REDACTED FOR PUBLIC INSPECTION

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Applications of T-Mobile US, Inc. and Sprint Corporation	)	WT Docket No. 18-197
	)	
For Consent to Transfer Control of Licenses and Authorizations	)	

PETITION TO DENY OF FREE PRESS

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Executive Summary

On April 29, 2018, T-Mobile US, Inc. ("T-Mobile") and Sprint Corporation ("Sprint," together, "Applicants") formally announced their intent to merge, with T-Mobile the surviving entity. On June 18, 2018, Applicants filed their public interest statement purporting to outline the public interest benefits of the proposed merger.[1]

As detailed herein, Applicants have failed to meet their burden of demonstrating that this merger would serve the public interest, which is required for Federal Communications Commission ("Commission") approval to transfer spectrum licenses and authorizations. They have not shown that the deal would not lessen competition, far less that it could <u>enhance</u> competition. In fact, the merger would massively increase concentration in the U.S. wireless market and in critical market segments too. For these reasons, it would violate the antitrust laws of the United States as well, and should be rejected based on Department of Justice ("DOJ") guidelines and past precedent.

Applicants' claimed public interest benefits for this proposed horizontal merger are negligible at best, and upon close scrutiny appear to be non-existent. Even if those claimed benefits were legitimate, they are not merger specific, and not nearly enough to offset the harms from the loss of a competitor in an already highly concentrated market.

There is nothing about this deal that would begin to offset the harms from the merger of the two primary carriers that serve the price-sensitive cellular market segment. This deal's irreversible harms to competition would be most acutely felt by subscribers who rely on the availability of lower-priced wireless options, and in particular by those

[1] *Applications T-Mobile US, Inc. and Sprint Corporation For Consent To Transfer Control of Licenses and Authorizations*, WT Docket No. 18-197, Description of Transaction, Public Interest Statement, and Related Demonstrations ("Application").

who have low incomes – with people of color disproportionately represented in that low-income demographic and on the wrong side of the digital divide. The deal would especially harm wireless subscribers living in many of our nation's largest markets. At a time when the modicum of wireless competition we see in today's market has finally yielded some trickle-down benefits for the average customer, approval of this merger should be unthinkable.

As we outline in this Petition to Deny, the available evidence demonstrates:

- The relevant product markets are the nationwide cellular service market and the nationwide wholesale cellular service market.
- Both of these markets are <u>already highly concentrated</u>, and the proposed merger of T-Mobile and Sprint would substantially increase concentration even further in both.
- This merger would result in substantial unilateral harms to consumers and competition. It would reverse the competitive progress made since the U.S. Government's 2011 rejection of the proposed AT&T/T-Mobile merger.
- T-Mobile and Sprint each independently exert competitive pressures on the market's "premium" carriers, AT&T and Verizon. But T-Mobile and Sprint also compete with each other for the market segment comprising more value-conscious customers.
- T-Mobile and Sprint are critical suppliers of wholesale access to Mobile Virtual Network Operators ("MVNOs") serving the most price-sensitive customers. This merger would substantially increase concentration in the already highly concentrated wholesale market, imparting substantial, disproportionate harms on low-income wireless users.
- The market is already vulnerable to coordinated conduct, and this merger would drastically exacerbate that harm.
- There is no prospect of competitive entry that could mitigate the unilateral harms and coordinated effects of this transaction.
- The claimed efficiencies of this merger are speculative, non-merger specific, non-cognizable, and would not outweigh the adverse competitive impact of this transaction. The merging parties' claimed benefits about accelerated 5G deployment are vastly overstated and cannot possibly outweigh the

permanent harms resulting from the contraction of the market from four to three facilities-based carriers.

- Local market divestiture would not remedy the adverse competitive impacts this transaction would have on the nationwide product market. The local markets where Applicants have the highest combined market shares are disproportionately composed of lower-income households. Divesting these customers to remaining national carriers would be harmful, as those carriers have substantially higher prices than T-Mobile or Sprint.

This consolidation certainly would serve the interests of Softbank and Deutsche Telekom (the entities that control Sprint and T-Mobile). The resulting lessened competition also would benefit AT&T and Verizon. But the elimination of what modicum of wireless competition currently exists in the U.S. marketplace absolutely would not serve the public interest. The Commission should not grant the Application, and instead should continue to work to ensure that all people in America get the full benefits of meaningful competition in the wireless market. People need real competition that results in affordable service, and they also need advanced wireless services. They need not, and should not be asked by these Applicants, to trade the few options they have for affordable service just for illusory promises about better technology.

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I. Introduction

The competition that T-Mobile and Sprint each bring to the highly concentrated U.S. wireless marketplace is invaluable. U.S. mobile telecommunications users would be subject to rampant abuses from the market's two largest carriers – AT&T and Verizon – if not for the competitive pressures brought by T-Mobile and Sprint, each <u>independently</u>. And T-Mobile and Sprint customers (and the customers of their associated resale partners) would be far worse off if not for the competition <u>between</u> Sprint and T-Mobile – competition centered around attracting and retaining the value-focused customer.

Less than a decade ago, the U.S. wireless market was in a bad place. Competition was virtually non-existent. Anti-consumer practices like $0.20 per-text fees and bill shock were commonplace, even as market demand grew with the arrival of the smartphone era. Carriers were reluctant to invest and innovate, choosing instead to reap supra-competitive profits in a marketplace where consumers were locked to onerous contracts. This all changed following Commission and DOJ rejection of the proposed AT&T/T-Mobile merger. Forced to go it alone, T-Mobile had no choice but to invest and compete, and it did so by taking aim at the value-focused market segment. T-Mobile's competitive moves prompted responses, from Sprint (which had been the best option among national carriers for value-focused users till then), and AT&T and Verizon as well (which could no longer simply rely on their legacy Baby Bell-created advantages).

But with the Application before the Commission, T-Mobile and Sprint propose to put a stop to this positive competitive momentum. The Applicants want to grow their profits and profit margins to the heights historically enjoyed by AT&T and Verizon, and the only way for them to achieve that goal is to merge the market into a triopoly where no provider feels any meaningful pressures to compete on price.

Fortunately for wireless users, mergers cannot lawfully be blessed merely on the basis of grand promises made by merging companies and their hired experts. In order to gain the Commission's approval for this staggering consolidation of the nation's only two lower-cost facilities-based service providers, Applicants must demonstrate that approving the acquisition serves the public interest.[2] They simply cannot meet that burden.

The merger would create serious anticompetitive, consumer, and public interest harms. It would devastate the wholesale market and the lower-income customers of low-margin firms that resell service using it. There is no credible evidence to support Applicants' claims that without Sprint nibbling at its heels, T-Mobile still would not exercise its newfound market power. Nor is there any valid evidence to indicate that the consolidated market would not produce coordinated effects in the absence of the low-end and middle-market competition produced by Sprint and T-Mobile vying for share of these important market segments. And there's ample evidence conclusively demonstrating that Sprint and T-Mobile each will deploy competitive 5G networks if they are not permitted to merge. Though they are vastly overstated, Applicants could achieve the limited, speculative capacity benefits of this transaction without resorting to combination. The Commission should not grant the Application and should reject this transaction.

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[2] *See, e.g.*, *News Corp. and DirecTV Group, Inc., and Liberty Media Corp. for Authority to Transfer Control*, MB Docket No. 07-18, Memorandum Opinion and Order, 23 FCC Rcd 3265, ¶ 22 (2008) ("*News Corp./DirecTV Order*").

II. Statement of Interest

Free Press is a national nonpartisan organization working to promote access to affordable and open telecommunications services and broadband internet access. Free Press also aims to increase informed public participation in crucial media and telecommunications policy debates. Free Press has participated in numerous merger proceedings before the Federal Communications Commission.[3] In each such proceeding, Free Press has advocated for policies that promote competition and serve the public interest. As such, Free Press constitutes a "party in interest" within the meaning of Section 309(d) of the Communications Act of 1934, as amended.

Free Press also has standing to challenge this transaction. The organization uses cellular services, including voice, text messaging, and data services, to disseminate our advocacy content and to communicate with our nearly 1.5 million members. While the organization does not itself subscribe to Applicants' services, the proposed merger would result in substantial unilateral harms and exacerbate the prospect of coordinated conduct in the cellular market. Moreover, tens of thousands of Free Press members undoubtedly do subscribe to T-Mobile and Sprint, the nation's third- and fourth-largest wireless carriers serving well over 100 million customers between them. As the attached declarations illustrate, specific Free Press members and employees are T-Mobile and Sprint subscribers.

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[3] For example, Free Press has filed petitions to deny and extensive comments in merger proceedings before the Commission stretching back twelve years or more, in proceedings including but not limited to those regarding Charter/Time Warner Cable, MB Docket No. 15-149; AT&T/DIRECTV, MB Docket No. 14-90; Comcast/Time Warner Cable, MB Docket 14-57; Verizon/SpectrumCo, WT Docket No. 12-4; AT&T/T-Mobile, WT Docket No. 11-65; Comcast/NBC Universal, MB Docket No. 10-56; XM/Sirius, MB Docket No. 07-57; and AT&T Inc./BellSouth, WC Docket No. 06-74.

III. The Proposed Transaction Would Not Serve the Public Interest Because It Would Massively Concentrate an Already Highly Concentrated Wireless Market, Eliminating That Market's Primary Source of Price Competition.

The proposed transaction between T-Mobile and Sprint is a large horizontal merger that would combine the operations of the nation's third- and fourth-largest cellular service providers, in a market in which there are only four national carriers. The Commission's and DOJ's merger reviews both are centered in antitrust analysis. However, though the Commission considers a transaction's competitive effects to help determine whether that transaction would serve the public interest,[4] its analysis is not limited to antitrust principles.[5] This broader scope of review is particularly important for transactions in which merging firms utilize public spectrum and public rights of way.

However, an antitrust analysis alone conclusively demonstrates the certain and substantial competitive harm this merger would cause. The first step in such an analysis involves identification of the relevant product market and its geographic scope. In prior similar reviews, the Commission determined that the relevant product market is broadly the "mobile telephony/broadband services" market, which contains other distinct product markets in which a transaction may impart particular competitive effects (*e.g.*, retail,

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[4] *See, e.g.*, *News Corp./DirecTV Order* ¶¶ 23-24; *id.* ¶ 23 ("The Commission's public interest evaluation necessarily encompasses . . . a deeply rooted preference for preserving and enhancing competition in relevant markets[.]"); *see also Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations*, WT Docket No. 04-70, Memorandum Opinion & Order, 19 FCC Rcd 21522, ¶ 41 (2004).

[5] *See, e.g.*, *News Corp./DirecTV Order* ¶ 24 ("Our competitive analysis, which forms an important part of the public interest evaluation, is informed by, but not limited to, traditional antitrust principles.").

wholesale, enterprise and government wireless services).[6] DOJ's reviews identified the same broad market and additional markets of focus.[7] These same product market definitions remain appropriate for this transaction. However, consistent with prior reviews that devote attention to market segments that might be particularly impacted by the transaction, the Commission should also assess the competitive impact this transaction would have on the "value-focused" wireless customer segment.[8]

A. The Relevant Product Markets Are the Nationwide Cellular Service Market and Nationwide Wholesale Cellular Service Market, Which Contain Market Segments that the Merger Would Acutely Impact.

At the highest level, this merger proposes the combination of two companies that operate in the broad "cellular" market. Yet we believe the data demonstrates that formally, the relevant product and geographic markets affected by this transaction would be the 1) nationwide cellular service market,[9] and 2) nationwide wholesale cellular

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[6] *See, e.g., Bureau Dismissal Without Prejudice of AT&T's Applications for Transfer of Control of T-Mobile USA, Inc*., WT Docket No. 11-65, Staff Analysis and Findings, 26 FCC Rcd 16184, ¶ 31 (2011) ("FCC Staff Report").

[7] *See U.S. v AT&T Inc. & T-Mobile USA, Inc.,* Second Amended Complaint, Civil Action No. 11-01560 (ESH), ¶¶ 12-13 (D.D.C. Sept. 30, 2011) ("DOJ Second Amended Complaint").

[8] Press reports suggest DOJ's initial inquiry of this transaction did focus on the wholesale market. *See, e.g*., Sheila Dang, "Exclusive: U.S. Justice Department probes T-Mobile-Sprint merger effect on smaller wireless companies - sources," *Reuters* (June 7, 2018). But a review of the wholesale wireless services market will only capture part of the transaction's impact on the value-focused market segment. Wholesale customers that operate as MVNOs primarily target the price-conscious customer base. But T-Mobile and Sprint (and their wholly-owned affiliates MetroPCS, Boost Mobile, and Virgin Mobile) all market to, and compete for this value-focused market segment too.

[9] Today's cellular market largely consists of monthly service plans (pre-paid or post-paid) that deliver combined mobile voice telephony, mobile universal messaging ("SMS"), and mobile internet access services. This market has customer segments that do not purchase mobile internet access, but those are in secular decline. Conversely, the so-called "Internet of Things" ("IoT") market segment involves data-only services, many of which are sold wholesale (*e.g*., connected car data subscriptions). See discussion *infra*.

service market. This is the same conclusion reached by DOJ and the Commission during those agencies' reviews of AT&T's failed attempt to acquire T-Mobile in 2011.[10] We also believe that the market functions at the national level, but because of differences in how services are marketed (*e.g.*, where carriers place retail stores, place advertising, and target customer segments like the value-focused segment), this merger also would have particularly acute effects on competition in certain local geographic markets.

i. Product Market Definition

The first task for the Commission and DOJ when conducting their respective merger reviews is to determine the relevant product market. When defining the boundaries of the relevant product market, the agencies will investigate how and to what extent consumers can and would substitute other products in response to price increases in the candidate market.[11] For cellular telecommunications consumers, there are no viable

[10] *See U.S. v AT&T Inc. & T-Mobile USA, Inc.*, Amended Complaint, Civil Action No. 11-01560 (ESH), ¶ 20 (D.D.C. Sept. 16, 2011) ("DOJ First Amended Complaint") ("[T]he Big Four carriers compete against each other on a nationwide basis and AT&T's acquisition of T-Mobile will have nationwide competitive effects across local markets."); *see also* FCC Staff Report ¶ 34 ("[T]wo key competitive variables – prices and service plan offerings – do not vary for most providers across most geographic markets where they sell services . . . . AT&T, Verizon Wireless, Sprint, and T-Mobile[ ] set the same rates for a given plan wherever they sell service and do not alter the plans they offer depending on the location. . . . Because of these important national characteristics, a loss of competition that occurs at the local level is likely to have only a small adverse effect on, for example, the pricing and plans that the nationwide providers offer . . . . Accordingly, we do not find it necessary to assess the competitive effects in retail wireless services individually in each local market to determine the likely consequences of the proposed transaction for competition.").

[11] *See* U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, at 11 (Aug. 19, 2010) ("*Horizontal Merger Guidelines*") ("In considering customers' likely responses to higher prices, the Agencies take into account any reasonably available and reliable evidence, including, but not limited to . . . objective information about product characteristics and the costs and delays of switching products, especially switching from products in the candidate market to products outside the candidate market . . . .").

substitutes for combined, all-in-one mobile telephony and computing via mobile broadband networks. A smartphone consumer facing sustained price increases in this mobile telecommunications market controlled by the hypothetical monopolist has no choice but to pay the increased rate, or instead to exit the cellular market to use fixed telecommunications networks. Most cellular users would not substitute in that manner, and thus would not exit.

Antitrust analysis uses the hypothetical monopolist test to assess the likelihood of that kind of substitution: that is, to determine whether a small but significant and non-transitory increase in price ("SSNIP") in the Applicants' merged offerings actually would result in customers substituting fixed voice and data services (such as a DSL/VoIP service package) for mobile communications services.[12] There is simply no evidence to suggest that a critical level of customers would do so.

Moreover, there are substantial switching barriers. Although after the failed AT&T/T-Mobile merger the national carriers moved away from the practice of locking their customers in with two-year contracts, many wireless users remain effectively locked to their carrier for a two-year period due to the now-common industry practice of carriers collecting device-payments rather than subsidizing handsets. Despite the reduction in the

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[12] *See id.* at 8-9 ("The Agencies employ the hypothetical monopolist test to evaluate whether groups of products in candidate markets are sufficiently broad to constitute relevant antitrust markets. . . . The hypothetical monopolist test requires that a product market contain enough substitute products so that it could be subject to post-merger exercise of market power significantly exceeding that existing absent the merger. Specifically, the test requires that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products ('hypothetical monopolist') likely would impose at least a small but significant and non-transitory increase in price ('SSNIP') on at least one product in the market, including at least one product sold by one of the merging firms. . . . The SSNIP is employed solely as a methodological tool for performing the hypothetical monopolist test; it is not a tolerance level for price increases resulting from a merger.").

prevalence of those lock-in contracts, the need to pay off the device still makes exit a very costly option for customers making such payments. These high costs (which include a customer either paying off the balance for the device or needing to purchase a new one) mean that consumer switching within the market to another carrier is also prohibitive.[13]

Antitrust analysis also indicates the existence of distinct product markets beyond the broad "mobile" telecommunications market, for consumers and resellers alike. For example, MVNOs that purchase wholesale network access from Applicants and other facilities-based carriers clearly have no viable substitutes in adjacent product markets.

However substantial the harms it would cause in general, this merger's increased concentration in the retail and wholesale mobile wireless markets would have disparate competitive impacts on particular market segments, such as the value-focused and pre-paid customer segments. As we discuss in greater detail below, these market segments that may not be formally defined as separate product markets, but nonetheless are differentiated enough that concentration would likely confer additional market power on Applicants that non-merging firms in the broad mobile market would not act to negate.

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[13] For these and other reasons, we believe the most appropriate product market definition would be the national market for integrated mobile voice and data telecommunications services. This is particularly true today, when service plans that do not include data are relegated to the realm of niche resellers or national carriers' pre-paid tiers. However, this also would mean that there is no longer any practical distinction between the integrated voice and data mobile services market and the more general mobile services market. Regardless, the Commission or DOJ has the ability to perform its analysis on a subset of customers (*e.g.*, prepaid smartphone customers) if it determines that the particular subset could be targeted by a hypothetical monopolist for price increases. *See id.* at 12 ("If a hypothetical monopolist could profitably target a subset of customers for price increases, the Agencies may identify relevant markets defined around those targeted customers, to whom a hypothetical monopolist would profitably and separately impose at least a SSNIP. Markets to serve targeted customers are also known as price discrimination markets. In practice, the Agencies identify price discrimination markets only where they believe there is a realistic prospect of an adverse competitive effect on a group of targeted customers.").

For example, both T-Mobile and Sprint (and their affiliated pre-paid brands MetroPCS, Virgin Mobile, and Boost Mobile) market services specifically to the segment of cellular customers primarily concerned with price. In contrast, AT&T and Verizon market services to the segment of cellular customers primarily concerned with service quality (including geographic scope). This market segmentation is reflected in the prices of each national carrier, with AT&T's and Verizon's well above T-Mobile's and Sprint's.

ii. Geographic Market Definition

The Commission's and DOJ's second major task is to determine the relevant geographic market for the product sold by the merging firms. All available evidence – supported by DOJ and Commission precedent – indicates that the services offered by carriers with a national footprint are in a separate and distinct market from those offered by regional carriers. That is a change from the wireless market and wireless mergers of decades past, but it is one that was cemented in place once smartphones utilizing LTE data networks became the dominant cellular product.

Indeed, the four national carriers controlled 98 percent of the nation's mobile wireless service revenue in 2016, and their share of smartphone revenues is likely higher.[14] While the regional carriers had more consumer relevance a decade ago, it is clear that today's market is a national market.[15]

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[14] *Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, WT Docket 17-69, Twentieth Report, 32 FCC Rcd 8968, ¶ 32 (2017) ("*Twentieth Report*").

[15] In 2001, most of the wireless market consisted of regional carriers that in some cases offered nationwide service through roaming agreements. Since then, the major national carriers have gone on a buying spree, each building a nationwide footprint through mergers and acquisitions and turning the market from a regional to a national one. In 2001, the top four cellular providers controlled 69 percent of all subscriptions,

With the relevant product market appropriately defined as the nationwide cellular service market, the harms of this merger will be impossible to ignore. Regional carriers' offerings have diminished in importance. The smattering of "Wi-Fi-first" wireless services sold by traditional cable companies – that rely largely on wholesale access to Verizon's network – have not yet reached the level of disciplining national cellular service carriers' behavior. These cable companies' market their wireless offerings to their high-value bundling customers rather than as potential substitutes for wireless carriers' mobile-only offerings,[16] and cable companies like Comcast are by definition regional carriers.[17] Indeed, two month's prior to publicly announcing the deal to merge with Sprint, T-Mobile's CEO stated that as he considered expectations for T-Mobile's growth in 2018, "the furthest thing from my mind is any concern about the impact of cable."[18]

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compared with 92 percent at the end of the first quarter of 2018. *See Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Seventh Report, 17 FCC Rcd 12985, App. C, Table 4 (2002) ("*Seventh Report*"). With regard to first quarter 2018 shares, we note that the Commission's annual wireless competition reports no longer included such data after 2011. Free Press estimated values for subsequent years as described below, *infra* note 23.

[16] *See* "The XFINITY Mobile Plan," https://www.xfinity.com/mobile/plan (last visited Aug. 26, 2018) ("Included with your XFINITY Internet service . . . XFINITY Mobile is available to Internet customers.")

