actual potential competition" doctrine, but some lower courts have applied it. E.g. *Yamaha Motor Co.*, 657 F.2d at 977-80; *United States v. Phillips Petroleum Co.*, 367 F. Supp. 1226, 1231-57 (C.D. Cal. 1973); see also *Fed. Trade Comm'n v. Steris*, 133 F. Supp. 3d 962 (N.D. Ohio 2015) (applying the "actual potential competition" doctrine without reaching a decision as to its validity).

In challenging a crossover merger, a plaintiff could allege harm under both of these doctrines, or under other potential competition theories.[31] A court applying the "perceived potential competition" framework would look for evidence that market participants had altered their behavior in response to the threat that a merging party might launch a crossover product. A court applying the "actual potential competition" framework would assess the probability that the merging party would have launched a crossover product but-for the merger, and the probability that this entry would have brought significant new competition to the relevant market.

C. Acquisition or Maintenance of Monopoly Power

Third, a plaintiff could allege that a crossover merger would violate Section 2 of the Sherman Act because one of the merging parties is entering into the transaction in order to acquire or maintain a monopoly in a relevant market. Section 2 makes it illegal to "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations." 15 U.S.C. § 2. In order to support a claim of monopolization, a plaintiff must prove "(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966).

While Section 7 is most often used to challenge mergers, Section 2 can be used to do so as well where the transaction itself represents conduct by which a firm is acquiring or maintaining a monopoly.[32] The U.S. Department of Justice relied in part on a monopoly maintenance theory when it recently filed suit to block Visa's acquisition of Plaid, a fintech firm developing a payments platform that posed a threat to Visa's market position. See Complaint, *United States v. Visa Inc.*, No. 5:20-cv-07810 (N.D. Cal. Nov. 5, 2020). In that case, the Department alleged that Visa is "a monopolist among providers of online debit services, with a durable market share of approximately 70%." *Id.* ¶ 25. According to the Complaint, Plaid did not compete directly with Visa prior to the proposed acquisition but was uniquely suited to do so in the future. *Id.* ¶¶ 8, 37-

30 See also Horizontal Merger Guidelines, *supra* note 29, § 5.3 ("A merger between an incumbent and a potential entrant can raise significant competitive concerns. The lessening of competition resulting from such a merger is more likely to be substantial, the larger is the market share of the incumbent, the greater is the competitive significance of the potential entrant, and the greater is the competitive threat posed by this potential entrant relative to others.")

31 See C. Scott Hemphill & Tim Wu, *Nascent Competitors*, U. Pa. L. Rev. (forthcoming 2020) (manuscript at 16-19) (contending that Section 7 challenges to mergers that eliminate nascent competition need not be based on the "perceived potential competition" or "actual potential competition" doctrines and that another framework may be more appropriate), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3624058.

32 The D.C. Circuit has explained that "it would be inimical to the purpose of the Sherman Act to allow monopolists free reign to squash nascent, albeit unproven, competitors at will—particularly in industries marked by rapid technological advance and frequent paradigm shifts." *United States v. Microsoft Corp.*, 253 F.3d 34, 779 (D.C. Cir. 2001); see also *id.* ("The question in this case is not whether Java or Navigator would actually have developed into viable platform substitutes, but (1) whether as a general matter the exclusion of nascent threats is the type of conduct that is reasonably capable of contributing significantly to a defendant's continued monopoly power and (2) whether Java and Navigator reasonably constituted nascent threats at the time Microsoft engaged in the anticompetitive conduct at issue.").

41. Thus, in addition to alleging that the transaction would violate Section 7, the Department alleged that the transaction would violate Section 2 because it would "eliminate the nascent competitive threat that an independently owned Plaid poses to Visa's monopoly power and unlawfully maintain Visa's monopoly power in the online debit market." *Id.* ¶ 76.

In order to support a claim that a crossover merger would violate Section 2, a plaintiff would first have to prove that one of the merging parties has monopoly power in a relevant market or would have such power following the merger. This means the plaintiff would have to show that a merging party's post-transaction market share in a relevant geographic area, such as a fixed broadband provider's share in a particularly noncompetitive part of the country, would be very high. If this were true, the plaintiff would also have to prove that the acquisition itself is a means by which the provider is acquiring or maintaining monopoly power. In assessing a monopoly maintenance claim, a court would likely look to whether the monopoly provider perceived the crossover product as a potential threat to its market position and saw the transaction as a way to eliminate that threat.

The viability of each of these three theories in any particular case would depend on the facts at issue, including the degree to which convergence has brought the merging parties into actual or potential competition with one another. Thus, any analysis of a crossover merger would require a fact-specific inquiry into the merging parties' crossover products and their current and projected roles in the relevant markets. The strength of these theories may change over time as providers' crossover products prove to be successful or unsuccessful.

V. CONCLUSION

The trend of fixed/mobile convergence is changing the landscape of broadband competition in the United States. This trend is still in its early days, and its direction is uncertain. If fixed and mobile broadband providers continue to enter each other's markets by deploying new infrastructure and investing in new product offerings, this has the potential to reduce concentration in these markets and increase choice for American consumers. If these providers instead change course and pursue convergence through consolidation, this would have significant implications for the marketplace and would raise interesting analytical questions under antitrust law. The manner in which the industry evolves over the next several years will be critical, both in determining the answers to these questions and in determining the future of American broadband competition more generally.

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