[17] T-Mobile's Chief Financial Officer Braxton Carter made this clear in his comments at 2017's Morgan Stanley European Technology, Media & Telecom Conference when asked about the possibility of cable competition. Carter stated, "It's going to be really tough for them to make any meaningful penetration given the regulatory environment, which is much different than Europe with an MVNO-type relationship. And the other big difference between the U.S. and Europe is the cable broadband footprint is regional. There is no national platform." *See* Comments of J. Braxton Carter, Chief Financial Officer, Executive Vice President and Treasurer, T-Mobile US, Inc., Morgan Stanley European Technology, Media & Telecom Conference (Nov. 16, 2017).

[18] Comments of John Legere, T-Mobile US, Inc., Fourth Quarter 2017 Analyst Call (Feb. 8, 2018) ("Legere 4Q 2017 Comments").

The Commission's analysis of the evidence will surely show that customers' substitution of any fixed services and/or regional carriers' cellular services would not be substantial enough to prevent abuses of market power in the national post-paid market.[19]

Nevertheless, consistent with Commission and DOJ precedent, the transactions effects should be examined both at the national level as well as the local level.[20] This is particularly important in the examination of certain market segments, such as the value-focused and pre-paid customer segments. As we discuss below, Sprint and T-Mobile – along with their affiliated brands, and the resale carriers that purchase each Applicant's wholesale capacity – have significantly larger market shares in certain local geographic markets. While pricing decisions are made on a national basis, there can be substantial regional variability in marketing and selling mobile telecommunications services. If there are local markets where this transaction would visit particularly large increases in concentration, those areas should receive particular focus.

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[19] The question of geographic market boundaries will be important to consider; but given the fundamental shift of the wireless market from a regional to a national carrier market, this consideration becomes less relevant, because the harms from the merger would be national not local. Certainly consumers' buying decisions in this market are influenced by what services are available in the geographic area in which those particular consumers live and work, but supplier behavior is solely at the national level. Data plans are priced nationally regardless of the level of local competition. Smartphone devices are procured and introduced to the national market, not regionally. And there is no geographic characteristic to innovation in the wireless market: the harms to innovation from unilateral and coordinated effects will be felt nationally, regardless of what individual carrier choices a consumer has in a given local market. Indeed, DOJ has in the past recognized that "[t]he existence of local [purchasing] markets does not preclude the possibility of competitive effects in a broader geographic area, such as a regional or national area." *See U.S. v. Verizon Communications Inc. and Alltel Corp.*, Competitive Impact Statement, Case No. 1:08-cv-01878 (EGS), at 7 n.2 (D.D.C. Oct. 30, 2008).

[20] *See, e.g.*, FCC Staff Report ¶ 31; *see also, e.g.*, DOJ Second Amended Complaint ¶¶ 14-21.

B. The Relevant Product Markets Are Already Highly Concentrated, And the Proposed Merger of T-Mobile and Sprint Would Result In Formation of an Uncompetitive Oligopoly.

The U.S. wireless market has long been highly concentrated by any measurable standards. Waves of consolidation went hand-in-hand with increasing prices and onerous contracts. Yet in recent years, competition from T-Mobile and Sprint has finally elicited a competitive response from AT&T and Verizon, the market's two dominant firms. This competition has resulted in several consumer benefits: lower-priced service plans, the elimination of the two-year contract as an industry-standard, a return of unlimited data plans, elimination of metering for both voice calls and SMS texts, increased availability of innovative and low-cost MVNO carriers, increased marketing of pre-paid plans, widespread availability of data-only service plans, accelerated deployment of advanced network technologies (*e.g.*, LTE and LTE-Advanced), more frequent customer equipment upgrade options, the end of carrier handset exclusives, the end of device-locking, free international roaming, promotions that help to lower switching barriers (*e.g.*, carriers buying out a customer's existing contract), increased service add-ons (*e.g.*, free subscriptions to online video services), simplified pricing (*e.g.*, elimination of below-the-line fees), and many other pro-user developments.

We may now view these pro-competitive carrier actions and counter-actions as routine. But it is critical to note that this increased competition trend only began <u>after</u> the government rejected AT&T's attempt to acquire T-Mobile and consolidate the market in 2011, and only continued after the government signaled that it would not approve a merger between Sprint and T-Mobile in 2014 and on other occasions when this unwelcome marriage was proposed.

Prior to those events, the market was characterized instead by increasing prices, elimination of unlimited data plans, exorbitant rates on SMS messages, "bill shock" from metered plan overages, substantial below-the-line fees, arcane limitations on voice calls (*e.g.*, plans that allotted a limited number of minutes for calls during daytime hours), increasing contract-termination fees, carrier exclusives on popular handsets, carrier device-locking, slow carrier deployment of network upgrades, limited marketing and availability of pre-paid plans and MVNOs, and other anticompetitive behavior that should be expected in a highly concentrated market dominated by the legacy Bell Companies.

As we demonstrate below, this earlier history of declining competitive outcomes coincided with increased market concentration, while the recent increase in competitive outcomes coincided with decreased market concentration. To be clear, the market has not reached an optimal state of competition. Many of the carriers' recent competitive moves – particularly those undertaken by AT&T and Verizon – are designed to increase the value of their services while avoiding more drastic price competition. However, the history and current data strongly illustrate the critical role that an independent T-Mobile and Sprint both play in making the U.S. wireless market more competitive, and show how much there would be to lose if these two independent carriers were allowed to consummate their merger.

i. The History of Concentration and Competition in the U.S. Wireless Market.

Over the past two decades, the U.S. wireless market has transformed from one dominated at a regional level by a handful of carriers to one dominated at a national level by just two companies: the so-called "Twin Bells," AT&T and Verizon. In 2001, the top two carriers' combined share of total U.S. wireless subscriptions was 43 percent.[21] By the end of 2009, this two-firm share had risen to 62 percent.[22] We estimate that this two-firm share peaked at just under 66 percent of total U.S. wireless subscriptions in 2014, and declined to 63 percent as of the first quarter of 2018.[23] During this same period, as the large national carriers began creating a truly national footprint through mergers and acquisitions of smaller regional companies, the share of subscriptions for carriers other than the top-four national carriers shrank dramatically – from 34 percent in 2003 to less than 2 percent in 2014.[24]

This decline in the regional carriers' combined share, along with the share-growth of the Twin Bells, resulted of course in a steady increase in market concentration. Below in Figure 1, we reproduce the Commission's calculations of the Herfindahl-Hirschman Index ("HHI") for the total U.S. wireless market from 2003 to 2017. These values represent the population-weighted average for the HHIs of each local market, using Economic Areas ("EAs"). This data reflects a decade-plus of continued mergers and acquisitions. Yet it shows a slight decline in overall concentration after 2014, which

[21] *Seventh Report*, App. C, Table 4.

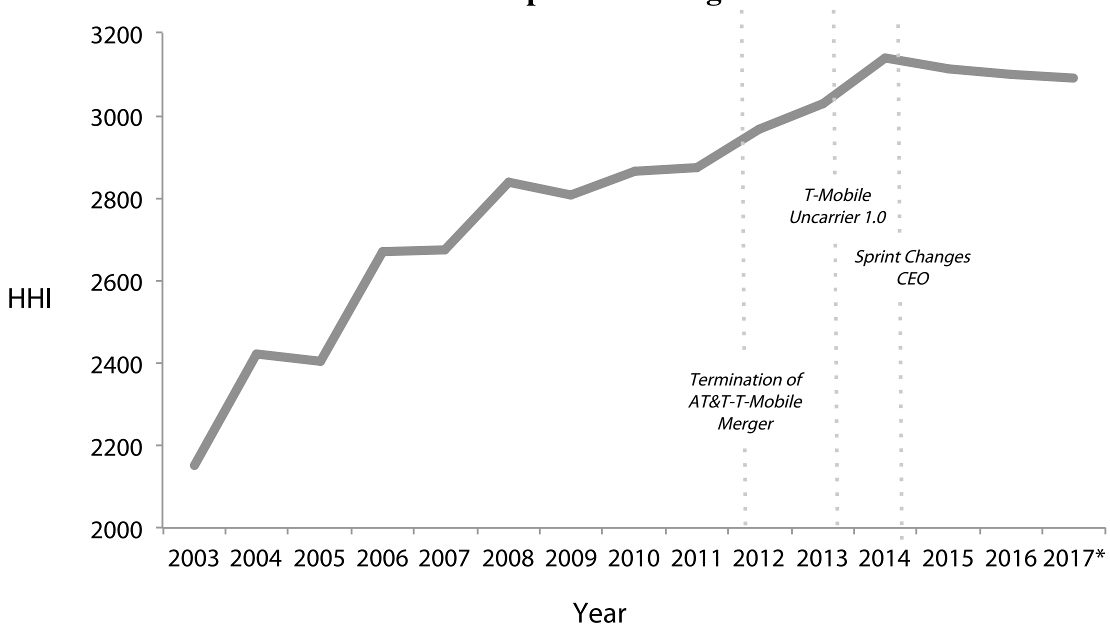
[22] *Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, WT Docket 10-133, Fifteenth Report, 26 FCC Rcd 9664, ¶ 31, Table 4 (2011) ("*Fifteenth Report*").

[23] As noted above, *supra* note 15, the 2009 values cited in the *Fifteenth Report* marked the last time the FCC produced this information in its annual wireless competition reports. Free Press estimated the values for subsequent years based on data from the FCC, CTIA, UBS, SNL Kagan, and companies' SEC filings. Our methodology, like the FCC's, attributes wholesale connections to the facilities-based provider.

[24] *Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, WT Docket No. 15-125, Eighteenth Report, 30 FCC Rcd 14515, ¶ 22 (2015).

reflects the small but meaningful growth in market share of T-Mobile and Sprint (relative to the Twin Bells' share) after the government's rejection of the AT&T/T-Mobile merger.

Figure 1: U.S. Wireless Market Concentration (2003-2017)
Economic Area Population-Weighted HHI



*Source: FCC Annual Mobile Wireless Competition Reports. * 2017 Value is a Free Press estimate.*

Figure 1 shows the Commission's population-weighted average of local cellular market concentration, based on its data for North American Numbering Plan allocation across all carriers. However, as we explained above, the primary relevant geographic and product market in question for this transaction is the national cellular services market. This market is comprised of just four facilities-based carriers: AT&T, Verizon, T-Mobile and Sprint. As we show below in Figure 2, the national wireless market was likewise becoming increasingly concentrated prior to the government's rejection of the AT&T/T-Mobile merger. It then also de-concentrated in the following years.

The period of most dramatic concentration increase in the national market came at a time when the top two carriers – AT&T and Verizon – were gaining market share at the expense of the bottom two carriers, particularly Sprint. Yet this 2009-2012 period also saw T-Mobile losing share relative to the other carriers, with Sprint's share eventually rebounding slightly. This is the same time period when smartphones became ascendant, and when AT&T and Verizon dominated the smartphone market segment.[25] And that dominance was achieved in part through the Twin Bells' exclusive agreements to sell the most popular handsets at the time (Apple's iPhone and Motorola's Droid). It was also a time during which the Twin Bells exercised their market power to implement price increases.[26] Not only did the unlimited data plans that had been common at the dawn of the smartphone era disappear from the market, but wireless users were increasingly hit with surprise overage fees. This problem was so widespread the Commission had to expend substantial resources to help consumers whom an ineffectively competitive marketplace had clearly failed.[27]

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[25] *See, e.g.*, "AT&T to Offer iPhone 3G S on June 19," *PR Newswire* (June 8, 2009) (proclaiming that AT&T had "twice as many smartphone users . . . as any other U.S. carrier").

[26] In early 2010, Verizon implemented an effective price increase by forcing all customers of feature phones and smartphones to purchase a data plan. AT&T shortly followed suit. Also in 2010, AT&T eliminated its unlimited data plan for smartphones, forcing new customers into capped plans with overage charges. *See, e.g.*, Karl Bode, "Verizon Announces Wireless Pricing Changes," *DSLReports* (Jan. 15, 2010) ("The biggest news of course is that Verizon's 25 megabyte for $9.99 per month plan (the one we're sure Verizon makes the most money from) is now mandatory for all of Verizon's '3G Multimedia' phones."); Marguerite Reardon, "AT&T-Verizon price war debunked (FAQ)," *CNET News* (Jan. 20, 2010) ("In fact, both AT&T and Verizon Wireless are extending data plans to a whole slew of customers who formerly were not subscribing to any data plans. And it is likely these are the customers who will see a bigger phone bill when they upgrade their phones or renew their contracts."); Jeffry Bartash, "AT&T to end unlimited plans for wireless data," *MarketWatch* (June 2, 2010).

[27] *See, e.g.*, Federal Communications Commission, Consumer and Governmental Affairs Bureau, "White Paper on Bill Shock," at 3 (Oct. 13, 2010) ("[I]n a survey done in April-May 2010, the FCC found that 17 percent of all Americans with cell phones – a total of 30 million people – had experienced a sudden increase in their bill that occurred even when they had not changed their calling or texting plan.").

The national market de-concentrated during the 2013-2017 time period, when many of the prior period's anti-consumer practices faded away.[28] Concerns about bill shock ebbed as carriers moved towards larger metered allocations (eventually ending the metering of voice and SMS on most plans), rollover data, and quasi-unlimited plans.[29] Customers found new ways of saving money, such as the discounted multi-line offerings that became common after T-Mobile's introduction of its "Simple Choice" plans, followed shortly by Sprint's "Framily" plans (and then followed by T-Mobile beating Sprint's multi-line price).[30]

These back-and-forth salvos are crucial for competition – not just those in which T-Mobile or Sprint spur on the Twin Bells, but also these battles between T-Mobile and Sprint competing against each other. The many cycles of offers and response offers continue to this day.

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[28] *See, e.g.*, Federal Communications Commission, Press Release, "FCC Launches New 'Bill Shock' Website to Help Consumers Track Wireless Carriers' Implementation of Voice, Data & Text Usage Alerts" (Apr. 19, 2012).

[29] T-Mobile's first Simple Choice plans included metered 4G LTE data, and unlimited data transfer at 2G speeds thereafter. *See, e.g.*, David Beren, "T-Mobile Adds New Monthly4G Plans, Special $30 Plan Now Live," *TmoNews* (Oct. 16, 2011) (announcing "new $60/month plan featuring Unlimited Talk, Text and Unlimited Web (first 2GB of data at 4G speeds)"); Jonathan Ping, "Best Value in Smartphone Plans? T-Mobile $30/Month Prepaid 4G with Unlimited Data," *MyMoneyBlog* (Dec. 17, 2012).

[30] *See, e.g.*, Marguerite Reardon, "Sprint's new 'Framily Plans' offers big savings," *CNET* (Jan. 7, 2014); T-Mobile US, Inc., Press Release, "T-Mobile Doubles Down on Flagship Simple Choice Plan with More 4G LTE Data, Tethering – and Unlimited International Texting" (Mar. 6, 2014). Sprint's actions in this more recent de-concentrating time period also illustrate how important Sprint is, independent from T-Mobile, to price competition between all of the carriers. When Sprint first launched its "Framily" plans, users had to have seven or more lines in order to pay $25 per month per line for unlimited talk and text with just one gigabyte of data. Sprint's "Unlimited Freedom" plan update in early 2018 prices four lines of unlimited voice, text and data at the same $25 per-line monthly fee. *See* Jerry Hildenbrand and Joseph Keller, "Everything you need to know about Sprint's Unlimited Freedom Plan," *iMore* (Jan. 7, 2018).

It is critical to note the change in each carrier's market shares during these more competitive periods, and how such changes also reveal the importance of competition between Sprint and T-Mobile to the entire wireless market. As shown in Figure 2, the Twin Bells grew their collective market share relative to Sprint and T-Mobile through 2012, with the Twin Bells' share of the "big four" carriers' national wireless market peaking then at 71.8 percent. AT&T and Verizon collectively lost share to T-Mobile and Sprint in 2013 (declining to 69.8 percent for the Twin Bells), and that top-two firms' combined share of the national market has stayed relatively constant in the years since.

But some of the most important pro-consumer developments occurred after this period, such as the late 2016/early 2017 return of unlimited data plans to all carriers.[31] This return and numerous other positive developments occurred primarily because of direct competition between Sprint and T-Mobile. As Figure 2 shows, after losing market share during 2008-2012, T-Mobile gained market share relative to Sprint beginning in 2013,[32] and overtook Sprint as the third-place carrier in 2015. (To be clear, about two-thirds of T-Mobile's 2013 share gain was from its acquisition of MetroPCS,[33] but it has continued to gain share largely from Sprint in every year since.)

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[31] *See, e.g.*, Chaim Gartenberg, "Why every US carrier has a new unlimited plan," *The Verge* (Feb. 17, 2017) ("After years of moving away from offering unlimited plans after the rise of data-hungry smartphones, Verizon announced out of the blue on Sunday that it would be offering a new unlimited plan to customers again. T-Mobile, who had previously led the way by removing tiered data back in January, updated its own unlimited plan to match. The move was followed by Sprint and AT&T by the end of the week.").

[32] DOJ and the Commission will have access to confidential porting data, which will enable precise analysis of how existing customers are moving between the national carriers and/or their MVNO carriers.

[33] *See* Mat Smith, "It's official: T-Mobile closes deal to acquire MetroPCS," *Engadget* (May 1, 2013).

ii. The Proposed Merger Would Vastly Increase Already High Concentration Levels, Beyond Even What the AT&T/T-Mobile Merger Would Have Caused.

The market-share data discussed above and presented in Figure 2 below conservatively implies **a national market HHI of 2,875, increasing 467 points to 3,342** if T-Mobile and Sprint merge**.** This post-merger market concentration would vastly exceed the level that would have resulted from the rejected AT&T/T-Mobile merger.[34] We expect that analysis of local market shares will reveal dozens of Cellular Market Areas ("CMAs") where the level of concentration increase and post-merger concentration would be substantially higher than the national average.[35] Based on the survey data we present below in Figure 9, because the Applicants and their affiliates have significantly higher customer shares in certain markets, we expect that the merger would increase the level of market concentration by **more than one thousand points** in many CMAs with very large low- to middle-income populations, such as New York, Los Angeles, Chicago, Houston and others.[36]

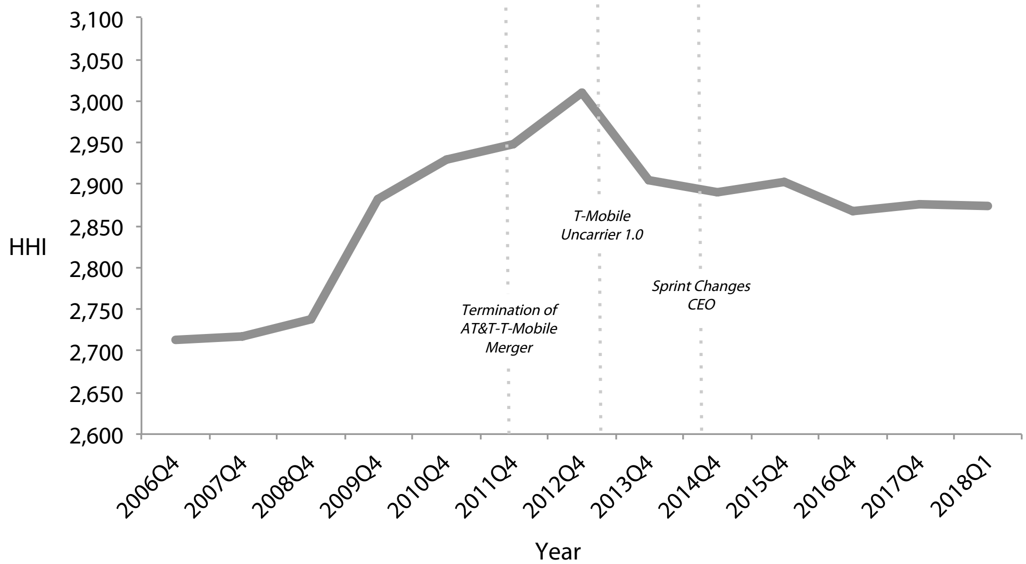
[34] *See* DOJ Second Amended Complaint ¶ 25 ("Nationally, the proposed merger would result in an HHI of more than 3,100 for mobile wireless telecommunications services, an increase of nearly 700 points. These numbers substantially exceed the thresholds at which mergers are presumed to be likely to enhance market power.").

[35] Free Press was granted access to the Highly Confidential Numbering Resource Utilization and Forecast/Local Number Portability ("NRUF/LNP") data on August 8, 2018. Our review of this information is ongoing, and we expect to file subsequent analysis that speaks to more precise national and local market concentration levels, as well as porting between and among the Applicants and other carriers.

[36] The data presented in Figure 9 are based on a consumer survey in which users self-reported their carriers. Because certain MVNOs purchase wholesale access from multiple carriers, we've presented an estimate of New T-Mobile's market share that allocates certain proportions of each MVNO's customers to each national carrier. Based on this analysis, the merger would increase market concentration by more than 1,000 points in most of the nations' top 25 market areas. We will further explore this question of local market impact using the NRUF/LNP data in a subsequent filing.

The data and developments discussed above – along with T-Mobile's and Sprint's long histories of offering prices well below the Twin Bells' prices, and T-Mobile's and Sprint's importance to the wholesale market – indicate that competition <u>between</u> Applicants is <u>the</u> primary reason wireless users have seen actual and quality-adjusted price declines in recent years. It is also a strong indicator that the relevant product market may in fact be narrower than the broader "cellular" market, and likely includes a "value" segment in which post-merger New T-Mobile would be able to exercise market power.[37]

Figure 2: U.S. National Wireless Market Concentration (Q4 2006-Q1 2018)



National Wireless Market Share	2006 - Q4	2007 - Q4	2008 - Q4	2009 - Q4	2010 - Q4	2011 - Q4	2012 - Q4	2013 - Q4	2014 - Q4	2015 - Q4	2016 - Q4	2017 - Q4	2018 - Q1
Verizon	29.8%	30.1%	31.2%	36.6%	36.3%	36.0%	38.0%	37.2%	36.6%	36.2%	35.2%	34.8%	34.5%
AT&T	30.8%	32.1%	33.3%	32.3%	33.9%	34.5%	33.8%	32.7%	33.0%	33.6%	33.7%	34.3%	34.6%
T-Mobile	12.6%	13.1%	14.2%	12.8%	12.0%	11.1%	10.6%	13.8%	15.1%	16.5%	17.8%	17.6%	17.8%
Sprint	26.8%	24.7%	21.3%	18.3%	17.7%	18.4%	17.6%	16.4%	15.3%	13.6%	13.3%	13.2%	13.1%

Source: Company SEC Reports

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[37] *See Horizontal Merger Guidelines* at 12. As we noted above when discussing other potential market definitions and market segments: "If a hypothetical monopolist could profitably target a subset of customers for price increases, the Agencies may identify relevant markets defined around those targeted customers, to whom a hypothetical monopolist would profitably and separately impose at least a SSNIP. Markets to serve targeted customers are also known as price discrimination markets. In practice, the Agencies identify price discrimination markets only where they believe there is a realistic prospect of an adverse competitive effect on a group of targeted customers." *Id*.

This concern about harm to the value segment of the cellular market is particularly acute given T-Mobile's and Sprint's substantial shares of the wholesale market. That market's buyers consist of MVNOs like Ting, Mint Mobile, Simple Mobile, Project Fi, and dozens of others that purchase wholesale network access from a national facilities-based carrier then resell that capacity – with service prices that are often far less expensive than those charged by the wholesaling carrier for its own similar retail plans.

Precise wholesale market share data is difficult to estimate, due to limitations in how each national facilities-based carrier reports its subscriber totals. For example, Verizon only reports retail connections, and does not report wholesale or connected device counts. AT&T does report "reseller" connections; but it is unclear how much, if any, of its connected device count is attributable to reseller connections. Sprint and T-Mobile also do report wholesale connections, but both companies no longer include such connections sold by a Lifeline reseller.

However, we initially estimate that post merger, New T-Mobile would control more than 45 percent of all wholesale connections, excluding so-called "connected devices" (meaning tablets, smart watches, connected cars, and other machine-to-machine connections that use only wireless data, rather than using integrated mobile voice and data telecommunications services the way most smartphones do). We initially estimate that the post-merger wholesale HHI (excluding such connected devices) **would increase by more than one thousand points, to nearly 3,700.** This estimate is similar to one produced by analyst firm Three Horizon Advisors.[38]

[38] *See* Cheenu Seshadri, "Is the Sprint & T-Mobile Merger Too Risky?" *Light Reading* (June 14, 2018). The article shows a current wholesale market HHI of 2,815, increasing by 1,022 points to 3,838 post-merger. This estimate appears to be based on

And if we were to attribute 100 percent of AT&T's connected devices to AT&T itself, not a possible MVNO wholesale customer of AT&T, then New T-Mobile's total wholesale market share post merger would be above 70 percent, **with the total wholesale market HHI increasing from just under 3,000 points to more than 5,500 points.**

We expect accurate estimates of the wholesale market will be forthcoming as parties file confidential and highly confidential information with DOJ and the Commission. But it is clear from these and other reasonable estimates that this merger would dramatically increase wholesale market concentration, posing a grave threat to MVNOs and their price-sensitive customers.

C. The Merger Would Result in Substantial Unilateral Harms in the Relevant Product Markets, Reversing The Positive Competitive Trends of the Past Half-Decade.

Though the proposed transaction is not a merger to monopoly in the primary product markets, there would nonetheless be substantial unilateral harms. These harms include relative reduced long-term capital investment, reduced innovation, reduction in non-price competition, higher prices for certain services, and removal of certain products from the market.

AT&T's reseller reported total, Sprint's wholesale and affiliate reported total (including wholesale connected devices), T-Mobile's reported wholesale total, and an unspecified count for Verizon that is about half the value of AT&T's reported total. That count for Verizon is in line with its history of having far fewer and less prominent MVNO partners than the other national carriers, though that has changed slightly in the past two years with Comcast's launch of XFINITY Mobile (which uses Verizon's network) and Credo Mobile's switch from Sprint to Verizon in late 2016. However, Sprint and T-Mobile's published wholesale figures no longer include millions of connections sold to Lifeline MVNOs. T-Mobile's wholesale count decreased by approximately 4 million lines after it stopped reporting wholesale Lifeline connections; and Sprint's declined by 3 million, though much of this decline likely came from Sprint's own Assurance Wireless Lifeline brand. Our estimate above does include these uncounted wholesale Lifeline connections.

The elimination of independent T-Mobile and Sprint would remove from the market firms that each have a track record of product innovation, produced by the pressures to compete not only with the Twin Bells but against each other.[39] T-Mobile's and Sprint's ability to compete effectively with AT&T and Verizon historically was hampered by those Twin Bells' market power and legacy monopoly advantages, including their dominance of the special access and enterprise transit markets as well as their historical ability to use their market dominance to lock in exclusive deals for the most popular handsets. But as discussed above, more recently and in the wake of government decisions to oppose prior wireless industry attempts to contract from four to three national carriers, both T-Mobile and Sprint have taken on the role of maverick competitors, and collectively gained share relative to the Twin Bells in the broader cellular market and in specific market segments as a result. Both have used product innovation and price promotions to differentiate and compete.

For example, even before the failed AT&T takeover attempt, T-Mobile was the first carrier to offer the now market-leading Android platform. T-Mobile beat other GSM carriers on the initial deployment of early 4G technologies (*e.g.*, HSPA+) and of course has a record of offering substantially lower prices than the Twin Bells.[40] T-Mobile also had a track record of offering its customers innovative service packages, including in-

[39] *See Horizontal Merger Guidelines* at 23 ("The Agencies may consider whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger. That curtailment of innovation could take the form of reduced incentive to continue with an existing product-development effort or reduced incentive to initiate development of new products.").

[40] *See* Petition to Deny of Free Press, WT Docket No. 11-65, at 33-34 (filed May 31, 2011) (internal citations omitted) ("Free Press AT&T/T-Mobile Petition to Deny").

home service and discounts for customers who do not purchase subsidized handsets – innovations quickly adopted by Sprint well ahead of the Twin Bells. Though Sprint was a late deployer of LTE, it pushed the (now-failed) early 4G wireless technology "WiMax" years before other carriers launched LTE.[41]

T-Mobile's and Sprint's independent track records of product innovation and price competition has only grown in the years following the rejected AT&T/T-Mobile deal. Flush with new spectrum and a clear direction that growth had to come from competition, not acquisition, T-Mobile launched a series of what it calls "Uncarrier" initiatives starting in 2013. These regular service and product changes have pushed the entire industry away from many anti-consumer practices. In August 2016, T-Mobile brought back unlimited data plans, and just hours later Sprint announced its own unlimited data offering.[42] It was a full six months later that Verizon responded with its own unlimited data plan, and three days after that AT&T extended its unlimited data offering to any customer[43] (AT&T had an unlimited data offering, but only for its DirecTV customers, starting in January 2016).[44] The return of market-wide unlimited data offerings had a substantial impact on the quality-adjusted price of wireless services, as shown in the Bureau of Labor Statistics Wireless Telephone Consumer Price Index.

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[41] "Sprint launches its first WiMax market," *Reuters* (Sept. 29, 2008). For instance, this was three years before even AT&T launched LTE. *See* Phil Goldstein, "AT&T to launch LTE Sunday, Sept. 18," *FierceWireless* (Sept. 15, 2011).

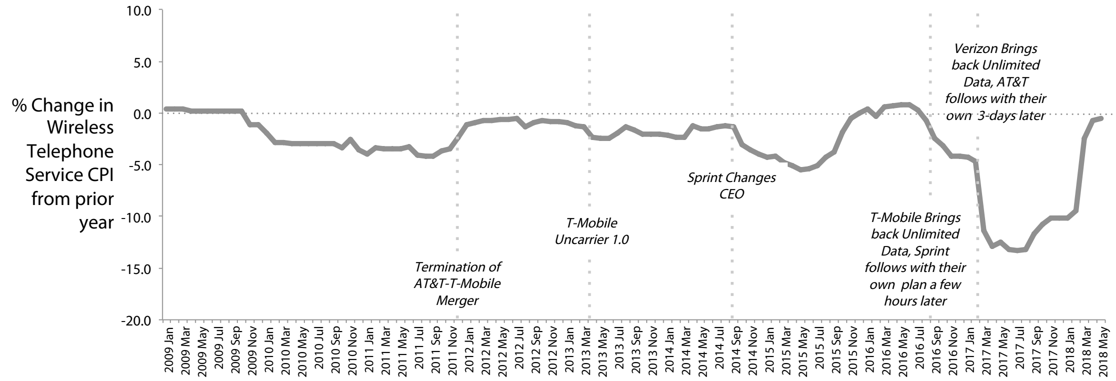
[42] *See, e.g.*, Aaron Pressman, "Here's How Sprint and T-Mobile Are Battling With New Unlimited Data Plans," *Fortune* (Aug. 18, 2016).

[43] *See, e.g.*, Raymond Wong, "AT&T caves in and opens its unlimited data plan to non DirecTV and U-Verse subscribers," *Mashable* (Feb. 17, 2017).

[44] *See, e.g.*, Roger Cheng, "AT&T revives the unlimited data plan, with a catch," *CNET* (Jan. 11, 2016).

(See Figure 3 below, which shows the percentage change in the wireless telephone CPI from the year prior.)

Figure 3:
Wireless Telephone Services Consumer Price Index January 2009-May 2018
Year-over-Year Percent Change in Wireless Telephone Services CPI-U

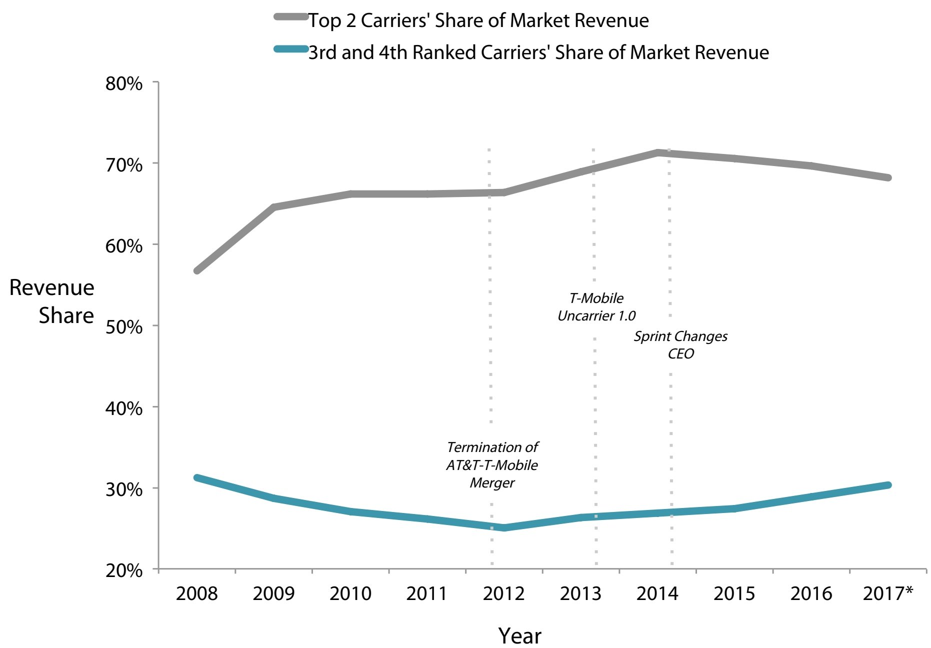


Source: U.S. Bureau of Labor Statistics

Metrics other than subscriber share also reflect the earlier history of growing dominance of the Twin Bells, then illustrate that their dominance has more recently been challenged by revitalized and <u>independent</u> T-Mobile and Sprint. As shown in Figure 4, prior to the government's rejection of the AT&T/T-Mobile merger, Sprint's and T-Mobile's share of the wireless market's service revenues steadily decreased from a combined 31 percent in 2008 to 25 percent in 2012. Then T-Mobile launched its "Uncarrier" competitive strategy and Sprint hired a new CEO (a move made in response to T-Mobile's revitalization, which increased competitive pressures on Sprint; and also a hire which directly followed the U.S. government signaling to Sprint it would not favor Sprint's 2014 attempted acquisition of T-Mobile).[45] In the wake of those moves, the Twin Bells' share of the market's service revenues finally started to decline from a peak of 71 percent in 2014 to 68 percent in 2017.

[45] *See, e.g.*, Ross Rubin, "Sprint and T-Mobile's failed merger: What went wrong – and what's next," *VentureBeat* (Aug. 6, 2014).

Figure 4: Share of U.S. Wireless Market Service Revenues (2008-2017)



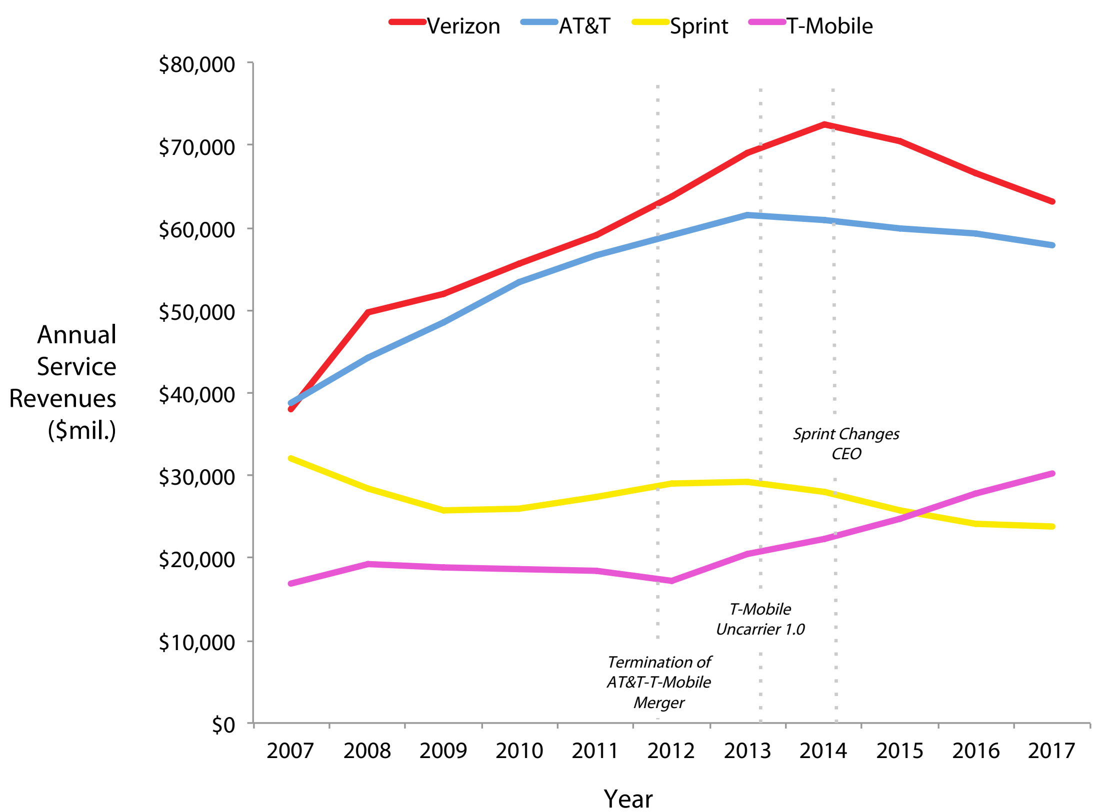
*Source: FCC Annual Mobile Wireless Competition Reports. * 2017 Value is a Free Press estimate based on FCC methodology. Values exclude equipment revenues.*

The service revenue data behind the percentages in Figure 4 reflects just how important Sprint's and T-Mobile's independent existence is, demonstrating that both their competition with one another and also against the Twin Bells all produces positive market outcomes (see Figure 5 below). Verizon's wireless service revenues increased by 91 percent between 2007 and 2014 (a $34.6 billion increase), but <u>declined</u> by 13 percent between 2014 and 2017 (by nearly $10 billion). Similarly, AT&T's domestic wireless service revenues increased by 59 percent between 2007 and 2013 (a $22.9 billion increase), before declining 6 percent between 2013 and 2017 (a $3.6 billion decline).

In contrast, T-Mobile's wireless service revenues declined from 2008 to 2012, then grew sharply through 2017 as T-Mobile grew share with pro-consumer innovations following the rejected AT&T takeover attempt. Sprint's wireless service revenues declined during 2008-2011, increased from 2011-2013, but declined again from 2014-2017 as Sprint lowered prices to compete more effectively against a revitalized T-Mobile.

Service revenues for the four national wireless carriers combined increased steadily until peaking in 2014. They were $125.7 billion in 2007, increased 46 percent to $184 billion in 2014, then declined sequentially to $175 billion in 2017 for nearly a 5 percent drop. This all reflects the fact that T-Mobile's independent "Uncarrier" moves elicited a competitive response not just from the Twin Bells, but from Sprint as well.

Figure 5: Wireless Market Service Revenues (2007-2017)



Source: Company annual SEC filings. Values exclude equipment revenues.

The data and the marketplace activities summarized above indicate a period of declining competitive outcomes prior to the government's rejection of the AT&T/T-Mobile merger in late 2011, then an increase in competitive outcomes following that rejection, followed by strong government signals a few years later that it would not permit further national wireless market consolidation.[46]

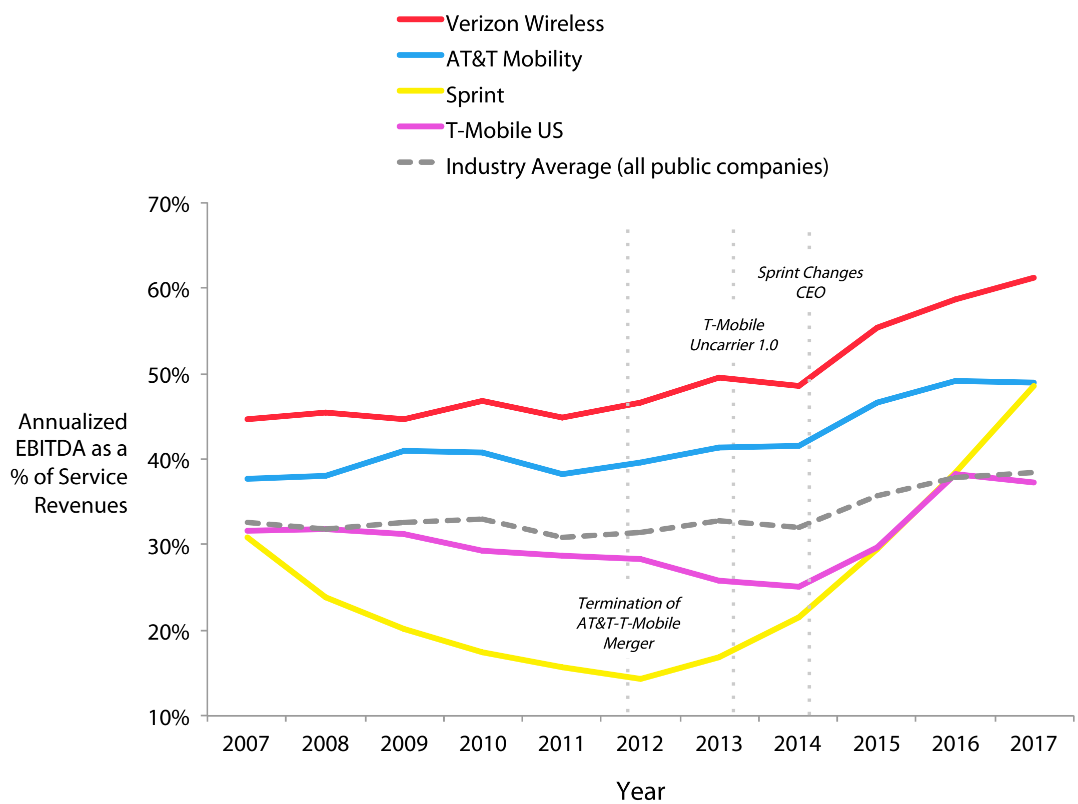
However, an examination of the market's profitability data indicates that the increase in competition during the past half-decade has not harmed profitability – of the industry as a whole, <u>or any individual carriers</u>. Indeed, increased competition appears to be a rising tide that lifted all boats. The Twin Bells saw their profit margins (measured as wireless Earnings Before Income Tax, Depreciation and Amortization – "EBITDA" – as a percentage of wireless service revenues) grow slowly and steadily over the last decade, and their margins were appreciably higher than those of T-Mobile and Sprint. However, while Sprint and T-Mobile's profit margins had <u>declined</u> prior to the failed AT&T/T-Mobile merger, they too returned to growth in recent years (see Figure 6 below).

<u>This profitability data is a reminder that although the wireless market has shown signs of competitive life in recent years, it remains in an oligopolistic state</u> in which carriers are not sufficiently pressured by market forces to reduce profits through fierce

[46] Indeed, Sprint's August 2014 move to replace its long-time CEO Dan Hesse and undertake a series of pro-consumer innovations (such as device leasing, service prices below T-Mobile's, and aggressive rollout of advanced LTE technology across its network footprint) came directly after it became clear that the U.S. government would not permit Sprint's parent company Softbank to acquire T-Mobile. *See* Ryan Knutson and Dana Mattioli, "Sprint Abandons Pursuit of T-Mobile, Replaces CEO," *Wall Street Journal* (Aug. 5, 2014) ("<u>After months of arguing that it couldn't compete effectively without a merger partner</u>, Sprint Corp. is preparing to go it alone. The company decided Tuesday to end its pursuit of T-Mobile US Inc. in the face of stiff opposition from regulators and replace Chief Executive Dan Hesse with Marcelo Claure, a billionaire entrepreneur who is untested as a wireless operator.") (emphasis added). We emphasized this passage because Sprint is now making the exact same argument, despite the fact that its post-2014 strategy worked to return the company to sustained profitability. *See* Sean Kinney, "Sprint profitable for first time in three years," *RCR Wireless* (Aug. 1, 2017). Sprint recorded its most profitable quarter in the company's history earlier this year. *See* Jon Brodkin, "Sprint announces highest profit ever after saying it needs T-Mobile merger," *Ars Technica* (May 3, 2018).

price competition. Approval of the T-Mobile/Sprint merger proposed by Applicants here would only further decrease the small gains realized from competitive pressures that have benefited consumers for the past few years, largely through non-price promotions but also some modest price competition.

Figure 6: Wireless Profit Margins (2007-2017)



Source: S&P Global Market Intelligence.

What each of these carriers is charging their customers is of course one of the most important factors for the Commission and DOJ to consider when evaluating this proposed merger, as they assess whether or not New T-Mobile would have unilateral pricing power. However, collecting and comparing historical pricing data is not a simple task in this market. This is because carriers offer a large variety of plans at various price points, and certain aspects of the service make direct comparison difficult, particularly over time. For example, even with all four national carriers now offering "unlimited" data plans again, each of them have different definitions of "unlimited," and three of these national carriers have multiple different "unlimited" plans and prices too.[47]

One way to get a sense of pricing power and its trajectory is to examine Average Revenue per User ("ARPU"). However, even this metric is not as informative as it once was due to marketplace changes and changes in how carriers report this information. One consequence of T-Mobile's pushing the rest of the industry to drop device subsidies in favor of device payment plans is that the ARPU timeline no longer reflects just the average <u>service</u> price per user, but (if a carrier reports it) might encompass both service revenues and equipment revenues. In addition, the proliferation of data-only connected devices has resulted in a decline in average service prices, which masks how the average price paid for a primary smartphone connection has changed over time.

To be clear then, contrary to what the Commission stated in its most recent wireless competition report, <u>data showing declining ARPU does not necessarily indicate falling prices</u> in the nationwide cellular service market. That is because the comparison and the link to historical ARPU measurements in the market was broken – both by the move to equipment installment plans ("EIPs") rather than device subsidies, and by the proliferation of lower-cost/lower-capacity "connected device" plans.[48]

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[47] *See, e.g.*, Patrick Holland, "Verizon, T-Mobile, AT&T and Sprint unlimited plans compared," *CNET* (June 21, 2018) (discussing Verizon's three different unlimited plans, AT&T's two different unlimited plans, T-Mobile's two different unlimited plans, and Sprint's single unlimited plan, which all have different price points and are differentiated largely by how much data customers can use before they are throttled to below-4G speeds, as well as how much data each plan permits the customer to use when tethering).

[48] Contrast the boastful text of the *Twentieth Report* on this matter ("[B]ased on various price metrics, average prices have been falling") with the more nuanced text of the *Nineteenth Report* ("[T]he separation of equipment revenues makes it difficult to determine if the decline in the ARPU is likely due to the changes in the reporting and/or the calculation of the metric."). *Compare Twentieth Report* ¶ 94, *with Implementation of*

Other metrics such as Average Billings per User (which includes EIP revenues) or Average Revenues per Account (which flattens the impact of low-cost/low-data connected devices) may be more reflective of how market pricing is changing. However, not all carriers report similar metrics, and such data is only available for the past few years. The CPI data shown above in Figure 3 is also of limited use, since it was greatly impacted by the return of unlimited data plans, and as a quality-adjusted metric it does not speak directly to the issue of retail price competition. Nor do we have any useful information concerning how prices have changed over time in the wholesale market, and how that has impacted MVNO customers and their retail prices.

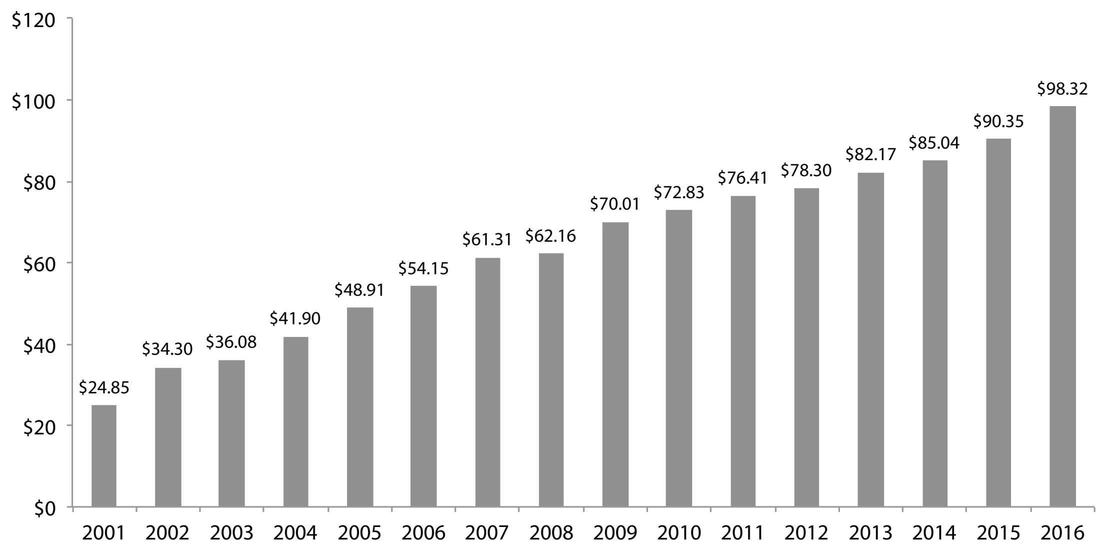
Annual Consumer Expenditure Survey data indicates that U.S. consumers increased their annual expenditures on cellular services at a Compound Annual Growth Rate ("CAGR") of 9.6 percent between 2001 and 2016, and a CAGR of 5 percent since the dawn of the smartphone era in 2009 (see Figure 7 below). Average expenditures on cellular services jumped nearly 9 percent between 2015 and 2016, likely reflecting the carriers' pushing more expensive unlimited plans.

<u>The data collectively shows that consumers are spending more and that carrier profits are increasing</u>, all while carriers continue to offer certain quality improvements. It appears almost certain that the market's competitive activity increased following the rejection of the AT&T/T-Mobile merger, but that this competition largely took the form of service enhancements and bulk discounts rather than direct price declines. This is the expected outcome from a highly concentrated market reaching customer saturation.

Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket No. 16-137, Nineteenth Report, 31 FCC Rcd 10534, ¶ 27 (WTB 2016) ("*Nineteenth Report*").

Yet the competitive benefits that materialized over the past half-decade would not have occurred if there were not competition between the market's two smaller national carriers for value-seeking customers. That in turn produced responses from the market's two larger national carriers, because in a saturated market they could no longer grow from "natural" customer additions of individuals with no prior service.

Figure 7:
Monthly Expenditures for Cellular Phone Services per Consumer Unit (2001-2016)
(May 2018 CPI-U Inflation-Adjusted Values)



Source: Bureau of Labor Statistics Annual Consumer Expenditure Survey; Bureau of Labor Statistics CPI-U

But returning to the central question: Would the merger of T-Mobile and Sprint confer unilateral pricing power on the merged firm? We feel confident in concluding, based on all of the publicly available data, that Sprint and T-Mobile already possess unilateral pricing power in the "value" market segment, and their merger would vastly enhance this unilateral market power. Though the return to unlimited data plans as the market norm during 2016-2017 produced headlines about a "price war," the truth is that many carriers' bottom line prices have not declined at all. For example, pre-paid plans do not usually include EIPs, nor are they multi-line plans that include connected devices.

Sprint's prepaid ARPU has increased 11 percent over the past two years (from $33.59 in the first quarter of 2016 to $37.15 in the first quarter of 2018). T-Mobile's prepaid ARPU increased 4 percent during this time (from $37.58 in the first quarter of 2016 to $38.90 in the first quarter of 2018).

Another critical point to note in assessing potential unilateral effects is that Sprint, not T-Mobile, has acted more like a "maverick" in recent months. After T-Mobile surpassed Sprint as the third place carrier, it began to pull back somewhat on its more aggressive price promotions, focusing more on value-adds like free Netflix subscriptions. In contrast, Sprint continues to focus on aggressive price promotions, demonstrated by its early June 2018 offering of a $15 monthly unlimited voice, SMS, and data plan to switching customers.[49] Sprint's price-focused efforts have exerted some price discipline on T-Mobile, primarily on T-Mobile's pre-paid MetroPCS subsidiary. But if T-Mobile is permitted to acquire Sprint, these pricing pressures disappear.

While the headlines about the return of unlimited from early 2017 still reverberate, the truth is much of the activity in the U.S. wireless market in recent years has been exactly what you'd expect from a weakly competitive oligopoly: non-price competition and attempts at differentiation that help stave off the transition to wireless as a commodity service.[50] The primary remaining bright spot in 2018 (*i.e.*, after the 2016/2017 return to unlimited or quasi-unlimited data plans) is Sprint's lower-cost offerings, which it had to make in order to remain viable.

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[49] *See* Chris Welch, "Sprint offering $15 unlimited plan to those willing to switch carriers," *The Verge* (June 7, 2018).

[50] *See, e.g.*, Mike Dano, "Editor's Corner – The era of nickel-and-diming wireless customers is back," *Fierce Wireless* (Aug. 6, 2018).

These offerings have worked somewhat to discipline T-Mobile's ability to move away from more direct price competition. And because T-Mobile occupies a market position somewhere between a pure-value carrier and a pure-quality carrier, Sprint's price competition in 2018 has in turn disciplined the behavior of AT&T and Verizon.

In sum, there's no good argument that combining the market's only two value-focused facilities-based carriers would not lead to price increases and unilateral harms. And as we discuss below, there's ample reason to expect this 4-to-3 market contraction would create coordinated harms, relieving AT&T and Verizon from the modicum of competitive pressure they've felt from both Sprint and T-Mobile in recent years.

D. The Merger of T-Mobile and Sprint Would Further Exacerbate Harmful Coordinated Effects in the Relevant Product Markets.

There is evidence that AT&T and Verizon may already engage in and benefit from coordinated interaction.[51] This proposed merger, and the elimination of competition in the value-focused customer segment, would only exacerbate such harmful behavior. While assessing the potential for coordinated interaction is inherently a predictive exercise for the Commission and DOJ, the structure of the wireless marketplace is such that it is particularly vulnerable to this behavior. First, the potential product market (smartphone service plans) is largely homogeneous, with prices easily observed by competing firms. Carriers rarely offer new customer discounts or retention incentives, unlike in the wired broadband market, and they price their services nationally.[52]

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[51] *See, e.g.*, Cecilia Kang, "U.S. Investigating AT&T and Verizon Over Wireless Collusion Claim," *New York Times* (Apr. 20, 2018).

[52] *See Horizontal Merger Guidelines* at 26 ("A market typically is more vulnerable to coordinated conduct if each competitively important firm's significant competitive initiatives can be promptly and confidently observed by that firm's rivals. This is more

The agencies will need to focus both on price and non-price competition when evaluating the potential for unilateral and coordinated conduct. Though some of the prior switching barriers (such as handset exclusivity, two-year contracts, or lack of handset portability) have gone away thanks to T-Mobile's and Sprint's competitive moves, free switching between carriers remains difficult. It is unlikely that a firm exercising market power through increased prices would immediately lose a substantial portion of customers to competing carriers.[53] This would especially be the case if New T-Mobile were to increase prices or reduce non-price competition, because its value-focused customers would have no better option. For the Twin Bells, coordination in response to New T-Mobile increasing prices or reducing non-price competition would be highly likely, as they would face less threat of defection from customers seeking greater value.

In a typical product market, the impact of coordination would be greatly reduced by smaller firms expanding output and capturing share.[54] But the cellular service market is not typical: Smaller firms no longer exist, and the few remaining regional facilities-based carriers could not rapidly expand their sales due to customer switching costs (*e.g.*, EIP buy-out costs) and regional carriers' lack of spectrum outside their regions. The threat of regional carrier expansion into the national market obviously could not mitigate

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likely to be the case if the terms offered to customers are relatively transparent. Price transparency can be greater for relatively homogeneous products.").

[53] *See id*. ("A market is more apt to be vulnerable to coordinated conduct if the firm initiating a price increase will lose relatively few customers after rivals respond to the increase.").

[54] *See id*. ("This collective market power is diminished by the presence of other market participants with small market shares and little stake in the outcome resulting from the coordinated conduct, if these firms can rapidly expand their sales in the relevant market."). But as we mentioned above, the few remaining and vanishingly small regional and pre-paid firms are simply unable to rapidly expand sales, both due to constraints on supply (prime spectrum) and demand (switching costs).

coordinated action due to the high fixed costs and deployment time even if the few remaining regional carriers were inclined to try. Thus, the structure of the wireless market makes it particularly vulnerable to coordinated interaction.

This market is also particularly vulnerable to coordinated conduct because it is so top-heavy, with so much of the subscriber base and industry's revenues already concentrated between two firms (the Twin Bells control 69 percent of national market connections and 63 percent of all connections). Because of this duopoly, the harms from coordination would be substantial even if all firms did not engage in the behavior.[55] Further, because demand elasticity for service is relatively low, the coordinated behavior would be more profitable, increasing the likelihood of such harms post merger.[56]

Indeed, <u>while this merger would exacerbate pressures for the top firms to engage in coordinating behavior, it is apparent that such activity is already occurring.</u> The historically high margins earned by AT&T and Verizon relative to T-Mobile and Sprint <u>are strong evidence of existing coordination</u>. It is an open secret (and preference) among Wall Street analysts that the top carriers be careful to avoid setting off any actual price wars.[57] This merger would eliminate <u>two</u> maverick competitors (replacing them with a newly combined firm equal in size to the Twin Bells) and would lead to "a more stable

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[55] *See id.* ("Coordinated conduct can harm customers even if not all firms in the relevant market engage in the coordination, but significant harm normally is likely only if a substantial part of the market is subject to such conduct.").

[56] *See id.* ("Coordination generally is more profitable, the lower is the market elasticity of demand.").

[57] The avoidance of price wars is an indicator of coordinated interaction. *See id.* at 24 ("Coordinated interaction also can involve a similar common understanding that is not explicitly negotiated but would be enforced by the detection and punishment of deviations that would undermine the coordinated interaction.").

pricing environment," which is the main reason that Wall Street has long clamored for greater wireless industry consolidation.[58]

In the attached Appendix, we present the results of Free Press's empirical analysis of the short-term movements of certain telecom company stock prices in response to news events. These news events included a potential Sprint/T-Mobile merger or other deals involving these firms during the multi-year period when these rumors have been somewhat frequent. This analysis indicates that AT&T and Verizon stock prices did not show significant movements on the days of news that a T-Mobile/Sprint merger might happen, but showed strong and statistically significant declines on the days when news broke that such a merger was not going to happen or might not happen. This bifurcated result reflects the reality that the current U.S. wireless market already operates as a tight oligopoly, in which AT&T's and Verizon's supra-competitive profits can only be threatened by independent competition from both Sprint and T-Mobile.

AT&T and Verizon investors do not expect that a merged T-Mobile and Sprint would harm AT&T's or Verizon's future earnings. The investor class also does not expect the merged firm to materially enhance the Twin Bells' prospects either – beyond what is already assumed – because AT&T and Verizon already occupy a space as the market's "premium" providers and are already at the "monopoly-level pricing equilibrium."[59] However, "the market" likely punished AT&T and Verizon on news that

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[58] Sheena Lee, "AT&T/T-Mobile Deal Won't Hurt Verizon," *Seeking Alpha* (Mar. 25, 2011).

[59] It is critical for the Commission to understand the potential impacts of a merger in a market that already functions as a tight oligopoly, and how this may result in economic models that do not indicate substantial post-merger price increases. That is, economic models may not predict coordinated behavior if such behavior is already occurring. *See, e.g.*, Juan Jiménez González and Jordi Perdiguero, "Mergers and difference-in-difference

the merger was not happening because investors feared AT&T's and Verizon's earnings at the top are subject to greater challenge by an independent T-Mobile and Sprint.

The domination at the top is a strong indicator of an already-broken market, a problem that this proposed merger of the third- and fourth-largest carriers would exacerbate.[60] The proposed contraction from four to three carriers would have a particularly corrosive impact on innovation and what few competitive incentives exist.[61] That AT&T and Verizon were able to largely avoid dropping their prices during periods in which both T-Mobile and Sprint did so, and were still able to increase their profit margins and subscribers in the face of this price competition below them, is a strong

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estimator: why firms do not increase prices?" Research Institute of Applied Economics, at 25-26 (Working Paper, May 2012). ("The econometric results show that we cannot reject the idea that the average behavior of the companies operating in the oligopolistic markets is monopolistic, either before or after the merger. The retail gasoline prices in the Canary Islands have remained unaffected by the DISA-Shell merger because, prior to the merger, prices maximized joint profits and because of this, the new company had no incentive to increase prices. If we analyze the Competition Authority's decision only from the standpoint of unilateral effects, the decision to accept the merger can be considered correct. Increasing market concentration was not detrimental to consumers. <u>However, if we take multilateral effects into account, it seems that the Antitrust Authority should have examined in greater depth the impact of the disappearance of a competitor on the maintenance of a collusive agreement</u>. This recommendation is essential for the gasoline market because the empirical literature reports evidence of non-competitive behavior in this industry.") (emphasis added).

[60] As noted in the *Horizontal Merger Guidelines*, "even a highly concentrated market can be very competitive if market shares fluctuate substantially over short periods of time in response to changes in competitive offerings." *Horizontal Merger Guidelines* at 18. However, this is not the case in the U.S. wireless market, where the shares of the top two carriers have stayed largely constant relative to the shares of the bottom two carriers, only declining slightly over the past half decade.

[61] *See id.* at 15 ("Market shares can directly influence firms' competitive incentives. For example, if a price reduction to gain new customers would also apply to a firm's existing customers, a firm with a large market share may be more reluctant to implement a price reduction than one with a small share. Likewise, a firm with a large market share may not feel pressure to reduce price even if a smaller rival does.").

indicator of the market's existing lack of effective competition. Indeed, the *Horizontal Merger Guidelines* state:

> If a firm has retained its market share even after its price has increased relative to those of its rivals, that firm already faces limited competitive constraints, making it less likely that its remaining rivals will replace the competition lost if one of that firm's important rivals is eliminated due to a merger.[62]

In sum, both Sprint and T-Mobile have proven to be critical sources of marketplace competition that has in recent years resulted in tangible consumer benefits. Indeed, the market had four national carriers prior to the government's rejection of the AT&T/T-Mobile merger, yet still showed no signs of effective competition. It wasn't until T-Mobile received an infusion of cash and spectrum in the 2012-2014 period that the market finally started to show signs of effective competition and to produce pro-consumer competitive outcomes. This strongly illustrates why it is critical to maintain Sprint and T-Mobile as independent firms, and why market contraction to just three carriers would be a disaster. The elimination of the two "maverick" firms currently running as the third- and fourth-place carriers would more than fully restore AT&T's and Verizon's pre-2012 market power, and would remove the only sources of what little pricing discipline currently exists in the wireless space.

There's simply no good argument against the inescapable conclusion that contracting to three carriers would lead to price increases and to unilateral and coordinated harms. The merging parties' hypothesis to the contrary is neither borne out by the historical evidence in the U.S. market, nor suggested by comparative analysis of

[62] *See id*. at 18.

wireless markets in other nations, where the axiom of "more competitors equals more competition" proves true.[63]

E. There is no Prospect of Competitive Entry that Could Mitigate the Unilateral Harms and Coordinated Effects Resulting from This Merger.

Horizontal mergers of this size raise particular concern in markets where competitors are unable to enter sufficiently and quickly. In the wireless market – and particularly the wireless data market – sufficient new entry is impossible, and the smaller firms lack the ability to quickly and efficiently expand output at levels needed to offset the unilateral and coordinated harms that grant of the Application would cause.

<u>No new firm has successfully entered the facilities-based cellular telephony and data market in the past two decades</u>, and with the massive amount of consolidation many have exited.[64] This lack of successful entry combined with increasing margins[65] is a

[63] There are at least two major international comparative market studies that provide strong evidence that markets with three carriers produce worse competitive outcomes than markets with four or more carriers. *See* Working Party on Communications Infrastructures and Policy, OECD, "Wireless Market Structures and Network Sharing," at 17 (Jan. 8, 2015) ("Competition in mobile markets benefits consumers by offering them better services, quality and price discipline. Particularly in countries with four or more mobile operators these benefits are visible through more competitive and more inclusive offers and services that are generally not available in countries with three mobile operators."); Price Waterhouse Coopers, "Grasping at differentiated straws: Commoditization in the wireless telecom industry" (Feb. 2018) (showing that markets with four or more carriers tend to have lower prices and exhibit behavior closer to a commoditized market, with low spreads in market share and ARPU; while markets with three carriers exhibit behaviors of a "comfortable" market, with high spreads in market share spread and ARPU).

[64] The only facilities-based carriers to enter the market in the past two decades are Clearwire in 1998, and Qualcomm's spin-off Leap in 1999. Clearwire did not enter the national market for integrated mobile voice and data. AT&T later acquired Leap. AT&T, Press Release, "AT&T Completes Acquisition of Leap Wireless" (Mar. 13, 2014).

[65] *See supra* Figure 6. This data showed that prior to T-Mobile's post-2012 revitalization, the margins of the two carriers at the top increased while Sprint and T-Mobile saw theirs decline.

strong indicator that market entry is incredibly difficult.[66] New entrants would have to amass substantial spectrum assets, navigate local and federal regulations, and incur substantial fixed deployment costs prior to signing up a single customer. In addition, the high valuation of existing leading firms indicates intangible assets that a new entrant would not be able to sufficiently and quickly duplicate.[67]

Even if timely entry were possible, the existing market structure would makes such entry would insufficient to mitigate the unilateral and coordinated harms of Applicants' proposed merger. In the cellular service market, AT&T and Verizon increasingly rely on bundled vertical content to differentiate themselves.[68] This practice, along with substantial switching costs, creates insurmountable barriers to effective entry.[69]

Any remaining regional carriers already have very little AWS, 600 MHz, and 700 MHz spectrum, and no millimeter wave spectrum (and little expectation they'll acquire it at auction based on recent history). Plus, they rely on the national carriers for data

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[66] *See Horizontal Merger Guidelines* at 28 ("Lack of successful and effective entry in the face of non-transitory increases in the margins earned on products in the relevant market tends to suggest that successful entry is slow or difficult.").

[67] *See id*. ("Market values of incumbent firms greatly exceeding the replacement costs of their tangible assets may indicate that these firms have valuable intangible assets, which may be difficult or time consuming for an entrant to replicate.").

[68] *See, e.g*., Jacob Passy, "Why a T-Mobile-Sprint merger could be 'devastating' for consumers," *MarketWatch* (Apr. 30, 2018) ("One big reason why regulators could block the deal is the role TV and internet services now play in the wireless market. As Kagan described, there's a divide among the major carriers between those that offer bundled services including TV and internet (AT&T and Verizon) and those that don't (Sprint and T-Mobile). Only having one company in the latter category could have caused prices to go up.").

[69] *See Horizontal Merger Guidelines* at 29 ("Even where timely and likely, entry may not be sufficient to deter or counteract the competitive effects of concern. For example, in a differentiated product industry, entry may be insufficient because the products offered by entrants are not close enough substitutes to the products offered by the merged firm to render a price increase by the merged firm unprofitable.").

roaming (at terms set by the national carriers). There's simply no prospect of existing carrier expansion to act as a sufficient check on the market power of the strengthened post-merger triopoly that would result from grant of the Application in the instant proceeding.

Applicants contend there are several other firms that are on the verge of market entry, and that this will discipline wireless market competition. This is simply not the case. Cable companies Comcast and Charter have very limited wireless offerings which are not competitively-priced as direct alternatives to T-Mobile's and Sprint's. These offerings are largely designed as a value-add product for high-ARPA bundling households,[70] in order to reduce churn. Furthermore, cable companies are regional, and rely heavily on Verizon's network. (The same is true for Altice's ambitions, though its facilities agreement is with Sprint).

Applicants also hold up Dish as an option, but their is little reason to expect Dish will <u>ever</u> launch a nationwide, competitive service, certainly not in the foreseeable future. What's more, Dish's current plans (which it may not be able to achieve) are for a narrowband IoT network, not a full broadband network offering a nationwide integrated mobile voice and data service that competes in the retail market with T-Mobile and Sprint, or with the other national carriers.[71]

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[70] *See supra* note 16 (indicating that XFINITY Mobile is only available for existing Comcast internet access service customers, who can then choose to pay an additional amount just to access any quantity of 4G data).

[71] *See* Sarah Barry James and Waqar Jamshed, "Analysis: Debt load, build-out deadlines complicate DISH's wireless ambitions," *S&P Global Market Intelligence* (Aug. 7, 2018).

IV. Applicants' Claimed Efficiencies of the Merger Are Speculative, Non-Merger Specific, and Non-Cognizable, and They Would Not Outweigh the Adverse Competitive Impacts of this Transaction.

A. Applicants' Claims of Accelerated 5G Deployment Are Vastly Overstated, as Are Their Claimed Benefits from Accelerated Deployment.

The Applicants' primary claimed benefit from the proposed merger is acceleration of their deployment of the next-generation wireless networking standard, so-called 5G.[72] As was the case with 4G technology, much of the discussion around 5G is marketing hype.[73] While there are potential benefits of true 5G technology, most of the real-world use cases are already possible with existing advanced 4G networks. Therefore, even if the Applicants' claims about actually accelerating 5G deployment were real, the measurable benefits of this modest acceleration in availability of 5G access (from one of what would be three post-merger national carriers) would be virtually non-existent, relative to likely use cases. This is particularly true for T-Mobile's and Sprint's proposed 5G deployments which will largely rely on non-millimeter wave spectrum for the present.[74]

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[72] 3GPP recently certified a standalone 5G standard, though there is still apparently more work to be done at the standards bodies, in addition to physical deployments. *See* Monica Alleven, "3GPP puts finishing touch on Standalone version of 5G standard," *FierceWireless* (June 14, 2018).

[73] *See, e.g.*, Ian Morris, "Vodafone CTO: 5G Is Overhyped & It's Mainly About Cost," *LightReading* (Nov. 15, 2017); Karl Bode, "5G Wireless Broadband is Being Ridiculously Overhyped," *DSL Reports* (Apr. 24, 2018) ("For example Eric Xu, current Huawei Chairman, recently argued that consumers will ultimately 'find no material difference between 5G & LTE.'").

[74] Millimeter wave spectrum, deployed in a dense network architecture, is required for some of the more robust hypothetical use cases for 5G, as it enables the lowest-latency/highest-speed transmissions that are often cited as 5G's primary evolutionary benefit. However, Sprint's and T-Mobile's mobile 5G plans largely involve 600 MHz or 2.5 GHz spectrum bands. *See, e.g.*, T-Mobile Press Release, "T-Mobile Building Out 5G in 30 Cities This Year . . . and That's Just the Start" (Feb. 26, 2018); Sprint, Press Release, "Sprint Announces New York City, Phoenix and Kansas City Among First to Experience Sprint 5G" (May 15, 2018).

But there is ample evidence indicating that Applicants' 5G investment claims are bogus. The Commission and DOJ have been down this road before. To sell their proposed merger, AT&T and T-Mobile made similar claims about how they <u>needed</u> to merge in order to deploy 4G LTE technologies. They claimed T-Mobile had "no clear path" to LTE without the merger,[75] which was completely wrong.[76] AT&T also claimed its 4G LTE deployments would stop at approximately 80 percent of the U.S. population.[77] Not only was this completely wrong, but AT&T achieved nationwide 4G LTE coverage faster <u>without</u> acquiring T-Mobile than it claimed it could had the firms merged.[78]

T-Mobile and Sprint's primary claimed benefit from the merger is that they would "invest nearly $40 billion to bring the combined company into the 5G era over the next three years, or approximately three times the amount that T-Mobile would have invested

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[75] *See Applications of AT&T Inc. and Deutsche Telekom AG For Consent To Assign or Transfer Control of Licenses and Authorizations*, WT Docket No. 11-65, Description of Transaction, Public Interest Showing and Related Demonstrations, at 1 (filed Apr. 21, 2011) ("AT&T/T-Mobile Application") ("In this transaction, AT&T Inc. — an American company on the leading edge of mobile broadband innovation – is acquiring T-Mobile USA, a Deutsche Telekom subsidiary with declining market shares and no clear path to Long Term Evolution (LTE), the gold standard for advanced mobile broadband services.").

[76] *See* Comments of John Legere, President & CEO, T-Mobile US Inc., Third Quarter 2015 Earnings Call (Oct. 27, 2015) ("You're the first to hear officially that we now cover 300 million LTE POPs. This was our goal for the end of 2015, and we achieved the milestone months ahead of schedule.").

[77] *See* AT&T-T-Mobile Application at 54-55 ("As a result of this transaction, AT&T can increase its LTE deployment from 80 to more than 97 percent of the U.S. population. . . . AT&T's current (pre-merger) plans call for deployment of LTE to approximately 80 percent of the U.S. population but no more.").

[78] *See, e.g.*, AT&T, Press Release, "AT&T 4G LTE Network Reaches More Than 300 Million People" (Sept. 4, 2014). AT&T indicates its 4G LTE network now reaches more than "317 million Americans." *See, e.g.*, Jon Brodkin, "T-Mobile and Sprint don't need to merge for 5G – they said so two months ago," *Ars Technica* (May 1, 2018) (citing www.att.com/offers/network.html). Archive.org contains a cached version of this page with the same population count as of December 2016. *See* https://web.archive.org/web/20161222074213/https://www.att.com/offers/network.html.

on its own without the merger."[79] Of course not mentioned is the amount that both Sprint and T-Mobile would have spent over the next three years. This omission is important, because if we examine the "but-for" scenario, we see that the marginal investment attributed to the merger is very small, the acceleration of investment is very small, and it may not be real.

T-Mobile's capital expenditure guidance is approximately $5.3 billion in 2018, and $5.4 billion in 2019.[80] Sprint's capital expenditure guidance for calendar year 2018 is $6 billion (not including capital expenditures for leased devices; with leased devices, the total would top $10 billion).[81] Though they've not given guidance for revenues, the combined companies took in approximately $74 billion in 2017. This equates to a combined company capital intensity value of 15.2 percent (capital intensity is capital expenditures as a percentage of revenues). This implies that in the but-for world, the two firms would invest just under $34 billion over the next three years, <u>if revenues were static or 2018 guidance held for 2019 and 2020</u>. That is, the three-year combined capital investment for the two companies without the merger would likely be higher than $34 billion, assuming each company's current capital intensity and modest revenue growth.[82]

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[79] Application at 15.

[80] T-Mobile US, Inc., Current Report, Form 8-K (May 1, 2018) ("Cash purchases of property and equipment, excluding capitalized interest, are expected to be between $4.9 and $5.3 billion, unchanged from the prior guidance. This includes expenditures for 5G deployment.").

[81] Sprint Corporation, Current Report, Form 8-K (May 2, 2018) ("The company expects cash capital expenditures excluding leased devices to be $5 billion to $6 billion.").

[82] T-Mobile's revenues increased more than 8 percent during 2017 from the prior year. Sprint's revenues were flat.

Thus, at best, the merging firms are claiming a total capital investment acceleration of $6 billion over a three-year period. This equates to merely a six-month acceleration of 2021 investments into 2020. However, it is important to note that these figures (and Sprint's $6 billion capital investment guidance for 2018) excludes a substantial portion of Sprint's capital investments. Between April 1, 2017 and April 1, 2018, Sprint's total capital expenditures were $10.8 billion. This amount included $3.3 billion in network capital investment, and $7.5 billion in leased device capital investment. Thus we see that in the coming months Sprint is already committing to a substantial increase in its network spend. But the merging parties have not given an indication of the fate of Sprint's leased device program after the merger. Given that T-Mobile is the acquiring party, it is entirely possible that New T-Mobile would end Sprint's leased device program in favor of T-Mobile's EIP. If so, this implies that the merged firm would actually invest $8 billion less than the stand-alone firms would over a three-year period.[83]

But the issue of the merger's impact on investment timing aside, it is clear that the impact of the merger on 5G deployment and adoption would be modest, at best.

i. Applicants Previously Outlined their Plans to Each Fully Deploy 5G Technology Across their Respective Service Footprints.

Applicants claim that they without the merger they "would be unable . . . to deploy a fully capable 5G network as quickly or as cost efficiently as New T-Mobile."[84] But T-Mobile and Sprint each independently have committed to deploying 5G

[83] This assumes standalone T-Mobile's total capital spend would be $16 billion during 2018-2020 (based on current guidance), and standalone Sprint's total capital spend would be $32 billion during 2018-2020 (based on current guidance and current total capital investments).

[84] Application, App. B (Declaration of Neville R. Ray), ¶ 4.

technologies across their networks within the same time period the firms now promise with the merger.[85] Sprint has promised a nationwide 5G network by the end of 2019, and T-Mobile has indicated it would fully deploy its 5G network by the end of 2020.

In November 2017, T-Mobile Chief Technology Officer ("CTO") Neville Ray told an audience gathered at Mobile World Congress in Barcelona "we're committed to drive a 5G rollout by 2020 across the nation."[86] Ray offered details there on the company's path to 5G, which included its "focus on densification from a small cells perspective." He explained that the company would have "5,000-plus" unique small cells on top of its Distributed Antenna Systems ("DAS") by the end of 2017, and planned for 20,000 more in 2018, which he described as "tremendous." Ray also noted that T-Mobile was already a leader in speeds, which he indicated are "a great proxy for capacity" to customers, and that the 2018 small cell deployment would increase that headroom which the company would "draw down as capacity needs dictate." As we discuss below, these comments reflect the existing reality of excess capacities at T-Mobile and Sprint, which the companies' Application also suggests would hold in the absence of the merger.

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[85] *See, e.g.*, Mike Dano, "Sprint promises to launch nationwide mobile 5G network in first half of 2019," *FierceWireless* (Feb. 2, 2018) ("'We're working with Qualcomm and network and device manufacturers in order to launch the first truly mobile [5G] network in the United States by the first half of 2019,' Sprint CEO Marcelo Claure said today during the carrier's quarterly earnings conference call with investors. 'This development will put Sprint at the forefront of technology innovation on par with other leading carriers around the world. . . . We believe our next-gen network will truly differentiate Sprint over the next couple of years.' That timeline would put Sprint ahead of T-Mobile in terms of launching nationwide mobile 5G; T-Mobile has promised to start its launch in 2019 and finish it in 2020.").

[86] *See* Comments of Neville R. Ray, Chief Technology Officer and Executive Vice President, T-Mobile US, Inc., Morgan Stanley European Technology, Media & Telecom Conference (Nov. 16, 2017).

Just one month prior to the public announcement of the merger with Sprint, T-Mobile's CTO again confirmed the company's 2020 completion date for its 5G deployment plans. He also explained how its existing advanced LTE network will have more than enough capacity for the foreseeable future, how its 5G and LTE technologies will complement each other, the company's excess spectrum capacity, and how T-Mobile would beat AT&T and Verizon to market with 5G.[87] Despite these earlier repeated and detailed statements on its nationwide 5G deployment plans, and its network's superior capacity and room for growth, T-Mobile now wants everyone to believe that without the government's blessing to wipe out its closest competitor T-Mobile will be "unable" to do what it just said it was going to do. This little magenta lie simply is not true.

Like T-Mobile, Sprint too outlined its nationwide 5G deployment plans just ahead of the news of the merger. While T-Mobile's 5G plans involves small cell densification and deployment on its recently-acquired 600 MHz spectrum, Sprint's plans center around densification, "massive MIMO" (multiple-input-multiple-output) antennas, dark fiber

[87] *See* Comments of Neville R. Ray, Chief Technology Officer and Executive Vice President, T-Mobile US, Inc., European and Emerging Telecoms Conference (Mar. 20, 2018) ("[W]e want to build out nationwide 5G. And I want to make sure that folk have an ever-improving smartphone experience. And we have up to 50 megahertz, or 25 plus 25 megahertz of 600 megahertz spectrum to deploy. That is very meaningful. And a great thing in the 5G radio is it can combine though dual connectivity, it can combine with the LTE layer; so if you think about 4G or 3G, you live in one or the other; you can move between the two, but you can't live in both. In the 5G world, you can live in LTE and 5G and combine and compound the benefits of the two radios. And so for us, as we rollout the 5G layer in 600 megahertz and push towards nationwide, we are going to start lighting up huge spots of geography and we're already starting it in 2018 from a build perspective. <u>But in '19, there's going to be a lot of 5G available to our customers in the U.S. and I compare and contrast that to the pockets of millimeter wave 5G that will exist from Verizon and AT&T</u>, and I think that's going to be tremendous for our brand, for our messaging and for our customers.") (emphasis added).

deployment, and utilization of Sprint's large 2.5 GHz spectrum assets.[88] Sprint's 2018-2019 network improvement plans are substantial, and as described would certainly aid the company's already-impressive turnaround.

Just a few weeks prior to agreeing to merge with T-Mobile, Sprint laid out in detail its plan to deploy "the first national wireless 5G network in 2019."[89]

> "From a timing point of view and what do we expect to do, <u>we expect to roll out 5G on a national-wide basis</u>. We have announced [a] few plans – [a] few projects in order to make it work. First, expand our macro cell sites. So we have said that in the next coming years, we will expand our macro cell sites by roughly 20 percent. It takes a bit of time in order to do that because we didn't – we have not built any site[s] in the past few years. So we have to reignite the machine to ramp up, but that's underway, so that will catch up probably more late 2018, 2019 rather than let's say early 2018. Then we are bringing all of our spectrum on our sites, meaning today, we have sites which have only 800 MHz or 1900 MHz or 2.5 GHz. . . . Only 50 percent of our sites today have 2.5 GHz. <u>So we are in a massive upgrade plan</u>. We have started on thousands of sites, in order to bring all the[ ] spectrum on all the sites. The intent is to bring all three bands on all the sites as quickly as possible. <u>That's a massive 2018 program. It will finish in 2019, but most of it will be achieved in 2018</u>."

And as would be true for all carriers (including AT&T, Verizon, and even New T-Mobile), Sprint's CTO noted how incremental improvements to its 4G network would massively increase capacities above projected demand for the foreseeable future, as it also rolls out a national 5G network.[90] Sprint's confidence in its network improvement

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[88] *See, e.g.*, Comments of John C. B. Saw, Chief Technology Officer, Sprint Corporation, Citi 2018 Global TMT West Conference (Jan. 10, 2018).

[89] *See* Comments of Michel Combes, President, CFO & Director, Sprint Corporation, 26th Annual Media, Telecom & Business Services Conference (Mar. 7, 2018) (emphases added) ("Combes Comments").

[90] *Id.* ("Massive MIMO is a way to really improve quality of the network in terms of speed, 10 times LTE speed; in terms of reach, meaning extending the coverage; and in terms of bandwidth, at the edge of the cell, so which means a much better experience for the customer. So there, we intend to start in Q2 this year to roll [out] Massive MIMO. . . Massive MIMO . . . to introduce smoothly 5G, meaning that as soon as 5G in our

plans and its ability to finally leverage its 2.5 GHz spectrum advantages, expressed repeatedly in the months leading up to the merger announcement, stand in stark contrast to the tales of woe in the Application. It is simply impossible to square Sprint's March 2018 statement that "we have the next few years where we have a clear advantage"[91] with the Application's claim that "Sprint's standalone future will not be one that allows it to be an effective competitor to Verizon and AT&T on a nationwide basis."[92]

ii. Applicants Overstate the Transaction's Benefits Related to 5G Deployment.

Applicants also vastly overstate the overall benefits, as well as the temporal benefits, of their merger's supposed accelerated deployment of 5G technology. Independent analyst projections indicate only a tiny difference in 5G adoption levels between the merger and no-merger scenarios.[93] Figure 8 below presents a recent analysis from analyst firm Strategy Analytics. The firm did find that the T-Mobile/Sprint merger

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software will be available, probably by the end of the year, we'll be able from a software point of view just to switch on to 5G, our Massive MIMO sites. . . . <u>[O]ur intent is to have . . . a national 5G network in first half of 2019</u>.") (emphases added).

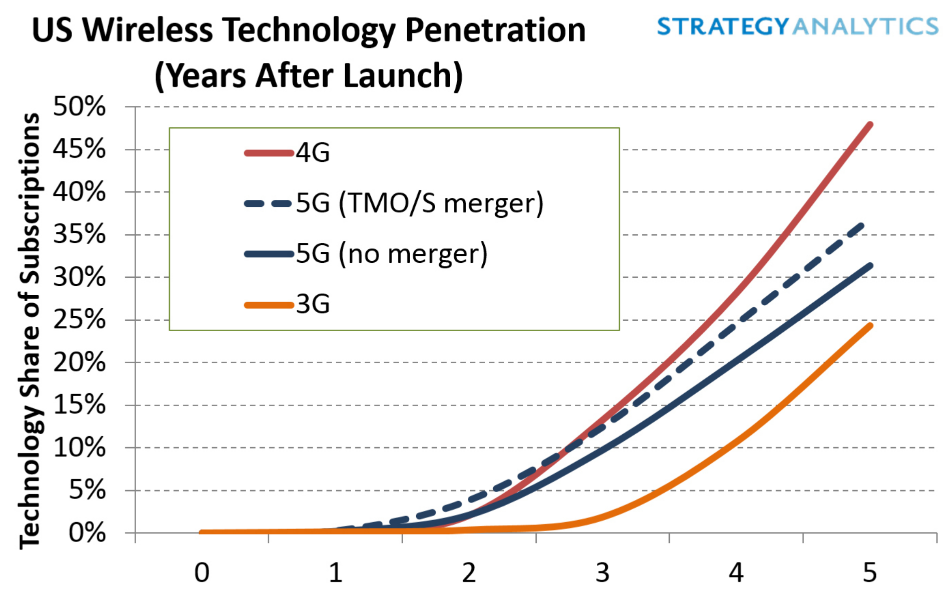
[91] *Id.* ("We have a unique opportunity to regain leadership in network, leveraging 5G. So, why should we miss it? That's now that we have to invest because we will enjoy the free – of course, our competitors at some stage will find additional spectrum or will invest massively even if they don't have the best spectrum. But <u>we have the next few years where we have a clear advantage</u>. So, let's play it. So, you can expect from us, and that's what we have guided the market, that we will invest more in the next 2 to 3 years. . . . Last but not least, <u>it's also very good to invest earlier than later in 5G for two reasons. First it will support our unlimited offers. So that will help us to continue the race for unlimited, where some of our competitors might be a little more reluctant</u>. And second, it reduces the cost per megabyte, because with the spectrum that we have, with the efficiency of 5G, we can reduce our cost to operate network. So on one side, we will continue to streamline the organization. On second, we will get the benefit of this 5G transition in terms of data cost." (emphases added).

[92] Application at 98.

[93] *See, e.g.*, Mike Dano, "Opposition to Sprint/T-Mobile merger rallies around '#All4Price'," *FierceWireless* (May 31, 2018).

would accelerate 5G adoption somewhat. That is not a surprising result, given that a horizontal merger would produce capital synergies (though integration headaches could of course thwart this prediction). Strategy Analytics estimated that five years after 5G launches, the merger-case has 37 percent of all wireless subscriptions on 5G. However, this is barely an improvement over the no-merger case, which shows an overall 5G adoption level of 32 percent. That is, the merger is (at best) only expected to produce a 5 percent marginal adoption benefit after five years, across all carriers (see Figure 8).[94]

Figure 8:
U.S. Wireless Technology Penetration Timelines



Source: Strategy Analytics

One of the authors of the Strategy Analytics' report also notes that "everything comes at a cost. Operators in three-player markets enjoy EBITDA margins 3-4 percentage points higher than those in four-player markets so a merger on this scale may

[94] Note that in this projection the 5G curves are more shallow than the 4G curve. This is because from the consumer perspective, 5G's marginal benefits are very minor, at least in the short-to-medium term. This is because the difference in capability between 3G and 4G was very big, particularly as the smartphone era became mature. But the difference between 4G and 5G in terms of speeds is not that large from a consumer standpoint.

weaken price competition and increase operator profits."[95] This risk hardly seems worth the very small potential gain in 5G adoption.

To be clear, availability of 5G is only part of Applicants' claimed benefits of New T-Mobile. The other is enhanced capacity. But as we describe throughout this Petition to Deny, there's scant evidence that there will be demand for capacities that cannot met be more than adequately by Applicants using their existing and planned networks.

For example, T-Mobile claims its planned standalone 5G network would have broad coverage, but lack capacity.[96] This claim is misleading, however, for numerous reasons. First and foremost, it completely ignores the fact that T-Mobile will no doubt acquire additional spectrum at future auctions or on the secondary market.[97] But this claim also ignores the fact that there likely will be little need for any additional excess capacity given the longevity of its 4G network. T-Mobile failed to establish its need for additional spectrum specifically for 5G. Its arguments boil down to speculative use cases

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[95] *Id*. The 17 percent "uplift" predicted by these analysts and quoted in the *FierceWireless* story is the percent difference between an approximate 37 percent 5G adoption level and a 32 percent adoption level after five years.

[96] Application at 20.

[97] The failure of Applicants to adequately account for future spectrum auctions and/or secondary market spectrum transactions, and their failure to include more reasonable estimates of future data consumption, render their predictions unreliable and unreasonable approximations of the real world. The legal standard of the Commission's merger review (and for Section 7 too) requires assessment of probabilities, and it is clear that any reasonable model has a high probability that Applicants and their remaining competitors exercise the increased pricing powers the merger would occasion. The courts have found that economic models are inherent simplifications of the real world and thus "imprecise tool[s]," *United States v. H&R Block, Inc*., 833 F. Supp. 2d 36, 88 (D.D.C. 2011). Accordingly, courts have recognized that an economist's quantitative analysis is probative if it is a "reliable, reasonable, close approximation" of the real world. *Id*. at 72. In the instant case, Applicants' models and predictions are certainly not close approximations of the real world, as they both are contradicted by recent history as well as the Applicants' repeated statements about their future expectations of market supply and demand.

for the select areas in which it won't hold millimeter wave spectrum (which T-Mobile could acquire in the upcoming millimeter wave auctions). But none of these hypothetical use-cases even arguably require T-Mobile to have additional, specific 5G spectrum in the short term. Regardless, T-Mobile's arguments do not offer a cognizable merger benefit that outweighs the lasting harm of a loss of a value-focused nationwide carrier.

Applicants also argue that Sprint's 5G network would lack nationwide coverage.[98] What this argument fails to account for, however, is the competitive benefits where Sprint would operate, how that is a critical component of the competitive forces that discipline the carriers with larger national footprints, and how this shortcoming has in fact benefited competition during the 4G LTE-era.[99] Indeed, Sprint's CFO made this clear in March when he stated "we are still the most aggressive players in the marketplace. We had to compensate a little bit for this bad perception by more aggressive pricing."[100]

Even considering the speculative predictions about future carried capacity offered by Applicants, it is clear that the standalone firms would have **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

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[98] Application at 23-24.

[99] With consolidation wiping out most regional carriers, Sprint's modest geographic shortcomings in part force the company to more aggressively compete nationally on price and non-price dimensions. If the market further consolidates to three equal-sized (in terms of national coverage and quality) firms, consumers will only see "competition" in the form of product add-on differentiation, similar to the offerings of mid-2018 (*e.g.*, Sprint's bundling of Hulu, T-Mobile's bundling of Netflix, AT&T's bundling of DirecTV Now). In other words, it is likely whatever value is lost by not having Sprint's newer networks deployed to the entire country (like the other three national carriers) is more than outweighed by Sprint's subsequent need to compete more aggressively on price in order to make up for this perceived shortcoming.

[100] He continued, stating "it's obvious that once you change the perception, we would be able to close the gap in terms of pricing, [ ] which will give us some support to reignite growth for our wireless revenue." *See* Combes Comments. This is a strong indicator of what is to come post-merger: the end to price competition in the U.S. wireless market.

[END HIGHLY CONFIDENTIAL INFORMATION][101]

The Applicants hang their benefits hat largely on the notion that the average "national practical capacity per month per smartphone subscriber" for all carriers would be **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]** **[END HIGHLY CONFIDENTIAL INFORMATION]**[102] But this wildly speculative prediction glosses over several factors. The most obvious is the fallacy that additional excess capacity would be utilized. Given that networks **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]** **[END HIGHLY CONFIDENTIAL INFORMATION]**, this assumption is likely wrong. Second, like other parts of the Application, this prediction of capacity use assumes current spectrum holdings, when the Commission is on the verge of auctioning new 5G spectrum (and of course Applicants can seek other deals <u>or partner with each other to share spectrum</u>).

This analysis also highlights a critical slight-of-hand in the Applicant's public interest benefits case: the purposeful confusion of price-per-GB with the actual price paid for monthly services. Applicants' claims are based on a theoretical **[BEGIN HIGHLY**

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[101] Application at 42-43.

[102] *Id*. at 52-53.

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[END HIGHLY CONFIDENTIAL INFORMATION] and a speculative series of assumptions about what prices each national carrier would charge for those unlimited plans. But never discussed is the likelihood of what the merger would do to the various carriers' specific prices and plan compositions, and how the merger would impact competition for value-focused customers (as opposed to those specifically seeking to utilize substantially higher amounts of monthly data).

Therefore, we see that T-Mobile and Sprint's primary justification for this horizontal merger – the achievement of efficiencies in order to accelerate 5G deployment and adoption – is misleading. But even if it were true, these efficiencies are non-merger specific,[103] non-cognizable,[104] and would not outweigh the competitive harms of this transaction.

In sum, T-Mobile and Sprint have already announced their existing plans to achieve full 5G deployment, under essentially the same timeframe promised in the merger case. Thus, <u>the merging parties' efficiency claims are non-merger specific and non-cognizable,[105] as each company could achieve these same gains either through utilization of existing assets or other methods</u> such as licensing deals that would enable it to share capacity with other carriers.

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[103] *See Horizontal Merger Guidelines* at 30 n. 13 ("The Agencies will not deem efficiencies to be merger-specific if they could be attained by practical alternatives that mitigate competitive concerns, such as divestiture or licensing.").

[104] *See id.* at 30 ("Cognizable efficiencies are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service.").

[105] These claimed efficiencies are non-cognizable, because they are non-merger specific and would come at the expense of the merging parties reducing efficient output by reducing long-term capital deployment. *See id.*

Furthermore, even if these claimed efficiencies were merger-specific and cognizable, they would not outweigh the competitive harm of this transaction. The Applicants have offered no evidence to suggest that the net benefit of these supposed efficiencies would be passed along to the merged firm's customers; they merely speculate about hypotheticals, like new competition with wired ISPs. If the Commission and DOJ follow their own precedent and guidelines, they will have no choice but to find that the supposed efficiencies do not offset the harms from this merger.[106]

iii. Prior to the Merger Announcement, Applicants Made Repeated Statements that the Benefits of 5G are Speculative and Incremental to Their Robust 4G Networks, and Said that AT&T and Verizon Did Not Have Inherent Advantages in the "Race" to 5G.

The merging parties' Application is littered with jingoistic appeals about a meaningless "race" to be the first country with ubiquitous 5G. The Application also portrays impending doom for Sprint and T-Mobile as standalone companies, with claims that they will be unable to compete against AT&T's and Verizon's 5G networks. But T-Mobile and Sprint executives were singing a completely different tune just a few weeks before the merger's announcement. In February, responding to an analyst's question about the "arms' race" to be first in 5G, T-Mobile's CEO stated "I think your definition of it as an arms' race portrays some of the mass confusion that the market in the United States must have about what 5G is. What its opportunity is, when it's going to be delivered. . . . And I think one of the big problems we have is, AT&T and Verizon, in particular, who have lost or never had competitive network[s], are now trying to

[106] *See id*. at 31 ("The greater the potential adverse competitive effect of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to customers, for the Agencies to conclude that the merger will not have an anticompetitive effect in the relevant market.").

recapture the network brand by defining 5G in something that's only attainable by them. . . . [I]t sure as hell isn't a 2018 arms' race."[107]

Sprint's leadership made similar statements that blatantly contradict the tales of woe in the Application. In February, Sprint's then-CEO told analysts that there "are a lot of claims being made about 5G by our competitors. We believe that <u>Sprint is best positioned to be the first carrier with a nationwide mobile 5G platform</u>. Verizon and AT&T talk about a path to 5G, but they're relying on millimeter wave spectrum that, sure, it will give you super-wide channels of capacity, but the propagation is limited to a very short distance, in most cases requiring line of sight. It is really just a hot zone and not a true mobile experience, unless they spend a fortune to massively densify their network to connect the dots, which will take a long time under current regulatory restrictions for permit. <u>Sprint is the only carrier that doesn't have to compromise what 5G can deliver</u> because we can deliver the super-wide channels of more than 100 megahertz, while still delivering mid-band coverage characteristics."[108]

These statements likely reflect a mere fraction of the truths that will be found in Applicants' internal communications about their true network capacity, and about their pre-merger thinking regarding the necessity for the supposed "race" to 5G. Those internal communications will no doubt contradict the tall tales woven into the Application. We expect the Commission to issue a robust request for information that will uncover these internal communications, and we will provide further analysis on this matter in subsequent filings.

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[107] *See* Legere 4Q 2017 Comments.

[108] *See* Comments of Marcelo Claure, Chief Executive Officer, Sprint Corporation, Q3 2017 Earnings Call (Feb. 2, 2018) ("Claure Q3 2017 Earnings Call").

B. Applicants Offer No Evidence That The Transaction's Massive Consolidation and Elimination of Competition in the Value-Focused Market Segment Would Not Lead to Price Increases, Overstating Efficiencies and Benefits that Would Be Passed Along to Users.

Applicants claim a 6 percent post-merger reduction in ARPU by 2026, which they claim would result from the merged firm passing along scale benefits to customers.[109] Setting aside the reality that in the resulting (and obscenely highly concentrated) market, there would not be the normal competitive pressures that force a carrier to pass along these savings to users (as opposed to shareholders) – <u>this is a wildly misleading statistic</u>. <u>ARPU is already declining</u>.[110] As we explained above, this is in large part due to the growth in additional connections per account, and the concomitant lower revenue for such tablet and IoT lines. A six percent reduction in ARPU by 2026 is an average annual decline of 0.9 percent. But according to CTIA data summarized by the Commission in the *Twentieth Report*, industry ARPU declined by 7 percent in 2016 alone (and between 2012 and 2016, declined by an average annual rate of 1.9 percent). Given that the number of "users" in the form of low-priced narrowband IoT lines is expected to increase significantly, the magnitude of Applicants' claims about ARPU reduction may in fact mask the reality of price <u>increases</u> when measured on a per service or per account basis.

The meaningless nature of this claimed consumer benefit is laid bare by Applicants in their public materials touting the merger, which noted in the long term (5-plus years) their expectation that <u>profit margins</u> (expressed as adjusted EBITDA less capital expenditures) <u>would more than double to a whopping 45 percent</u>, well above the

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[109] Application at 121.

[110] *See Twentieth Report* ¶ 59.

2018 *pro forma* values of 21 percent.[111] This massive margin expansion certainly cannot be explained by increased competition, nor can it be explained by supposed synergies. It's primary source is reduced market-wide competition that enables unilateral and coordinated behavior, as well as a reduction in investment.[112]

The Commission's 2011 decision to reject AT&T's takeover of T-Mobile was in part based on those applicants "significantly overstat[ing] the estimated cost savings of the proposed transaction."[113] This overstatement should not have been surprising, as it reflects the economic reality that large telecommunications firms have largely exhausted their returns to scale, which is particularly the case for wireless firms.[114] Following the collapse of that merger, DOJ economists produced an empirical analysis of firm-level economies of scale in the mobile telephony industry. The DOJ economists found that "in a regulatory system featur[ing] active competition among privatized oligopolies, the firms generally operate within the range of constant returns to scale."[115] The authors

[111] *See* T-Mobile US and Sprint Corporation, "Creating Robust Competition in the 5G Era," at 18 (Apr. 29, 2018) (showing the 2018 *pro forma* values for adjusted EBITDA and margins; adjusted EBITDA less capital expenditures and margins; capital intensity; as well as the short and long-term expectations for these values at New T-Mobile).

[112] *Id*. (showing the *pro forma* company spent approximately 18-19 percent of service revenues on capital expenditures during 2018, which Applicants expect would decline at New T-Mobile to 15-20 percent by year four, and decline further to 13-15 percent after the fifth year).

[113] FCC Staff Report ¶ 176.

[114] *See* Yan Li and Russell Pittman, United States Department of Justice Economic Analysis Group, Discussion Paper, "The proposed merger of AT&T and T-Mobile: Are there unexhausted scale economies in U.S. mobile telephony?" at 8 (Apr. 2012) ("[T]he literature suggests that it is unlikely that a firm as large as AT&T – and perhaps T-Mobile as well – is operating at a point on its overall enterprise cost curve of substantial unexhausted economies of scale."). Note that this was written in 2012, when T-Mobile's reach was well below where it is today, now reaching some 99 percent of the U.S. population.

[115] *Id*. at 15.

stated that they "did not find substantial unexhausted scale economies in mobile telephony in general, especially for firms of medium to large size."[116] Based on this, the DOJ economists concluded that their "results support the decision of DOJ to challenge the merger and the skepticism expressed by the FCC staff."[117]

The DOJ's findings that firms of Sprint's and T-Mobile's size likely do not have unexhausted scale economies suggests that Applicants' claims of substantial merger-related efficiencies are overstated. If this is the case, not only are the supposed benefits of this merger non-cognizable, they would not outweigh the competitive harms of the transaction – particularly the harms caused by the upward pricing pressure in the value-focused market segment.

V. Local Market Divestiture Would Not Remedy the Adverse Competitive Impacts That This Transaction Would Have on The Nationwide Product Market, and Would Impart Substantial Harm on Applicants' Price-Sensitive Customers by Forcing them to Purchase Service from a Higher-Priced Carrier.

We strongly believe, based on the evidence and past precedent, that as the Commission and DOJ conducts their analysis each agency will have no choice but to challenge this merger.[118] The merger will significantly increase market concentration in already highly concentrated markets.[119] The market structure is such that it is extremely

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[116] *Id.*

[117] *Id.* at 16.

[118] *Horizontal Merger Guidelines* at 25 ("The Agencies are likely to challenge a merger if the following three conditions are all met: (1) the merger would significantly increase concentration and lead to a moderately or highly concentrated market; (2) that market shows signs of vulnerability to coordinated conduct (see Section 7.2); and (3) the Agencies have a credible basis on which to conclude that the merger may enhance that vulnerability. An acquisition eliminating a maverick firm (see Section 2.1.5) in a market vulnerable to coordinated conduct is likely to cause adverse coordinated effects.").

[119] *See* discussion of HHIs *infra*. The exact HHI values will depend on how the product and geographic market is defined, whether subscribers or revenues are

vulnerable to coordinated conduct; and this merger's elimination of the only two maverick competitors (replacing it with a new firm equivalent in share to the current two largest firms) would only exacerbate that vulnerability.

The Commission and DOJ in the past have challenged horizontal transactions in the wireless market, including numerous acquisitions of smaller regional firms by large national carriers. Many of those transactions were ultimately approved with modest behavioral and structural conditions, most notably the divestiture of assets in certain local geographic markets. But these remedies came in an environment in which there were still at least four viable national carriers, and where divestiture to other firms was possible without raising additional antitrust concerns. This merger is not like those past transactions.

The merger of the market's only two non-vertically integrated and value-focused carriers presents an insurmountable obstacle that local market divestiture cannot cure. First, it is hard to conceive how local divestiture would mitigate the market harm that this transaction would cause at the national level. Because of the increasing market concentration and loss of viable competitive firms, local market divestiture is unlikely to reduce market concentration to an acceptable level. The markets are concentrated to an extent that local divestiture now would be simply rearranging deck chairs on the Titanic.

Second, and most important, the markets in which a post-merger New T-Mobile's market share really climbs into an HHI stratosphere are those in which T-Mobile and Sprint have done well gaining share <u>precisely because these are the markets with</u>

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considered, and the available data. Whichever metric is chosen, it is clear that the transaction will violate the *Horizontal Merger Guidelines* by substantially increasing concentration in already highly concentrated markets.

disproportionately high levels of value-seeking customers. The markets in which New T-Mobile would be the dominant carrier are some of the country's largest, which have a disproportionate share of lower-income wireless users (see Figure 9).[120]

Indeed, as we see in Figures 10 and 11, T-Mobile's and Sprint's customers are far more disproportionately lower-income individuals than are customers of the Twin Bells, and T-Mobile's and Sprint's customers also far more likely to be a member of a racial or ethnic minority group. And because there are no other national carriers left, any local market divestiture would send millions of value-seeking customers into the arms of the two biggest current carriers that simply do not offer value-focused service plans.

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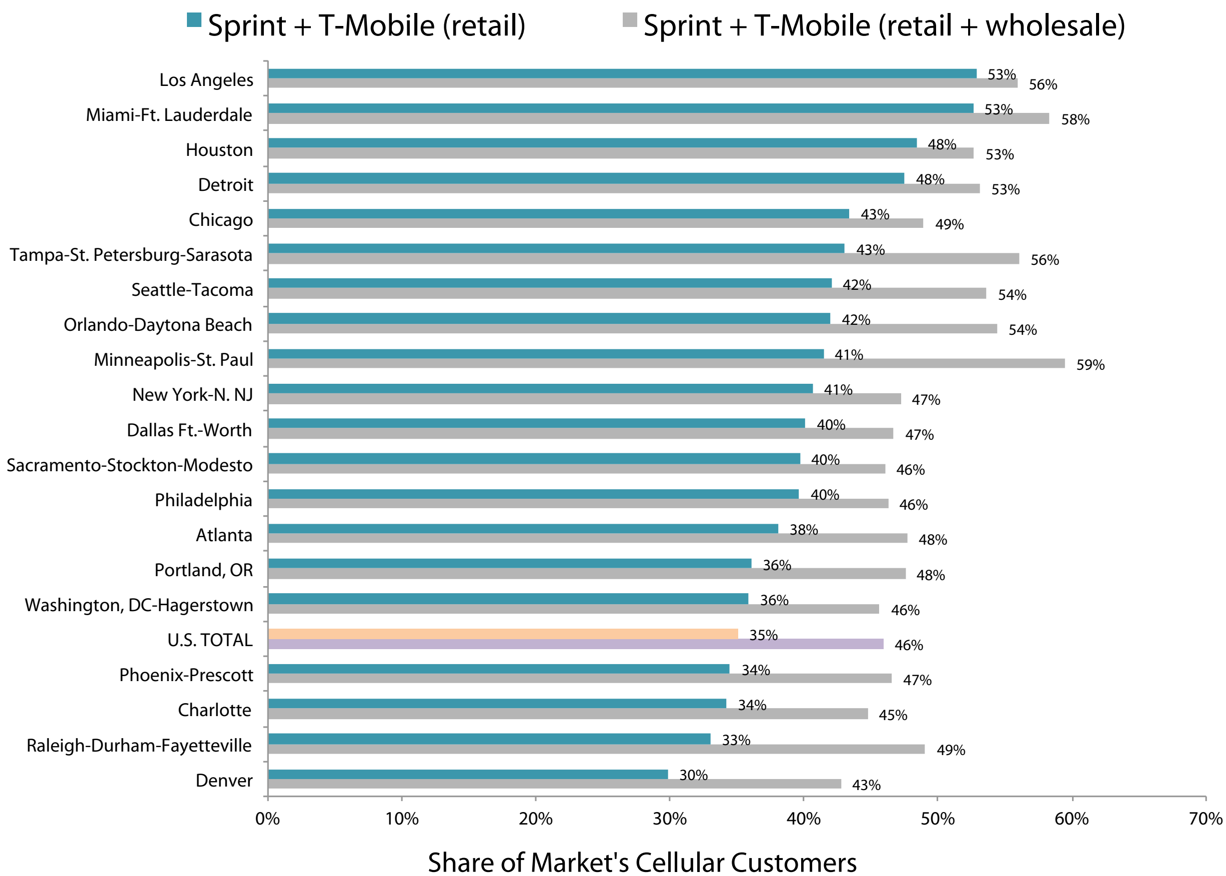
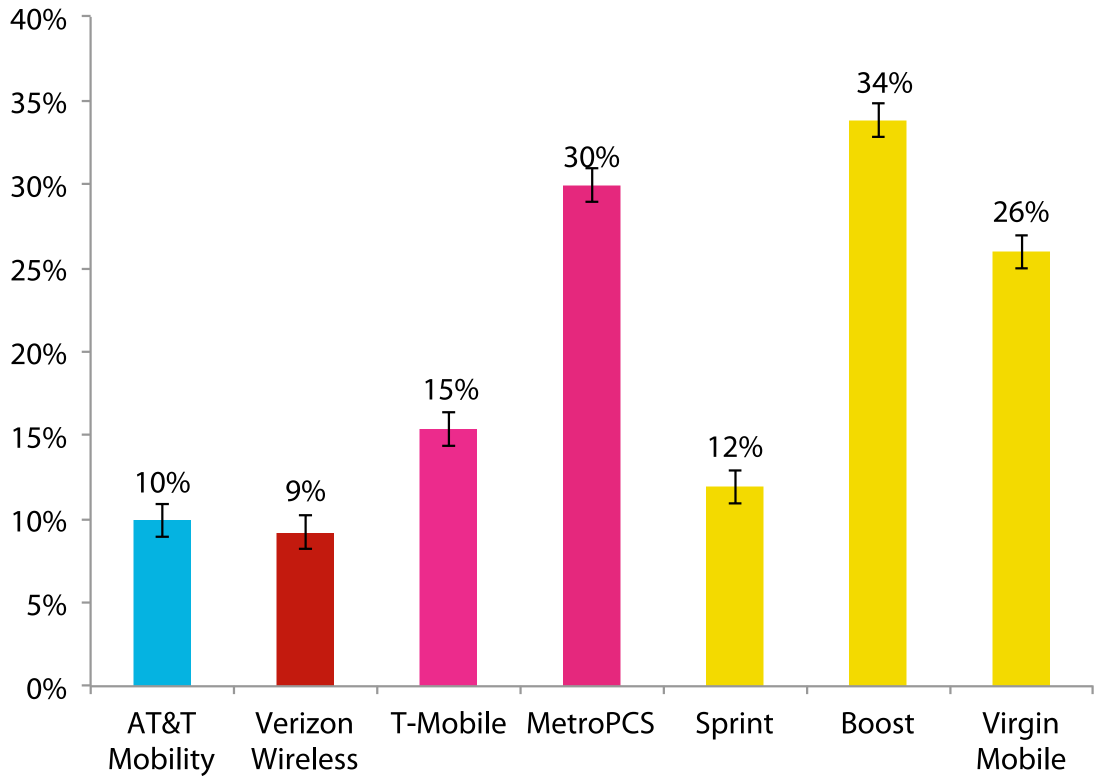
[120] Markets shown in Figure 9 are only those in the top 25 most-populated Nielsen Designated Market Areas ("DMAs") where New T-Mobile would have the largest share of customers (as measured by their retail customers). Values for "Sprint + T-Mobile (retail)" represent the percent of survey respondents reporting either Sprint, Boost, Assurance, Virgin, T-Mobile, or MetroPCS as their carrier. Values for "Sprint + T-Mobile (retail + wholesale partners)" represents the retail share plus the share of the market's cellular customers who report using an MVNO that obtains network access from Sprint and/or T-Mobile. This includes MVNOs that may also purchase wholesale network access from other facilities-based carriers, weighted down to reflect those carriers' portions of the lines. Thus, these estimates are imprecise, as they are based on survey data as well as estimated shares of each MVNO. We expect to file more precise estimates based on our forthcoming analysis of the Highly Confidential NRUF/LNP data.

Figure 9:
Percent of Each Market's Customers that Report Cellular Service from a Sprint or T-Mobile-Owned Company, or Sprint or T-Mobile-Owned company or Wholesale Partner (Select Top U.S. Local Markets)



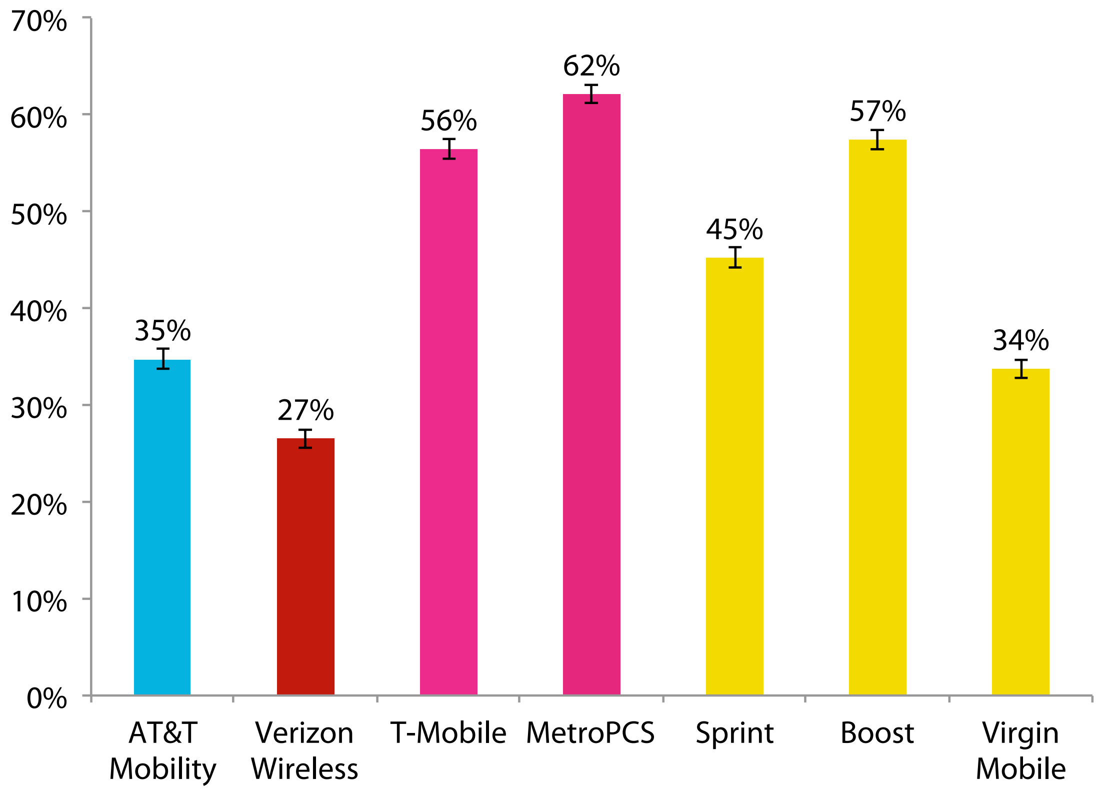
Source: Free Press analysis of a S&P Global Market Intelligence MediaCensus survey of 10,000 U.S. internet adults conducted in February 2018. Values for "retail + wholesale" represent MVNOs that exclusively purchase wholesale network access from Applicants, as well as an estimated allocation of customers from MVNOs that purchase wholesale access from Applicants and other carriers.

Figure 10:
Percent of Each Carrier's Customers that Report Annual Income Below $25,000



Source: Free Press analysis of a S&P Global Market Intelligence MediaCensus survey of 10,000 U.S. internet adults conducted in February 2018. Values for each carrier represent the percent of survey respondents claiming that brand as their carrier who reported their income as less than $25,000 per year. Values shown only represent branded customers, and do not include carriers' unlisted subsidiaries or customers of MVNOs that purchase wholesale network access from one of the facilities-based providers.

Figure 11:
Percent of Each Carrier's Customers that are Persons of Color



Source: Free Press analysis of a S&P Global Market Intelligence MediaCensus survey of 10,000 U.S. internet adults conducted in February 2018. Values for each carrier represent the percent of survey respondents claiming that brand as their carrier who self-reported a race or ethnicity other than Non-Hispanic white. Values shown only represent branded customers, and do not include carriers' unlisted subsidiaries or customers of MVNOs that purchase wholesale network access from one of the facilities-based providers.

Finally, it is critical to note that prior to announcing its merger with Sprint, T-Mobile made public its plans to expand its retail footprint into the one-third of the U.S. that currently lack T-Mobile stores. During 2017, the company opened 1,500 new T-Mobile stores and 1,300 MetroPCS stores, many in "greenfield" areas that previously lacked any T-Mobile/MetroPCS retail presence. In March of this year, T-Mobile confirmed its plans to continue this expansion with "100 percent . . . in new greenfield markets."[121] Sprint also is in the process of a substantial retail expansion, which includes its own storefronts as well as a massive expansion inside Walmart stores.[122]

These retails expansions are important, because it is likely that each carriers' respective market shares are relatively low in these local "retail greenfield" areas, and thus they may not be flagged as CMAs where the transaction would violate the *Horizontal Merger Guidelines*. But competition in these markets would be negatively impacted by the merger, because T-Mobile was preparing to enter and capture share. Furthermore, the merger would eliminate the need for T-Mobile to build new retail presence in these greenfield areas, depriving workers in those areas of new job opportunities. Given T-Mobile's boasting about how people celebrate the opening of these greenfield stores and how much "pent-up demand" there is in these areas, it is clear that T-Mobile is ignoring the loss of these future benefits in the Application's calculus of supposed benefits.[123]

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[121] *See* Comments of J. Braxton Carter, Chief Financial Officer, Executive Vice President and Treasurer, T-Mobile US, Inc., European and Emerging Telecoms Conference (Mar. 20, 2018).

[122] *See* Claure Q3 2017 Earnings Call ("[W]e will continue to drive a smart distribution strategy with over 1,000 new stores opened year-to-date across our Sprint and Boost brands and several hundred more planned throughout next year."); *see also* statement of Marcelo Claure on Twitter.com (July 27, 2018) ("BIG news for @Sprint today as we're expanding into 700 @Walmart stores! Strategic partnerships like this help more people see why @Sprint is the best choice for #unlimited.").

[123] *See* Comments of J. Braxton Carter, Chief Financial Officer, Executive Vice President and Treasurer, T-Mobile US, Inc., Morgan Stanley Technology, Media & Telecom Conference (Feb. 28, 2018) ("A lot of our advertising is nationwide and it's much more efficient to buy it that way. You've got brand recognition and a lot of pent-up demand. When we're launching some of these smaller parts of the city, I mean, they bring the high school band out, the mayor is there cutting the ribbon and then we open the store and just tremendous excitement over this distribution.").

VI. Conclusion

The U.S. wireless market is already one with coordinated effects and rampant pricing power. It is a market with little true price competition, even though it has shown signs of non-price competition in recent years, thanks almost entirely to the competition between Sprint and T-Mobile for the market's value-conscious customers.

This merger would eliminate this "maverick" competitive pressure, exacerbating pre-existing coordination effects, resulting in substantial unilateral harms, and creating substantial unilateral pricing power in the wholesale market – which though important to resellers serving the most value-focused and credit-challenged customers has largely failed to exert competitive pressure on the nation's two most dominant retail carriers.

The last time the Commission and DOJ were faced with a similar national wireless market merger, they rejected it, and in doing so set off a period of pro-consumer market expansion and competition. This current merger poses similar issues, and comes with similar unrealistic promises of benefits, and similar overwrought predictions of doom if it is rejected. We urge the Commission to follow the evidence before it and also heed the lessons of the recent past, both of which indicate that the T-Mobile/Sprint merger would produce a clear net harm to competition and the public interest.

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August 27, 2018

<u>**CERTIFICATE OF SERVICE**</u>

I, Matthew F. Wood, Policy Director for Free Press, certify that on this 27th day of August, 2018, I have caused true and correct copies of the REDACTED version of the foregoing Petition to Deny of Free Press to be served on the following individuals by electronic mail; and, only as indicated, that I have caused true and correct copies of the unredacted version of same to be served on specified parties by hand:

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APPENDIX

What Can The Stock Market Tell Us About How Investors View The Impact of the Potential Merger of T-Mobile and Sprint on AT&T and Verizon?

INTRODUCTION

One of the primary concerns about the potential merger between Sprint and T-Mobile is how the reduction in the number of national wireless carriers from four to three would impact the price of mobile telecommunications services. Antitrust authorities are of course concerned about the potential for a merger to confer additional unilateral pricing power on the merged firm. But these authorities also weigh the potential for a merger to confer pricing power on the other firms in the market. T-Mobile and Sprint claim the increased scale of the merged firm and its resulting size relative to the wireless market's current leaders – AT&T and Verizon – would lead to increased competition and lower prices.[1] This pleasing story ignores the classic concern about mergers like this one that substantially increase concentration in an already-highly concentrated market: the concern about coordinated effects.

According to the U.S. Department of Justice and Federal Trade Commission *Horizontal Merger Guidelines*:

> A merger may diminish competition by enabling or encouraging post-merger coordinated interaction among firms in the relevant market that harms customers. Coordinated interaction involves conduct by multiple firms that is profitable for each of them only as a result of the accommodating reactions of the others. These reactions can blunt a firm's incentive to offer customers better deals by undercutting the extent to which such a move would win business away from rivals. They also can enhance a firm's incentive to raise prices, by assuaging the fear that such a move would lose customers to rivals.[2]

The *Horizontal Merger Guidelines* state that such coordination need not involve *per se* illegal actions like explicit agreements between firms to fix prices:

> Coordinated interaction alternatively can involve parallel accommodating conduct not pursuant to a prior understanding. Parallel accommodating conduct includes situations in which each rival's response to competitive moves made by others is individually rational, and not motivated by retaliation or deterrence nor intended to sustain an agreed-upon market outcome, but nevertheless emboldens price increases and weakens competitive incentives to reduce prices or offer customers better terms. [3]

There are numerous examples in the literature of horizontal mergers resulting in consumer harm, and comparative market analysis that suggests likely harms resulting from the contraction of a wireless market

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[1] Application at i. It is worth noting that Applicants at times seem to imply that the merger would lower prices, but this appears to be short-hand for their actual claim that it would result in a lower price per gigabyte. This is however a completely unremarkable claim for an industry that is characterized by a Moore's-law type improvement in output capacity due to technological improvements and declining per-unit production costs.

[2] *Horizontal Merger Guidelines* at 24.

[3] *Id.* at 24-25.

from four to three national carriers.[4] There is also research suggesting that mergers in markets with structures that are already highly concentrated may not produce measurable price changes due to the existence of pre-merger coordinated effects (*i.e.*, the market's producers have already settled on a "monopoly" price and output).[5] The primary antitrust concern in such situations is the weakened incentives of firms to deviate from the existing coordinated behavior.

AT&T and Verizon have long held their positions at the top of the oligopolistic U.S. wireless market. However, in recent years each has been forced to respond to T-Mobile's and Sprint's competitive moves (actions that resulted primarily from T-Mobile's aggressive pricing and service changes first rolled out in the aftermath of the U.S. government's rejection of the AT&T/T-Mobile merger). While not quite the "price war" that media headlines implied, there is ample evidence that the U.S. wireless market has experienced a higher level of competitive behavior during the 2012-2018 period, and that this increased competitive action resulted in an overall decrease in the quality-adjusted prices paid by U.S. wireless customers.[6]

This recent history of competitive responses by the two carriers atop the wireless market, and the role that the four-carrier market structure played in it, are a primary reason to be concerned about the T-Mobile/Sprint merger. While it is theoretically possible that the merged "New" T-Mobile would continue its "uncarrier" behavior in an attempt to gain additional market share from the Twin Bells, there is no evidence that New T-Mobile's incentives would produce this outcome. Indeed, though the responses of the Twin Bells to the promotions by Sprint and T-Mobile are important, so too are the responses of T-Mobile to Sprint's promotions, and vice versa. The competition <u>between</u> Sprint and T-Mobile for more value-conscious customers ultimately impacts as well the actions of Verizon and AT&T.

Applicants claim that this horizontal merger would produce operational efficiencies (*e.g.*, reduction in capital requirements, reduction in operating costs from tower leases and maintenance, reduction in operating and capital costs from elimination of retail stores). Verifications and quantifications of these claims notwithstanding, if it were indeed the case, the important question for regulators would be whether the merged firm, operating as a rational actor in a highly concentrated market, would transfer these efficiency gains to consumers in the form of price reductions? (And if the only claim were output-adjusted price reductions per gigabyte, this claim should be measured against the "but-for" world without the merger). Or is it more likely that the merged firm would direct efficiency gains to shareholders, who are eager to see New T-Mobile rise to the level of profitability long-enjoyed by AT&T and Verizon? And how would the increase in

[4] *See, e.g.*, Working Party on Communications Infrastructures and Policy, OECD, "Wireless Market Structures and Network Sharing," at 17 (Jan. 8, 2015) ("Competition in mobile markets benefits consumers by offering them better services, quality and price discipline. Particularly in countries with four or more mobile operators these benefits are visible through more competitive and more inclusive offers and services that are generally not available in countries with three mobile operators."); *see also* Price Waterhouse Coopers, "Grasping at differentiated straws: Commoditization in the wireless telecom industry" (Feb. 2018) (showing that markets with four or more carriers tend to have lower prices and exhibit behavior closer to a commoditized market, with low spreads in market share and ARPU; while markets with three carriers exhibit behaviors of a "comfortable" market, with high spreads in market share spread and ARPU).

[5] *See, e.g.*, Juan Jiménez González and Jordi Perdiguero, "Mergers and difference-in-difference estimator: why firms do not increase prices?" Research Institute of Applied Economics, at 25-26 (Working Paper, May 2012) ("The majority of articles that apply [difference-in-difference] methodology to analyze the effect on prices of concentration processes report significant price increases, the exception being the research conducted to date in the gasoline market . . . One reason for this result is the lack of competition in the markets. This means that, after the merger was completed, prices did not rise as they were already fixed at the joint maximum profit; i.e., perfect monopolistic equilibrium . . . If we analyze the Competition Authority's decision only from the standpoint of unilateral effects, the decision to accept the merger can be considered correct. Increasing market concentration was not detrimental to consumers. However, if we take multilateral effects into account, it seems that the Antitrust Authority should have examined in greater depth the impact of the disappearance of a competitor on the maintenance of a collusive agreement.").

[6] *Supra* Figure 3.

the likelihood of parallel accommodating conduct ultimately impact not only New T-Mobile's future actions, but the future actions of Verizon and Sprint?

These are complex questions that involve the uncertainty of prediction. We can however gain some confidence in the direction of our predictions by examining the perceptions that market actors have of the merger. Obviously, Sprint and T-Mobile view the merger as positive and accretive to their shareholders. The shareholders of each firm are also likely to collectively view the deal as positive (though this view depends on the specific financial structure of the deal, and one firm's shareholders may hold a view that is less strong than the other firm's shareholders because of this consideration).

But what about Verizon and AT&T, and their shareholders? Both Verizon and AT&T company representatives have publicly expressed neutral positions on the merger since it became an official proposal at the end of April 2018.[7] This neutrality is not indicative of very much at all, as dominant firms rarely speak against others' mergers, perhaps hoping to avoid having their arguments used against them in the future when they come to regulators seeking approval for their own acquisitions.

And so what about the AT&T and Verizon investors themselves. Do they have a collective view of the import of the T-Mobile/Sprint merger for the value of the Twin Bells' equity? Short of surveying individual investors, there's no definitive method for answering this question. We can however examine the movement in company share prices, and use this movement as an imperfect proxy for investors' collective view. Stock prices reflect a consensus valuation of a company's current value and its future growth potential (and reflect as well a company's financial structure, and whether or not it is a "growth" or "dividend" equity). Stock price movements are fundamentally a function of supply and demand. At any given time, if demand for a stock increases, the price will increase; if demand decreases, the price declines. These price fluctuations are an indicator of how supply and demand change over the short-term.

It is therefore possible to examine a stock's price movements during a short-term event, such as a breaking news story; compare that movement to shares not impacted by the news; and draw conclusions about how "the market" collectively viewed the impact of the news on demand for a company's stock. From this, it is possible to draw reasonable inferences about the collective view of "the market" on the future fortunes of the company in question. We stress that this of course should be a cautious inference, as short-term stock price movements can reflect in part speculation by some investors about how other investors will react in the short-term to the news.

Below we examine stock pricing data for a number of firms, seeking understanding about how investors view the potential impact of a T-Mobile/Sprint merger on the future economic fortunes of AT&T and Verizon.

METHODOLOGY & DATA

To investigate the collective response of "the market," in the short-term movements of a certain company's equity prices in response to news of the T-Mobile/Sprint merger, we first must identify relevant news moments. To do this, we searched S&P Global's news archive for the terms "Sprint" or "T-Mobile" appearing in articles that also contain the terms "merger" or "deal." Our search period encompassed 2012 through May 2018, the time between the collapse of the proposed AT&T/T-Mobile merger and formal announcement of this most recent T-Mobile and Sprint merger attempt. We then classified news about the possible merger into three categories: 1) days when news indicates the T-Mobile/Sprint merger is under consideration (or is happening); 2) days when news indicates the merger is highly likely to happen; 3) days

[7] *See, e.g.*, Matt Day and Rachel Lerman, "'We frankly don't care' if T-Mobile and Sprint merge, Verizon CEO says," *Seattle Times* (May 2, 2018); Monica Alleven, "AT&T's Donovan on T-Mobile/Sprint merger: We won't contest it," *FierceWireless* (May 15, 2018); Chris Mills, "Wow, I wonder why AT&T and Verizon aren't worried about that mammoth Sprint-T-Mobile merger," *BGR* (May 16, 2018).

when news indicates the merger is not likely to happen. These events are summarized in Figures A1 and A2 below.

Figure A1: Descriptive Statistics

Company	% Change - Day of Positive News for Merger (all news days)	% Change - Day of Positive News for Merger (major news days)	% Change - Day of Positive News for Merger (major news days; exclude Mon. 4/30/18 sell-off)	% Change - Day of Negative News for Merger
T-Mobile	1.75%	-0.04%	1.19%	-2.17%
Sprint	1.73%	2.10%	5.26%	-3.50%
AT&T	0.07%	0.23%	0.48%	-1.78%
Verizon	0.04%	0.19%	1.09%	-1.61%
CenturyLink	-0.22%	0.15%	0.52%	0.21%
Cincinatti Bell	0.35%	0.13%	0.16%	0.42%
Comcast	-0.25%	-0.75%	-0.64%	-0.89%
Charter	-0.81%	-1.73%	-2.68%	0.41%
S&P 500	0.08%	0.27%	0.49%	-0.17%
Russell 3000	0.07%	0.26%	0.47%	-0.20%

Figure A2: Key Dates and News Events

*Positive News Days (major positive news days in **bold**)*	
Friday, Dec. 13, 2013	WSJ: Sprint could place a bid for Tmo in "the first half of 2014."
Thursday, Dec. 19, 2013	WSJ: At least 6 banks are working on proposals to finance merger.
Wednesday, Dec 25, 2013	Nikkei Asian Review: Softbank is in "the final stages" of talks to buy DT's stake in T-Mobile.
Thursday, Jan 16, 2014	WSJ: Sprint mulls financing options for possible T-Mobile bid.
Sunday Jan 19, 2014	Bloomberg: Softbank, DT in direct talks on Sprint/T-Mobile deal.
Tuesday March 11, 2014	Son gives a speech at USCOC which sparked additional speculation the merger was real.
Thursday May 1, 2014	Bloomberg: Sprint approached 6 banks to arrange funds for a possible T-Mobile US Inc. bid in June or July.
Thursday May 29, 2014	Reuters: DT agreed to sell its majority stake in TMUS to Softbank.
Wednesday June 3, 2014	Reuters: Softbank has agreed to acquire TMUS for $32B. Source said other details not finalized.
Wednesday, May 10, 2017	FT reports Son saying in Softbank's earnings call that they're looking to merge Sprint with TMUS.
Thursday, May 11, 2017	Bloomberg reports DT CEO is weighing a potential merger for TMUS.
Friday, May 12, 2017	Bloomberg reports Sprint and TMUS have reinitiated talks to explore a merger.
Monday August 7, 2017	Bloomberg reports Sprint and TMUS are in talks again to merge, after the two-month Comcast/Charter window expired.
Tuesday, September 19, 2017	CNBC reports that TMUS and Sprint are engaged in active discussions to merge, but weeks away from finalizing terms.
Friday, September 22, 2017	Reuters reports T-Mobile US Inc. and Sprint Corp. are close to agreeing on the terms of a merger that could be announced next month.
Friday, October 6, 2017	Bloomberg reported Sprint and TMUS are working on the final details of a merger that may be announced before the end of October.
Sunday, October 15, 2017	Reuters reports Softbank and DT reached a broad agreement on the merger.
Thursday, November 2, 2017	WSJ reports TMUS made a revised offer to save the merger. Softbank is considering new terms.
Tuesday April 10, 2018	WSJ reports Sprint and TMUS have resumed merger talks.
Friday April 27, 2018	Reuters reports TMUS and Sprint could reach a deal by the first week of May.
Sunday, April 29, 2018	Merger officially announced.

Negative News Days	
Tuesday August 5, 2014	WSJ reports Sprint decided to abandon its bid for TMUS b/c of difficulty in obtaining regulatory approval, and that it would replace its CEO.
Thursday, June 27, 2017	WSJ Reports Sprint Chairman Masayoshi Son entered into an exclusive two-month negotiation period with Comcast Corp. and Charter Communications Inc.
Thursday, October 12, 2017	Reuters reports three sources saying US DOJ is expected to oppose a potential Sprint+TMUS merger.
Monday, October 30, 2017	Nikkei reported that Softbank is set to end merger talks after failing to agree on the ownership structure.
Wednesday November 1, 2017	Bloomberg reports merger talk on life support, but Softbank had not yet canceled talks, as it waits on a final proposal from DT.
Saturday November 4, 2017	Sprint and TMUS issue joint statement saying merger talks are over, no deal.

Our objective is to ascertain whether there were any significant changes in AT&T's and Verizon's stock prices in response to news of the possible T-Mobile/Sprint merger, or news of that potential merger's demise. Thus, we examine the stock prices of the following companies: T-Mobile, Sprint, AT&T, Verizon, CenturyLink, Cincinnati Bell, Comcast, and Charter. These companies can be grouped together as: T-Mobile and Sprint (the merging parties); AT&T and Verizon (Sprint's and T-Mobile's national wireless market competitors, who are also vertical into many other markets); CenturyLink and Cincinnati Bell (wired telephone companies that generally are not vertically integrated into other markets); and Comcast and Charter (cable companies with varying levels of vertical integration, both of which have ambitions of entering the wireless market, and both of which were engaged in formal merger/partner talks with Sprint).

We examine these specific non-wireless ISPs along with the four national wireless carriers for several reasons. First, they serve as controls (*i.e.*, they are firms not directly involved in the merger nor the direct national wireless market competitors of the merger candidates) beyond the broader market index funds (*e.g.*, S&P 500, Russell 3000). That is, they are proximate enough to the wireless ISP market as wired ISPs, and thus their equity values might change alongside those of the wireless carriers in response to news that impacts the telecom market but not other markets. But these firms are not all completely disinterested in the T-Mobile/Sprint merger. As grouped above, the two ILECs are the least impacted by the possible merger; the two cable companies were in a formal negotiation with Sprint about a possible acquisition or partnership (with Charter rumored to be a target of Sprint's parent company, SoftBank).[8]

Our expectations for short-term stock movement for each of these firms varies, but these groupings broadly capture the groups for which we expect certain results.

We would expect that Sprint's and T-Mobile's share prices would be most impacted by any merger rumors, and would rise in the short term on positive news while declining on negative news. One confounding factor, however, is the different impact on share prices depending on which firm is the acquiring party. For example, the spring 2014 rumors indicated that Sprint would acquire T-Mobile, while the final 2018 deal has T-Mobile as the surviving firm.

In a typical market – one characterized by robust competition and low entry barriers – we would expect the share prices of the market's top firms to move lower on news of consolidating rivals. And in such a market, we would expect the share prices of the top firms to move higher (or stay flat) upon news that such a potential merger was now off. This is because in a competitive market, the dominant firm(s) would be expected to have lower future earnings as a result of strengthened rivals, and would be expected to maintain or improve future earnings if the rivals were not permitted to merge. Yet the already highly concentrated wireless market is not typical. Shareholders in the wireless market generally view market consolidation as a positive for the fortunes of the remaining parties. And in an already highly-concentrated market, shareholders understand there's more to lose from increased competition following a rejected merger than there is to gain from approval of a merger in a market in which the market's top firms (in this case AT&T and Verizon) already enjoy substantial market power.

We would expect that the ILEC shares would not show any significant movement on the key news event days, as these firms do not compete with the merger candidates, nor would they stand to gain or lose material business if the merger were consummated or rejected.

Finally, we would expect to see little movement in cable company stocks on merger news days. However, because of the widely reported negotiations between Sprint and Comcast and Charter jointly, we would expect some minor disappointment from shareholders upon learning that those separate tie-ups would not happen (this is particularly true for Charter, which was rumored to be a direct merging partner for Sprint).

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[8] *See, e.g.*, Mari Silbey, "Rumor Mill: SoftBank Still Eyeing Charter," *LightReading* (Mar. 12, 2018). We note that after the Applicants filed their Public Interest Statement, there have been stories that mention, or uncritically accept Applicants' premise that 5G wireless services will be directly competitive with wireline broadband services, a market dominated by traditional cable distributors. However, this notion was largely non-existent prior to the merger's announcement. Nevertheless, even today, there is a high degree of skepticism about whether fixed 5G services will have a material impact on the businesses of wired ISPs, many of whom have already deployed networks capable of delivering multi-gigabit capacities to customers.

It is important to note the impact that prior expectations can have in blunting or accentuating the collective market's response to a news event. If investor's have "priced-in" the expectation of a merger, positive news of ongoing negotiations may not produce a significant increase in demand for a merging firm's stock because the price already contains the merger "premium." Conversely, if the market expects a merger to happen and news breaks that it will not, the price swing may be much more substantial. There are other potential complications to interpreting the meaning of stock price movements in response to merger news. If investors have purchased a stock with the expectation of a merger increasing that stock's short-term price, and news breaks confirming a likely merger, some of these investors may sell the equity in order to harvest profits, leading to a flat or declining stock price in the days following the news event.

A stock's price movements are a function of supply and demand of/for that stock, which is a function of investors' views about the current and future valuation of that stock. These views are influenced by the business fundamentals of the company in question, the fundamentals of the market in which it operates, and investors' collective temporal views about the broader economy. This last factor is particularly important, as a particular equity may rise or fall on a given day where nothing new about their company is revealed or discussed, but simply because the news of the day influenced investors' attitudes about the broader economy, triggering a general buying or selling mood. To account for this, in our second model we add the daily percentage change in the Russell 3000 index as a control variable in our model of a stock's daily percentage price change as a function of a news event. The two general model forms are thus:

$$y_{it} = \beta_0 + \beta_1(event_n) + \varepsilon_{it} \qquad \text{(model 1)}$$

$$y_{it} = \beta_0 + \beta_1(event_n) + \beta_2(broadmarket_t) + \varepsilon_{it} \qquad \text{(model 2)}$$

Where

y_{it} is the percent change in firm *i*'s stock price over time period *t*

$event_n$ is a dummy variable that has a value of 1 on certain news days and a value of 0 on the other days. There are three types of events, as described in more detail above.

$broadmarket_t$ is the percent change in the value of the Russell 3000 index over time period *t*.

β_0 is the model's constant value.

β_1 is the coefficient for event days.

β_2 is the coefficient for the Russell index's change.

ε_{it} is the model error.

Finally, we run an alternative model that is identical to those described above for major positive news days, but excluding the values from the first trading day after the merger was made official (Monday, April 30, 2018) as a major positive news event. We did this because it is clear from the raw values and contemporaneous news events that there was a significant "sell-off" of Sprint shares on that Monday, likely from more expert traders who were seeking short-term profits from lay investors buying on the official news of the merger (the merger was largely confirmed by news from Friday, April 27, 2018, with the parties issuing a press release formally announcing the deal on Sunday, April 29, 2018).

RESULTS

The results of this analysis are shown below in Figures A3 (no broad market control) and A4 (Russell 3000 index included as a broad market control). The data shown are the marginal effects on each company's stock price, one trading day after the key news event categories.[9] Bolded values in shaded cells were those of firms whose 1-day stock price change was statistically significant at $p<0.1$ (all p-values are shown, and most of the significant changes had p-values below 0.05).

Figure A3: Marginal Effects (Model without broad market control)

Marginal Effect (No Broad Market Control; ISP's 1 Day % Change = β0 + β1*News Event Day + εi)

Company	% Change - Day of Positive News for Merger (all news days)	% Change - Day of Positive News for Merger (major news days)	% Change - Day of Positive News for Merger (major news days; exclude Mon. 4/30/18 sell-off)	% Change - Day of Negative News for Merger
T-Mobile	**1.75%**	-0.04%	1.19%	**-2.17%**
p-value	0.000	0.961	0.190	0.009
Sprint	**1.73%**	**2.10%**	**5.26%**	**-3.50%**
p-value	0.009	0.091	0.000	0.005
AT&T	0.07%	0.23%	0.48%	**-1.78%**
p-value	0.740	0.579	0.290	0.000
Verizon	0.04%	0.19%	**1.09%**	**-1.61%**
p-value	0.854	0.664	0.022	0.000
CenturyLink	-0.22%	0.15%	0.52%	0.21%
p-value	0.575	0.839	0.523	0.778
Cincinatti Bell	0.35%	0.13%	0.16%	0.42%
p-value	0.503	0.892	0.881	0.670
Comcast	-0.25%	-0.75%	-0.64%	-0.89%
p-value	0.373	0.145	0.259	0.084
Charter	**-0.81%**	**-1.73%**	**-2.68%**	0.41%
p-value	0.030	0.013	0.000	0.559

[9] If the news broke over the weekend, the price change measured is the change in the following Monday's closing price from the prior Friday. If the news broke over a weekday holiday, the price change measured is the change in the following trading day's closing price from the most-recent trading day's closing price.

Figure A4: Marginal Effects (Model with broad market control)

Marginal Effect (Russell 3000 Index Broad Market Control ; ISP's 1 Day % Change = β0 + β1*News Event Day + β2*% Change Russel 3000 + εi))

Company	% Change - Day of Positive News for Merger (all news days)	% Change - Day of Positive News for Merger (major news days)	% Change - Day of Positive News for Merger (major news days; exclude Mon. 4/30/18 sell-off)	% Change - Day of Negative News for Merger
T-Mobile	**1.73%**	-0.25%	0.78%	**-1.93%**
p-value	0.000	0.746	0.357	0.012
Sprint	**1.71%**	1.86%	**4.78%**	**-3.21%**
p-value	0.007	0.117	0.000	0.007
AT&T	0.06%	0.10%	0.22%	**-1.62%**
p-value	0.761	0.786	0.586	0.000
Verizon	0.03%	0.05%	**0.81%**	**-1.45%**
p-value	0.893	0.895	0.051	0.000
CenturyLink	-0.24%	-0.04%	0.13%	0.43%
p-value	0.503	0.951	0.860	0.525
Cincinatti Bell	0.32%	-0.12%	-0.35%	0.71%
p-value	0.503	0.893	0.723	0.428
Comcast	-0.27%	**-0.95%**	**-1.04%**	-0.66%
p-value	0.231	0.023	0.024	0.114
Charter	**-0.83%**	**-1.92%**	**-3.07%**	0.63%
p-value	0.014	0.002	0.000	0.320

As Figures A3 and A4 indicate, this analysis largely reflects our prior expectations described above.

Sprint and T-Mobile share prices moved higher on days with news events that indicated the merger was possible (relative to all other days). Sprint and T-Mobile share prices declined on days with news events that indicated the merger was not likely to occur (relative to all other days). On negative news days for the merger, Sprint's shares showed larger declines than T-Mobile's, likely reflecting the market's general belief that Sprint needs the merger more than T-Mobile.

As expected, the share prices for ILECs CenturyLink and Cincinnati Bell did not show significant changes on the three groups of key news event days (relative to all other days).

Also as expected, the share prices for Comcast and Charter moved significantly lower on days where there were major news events indicating the merger between Sprint and T-Mobile was possible or likely (or confirmed), relative to all other days. Charter, as a long-rumored potential merging partner for Sprint, saw its shares significantly decline on all news days that indicated the merger was possible. Neither Comcast nor Charter shares saw significant changes relative to other days on the days when there was news indicating the T-Mobile/Sprint merger was unlikely. This perhaps reflects the tenuous nature of the rumors about any merger or partnership between these cable companies and Sprint, and the market's indifference to such a tie-up not happening.

Finally, we observe that AT&T and Verizon's stock prices saw significant declines on the days when news stories indicated that the T-Mobile/Sprint merger was not likely (significant relative to all other days in the study period). Only Verizon's shares saw significant increases on the "major" news event days when the news indicated the merger was likely – but only for the major positive news days that excluded the day the merger was confirmed.

The AT&T and Verizon results indicate that investors collectively view the continued independent operation of T-Mobile and Sprint as something that would reduce future earnings of both Twin Bells. The lack of movement of Verizon and AT&T shares on all positive news days could reflect the reality that the market is already operating in an oligopolistic state; in other words, the market may have the collective belief that while AT&T's and Verizon's future may not be substantially enhanced by a Sprint/T-Mobile merger, these future earnings would be harmed by the continued, heightened level of competition that would occur from independent T-Mobile and Sprint. The Verizon result on the major positive news days could reflect the market's belief that Verizon – as the highest-priced carrier, with a reputation for having the highest-quality network – could enjoy enhanced pricing power in a more consolidated market, while AT&T would be a closer competitor to New T-Mobile.

CONCLUSION

Our analysis of the single-day movement of AT&T and Verizon share prices on days following major news of a possible T-Mobile/Sprint merger possibly indicates that shareholders of these two mobile market leaders perceive standalone T-Mobile and Sprint as a threat to the Twin Bells' future earnings. While this analysis is in no way dispositive of the likelihood of future coordinated effects or parallel conduct, it does offer insight into how "the market" (which is largely comprised of professional investors) views the importance of standalone T-Mobile and Sprint to the abilities of AT&T and Verizon to leverage their market power. This analysis is yet another piece of evidence amongst a myriad of data that indicates the T-Mobile/Sprint merger, and its massive concentration of the wireless market, would certainly reduce competitive activity in the wireless market, harming the public interest.

DECLARATION OF O'NEIL PRYCE

1. I, O'neil Pryce, am the Special Assistant to the President and CEO at Free Press. I am also a member of the organization, located at 1025 Connecticut Ave. NW, Suite 1110, Washington, D.C. 20036.

2. I reside in Washington, D.C.

3. I am a T-Mobile customer. I regularly use my mobile device on T-Mobile's network – for voice, text and data services. I rely on these services for personal and work-related uses.

4. I believe that I and other customers like me would be harmed by T-Mobile's acquisition of Sprint because the decreased competition would result in higher prices for me and increase the risk of privacy invasions.

5. I believe the proposed merger would raise the price of the merged firm's mobile offerings. As Free Press wrote in its 2016 report *Digital Denied*, "despite the persistence of a digital divide for wired internet-access connections, the relatively higher levels of competition and choice in the mobile market have largely closed such divides in mobile internet and cellphone adoption." While both T-Mobile and Sprint have fewer customers and fewer advantages than their larger rivals, they still have a nationwide footprint and the motivation to recover their network investments. The resulting carrier would become more like AT&T and Verizon, with a position of market dominance, as the merger would relieve competitive pressures and allow the merged firm to raise prices.

6. Additionally, even if I were to decide to switch from the merged carrier in the future, the merger would force me to choose from among fewer carriers offering services at higher prices.

7. Furthermore, I am concerned that the merger would result in more invasive marketing and corporate surveillance, undermining my broader freedoms to connect and communicate. With the reversal of the Commission's strong Net Neutrality rules and legal underpinning for them, I no longer receive the benefit of the protections that were in place guaranteeing my rights to send and receive the digital information of my choosing without undue interference and discrimination from ISPs. If Sprint and T-Mobile were allowed to merge, I believe that with less competition it would be unlikely for either of these companies to position themselves as a privacy-protecting telecom alternative. Sprint and T-Mobile are already claiming that this deal would generate enough additional profits to let the newly merged colossus get into the "rapidly converging content and communications marketplace" — just like other big wired and wireless providers.

8. This Declaration has been prepared in support of the foregoing Petition to Deny. It is true to the best of my personal knowledge and belief, and is made under penalty of perjury of the laws of the United States of America.

O'neil Pryce

August 27, 2018

DECLARATION OF MATTHEW F. WOOD

1. I, Matthew F. Wood, am the Policy Director at Free Press. I am also a member of the organization, located at 1025 Connecticut Ave. NW, Suite 1110, Washington, D.C. 20036.

2. I reside in Washington, D.C.

3. I am a Sprint Corporation customer. I regularly use my mobile device on Sprint's network – for voice, text and data services. I rely on these services for personal and work-related uses.

4. I believe that I and other customers like me would be harmed by T-Mobile's acquisition of Sprint because the decreased competition would result in higher prices for me and increase the risk of privacy invasions.

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Matthew F. Wood

August 27, 2018