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Free Press

REDACTED – FOR PUBLIC INSPECTION

October 31, 2018

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: ***Applications of T-Mobile US, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 18-197***

Dear Ms. Dortch:

Pursuant to the Protective Orders (DA 18-624 and DA 18-777) issued in this docket, please find attached hereto a redacted copy for public inspection of the Reply to Opposition of Free Press.

We have also today served, as indicated in the attached certificate of service, unredacted copies of the petition on the Commission and on the Applicants.

Respectfully Submitted,

/s/ Matthew F. Wood

Matt Wood
Policy Director

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	)	
	)	

REPLY TO OPPOSITION

S. Derek Turner, Research Director
Matthew F. Wood, Policy Director
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October 31, 2018

Executive Summary

T-Mobile and Sprint ("Applicants") have come to the Commission seeking approval for a merger that would eliminate a key competitor in a wireless marketplace that's been trending in the right direction for the last several years. That trend is due to the competitive moves and counter-moves made by Sprint and T-Mobile to fight each other for customers, and to take share from Verizon and AT&T while (finally) eating into those two largest carriers' enormous profits.

Free Press's first filing in this docket made the case that the transaction would massively increase concentration in an already highly concentrated market. This loss of options would hurt all wireless users, but especially people of color, lower-income consumers, and other price-sensitive and value-seeking customer groups that T-Mobile and Sprint independently cultivate.

This Reply shows conclusively, with data subject to protective orders in this docket, that T-Mobile and Sprint are each other's closest competitors. They take customers away from each other's flagship brands and pre-paid affiliates by offering not only more valuable data packages but plain and simple lower prices. They cater to these customers in densely populated areas, placing retail stores in locations that serve middle- and low-income populations often ignored by the two largest carriers. And they are rewarded for this with higher market shares in those largest local markets, which would be hit hardest by this merger's harms.

The driving force for the dynamic competition benefitting those communities has been Sprint's revival over the course of the past half-decade, coupled with T-Mobile's resurgence following its liberation from AT&T's rejected 2011 takeover bid. Sprint's different network coverage capabilities are not the impediment that the Applicants now pretend, and in fact have the benefit of requiring Sprint to differentiate itself and compete more aggressively on price in ways that benefit the entire market and specific market segments.

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I. Introduction

The Applicants' Joint Opposition[1] does little more than double-down on the empty rhetoric and even emptier claims in their earlier filings and press materials. In this Reply, we make extensive use of highly confidential data (subject to the protective orders in this docket) to illustrate how vacuous those claims are – especially any attempts to dismiss the positive effects and consumer benefits from Sprint's ongoing, independent and aggressive competition against T-Mobile, and against Verizon and AT&T as well.

Our Petition to Deny[2] the approval of this disastrous deal explained how the transaction would further concentrate an already highly concentrated wireless market, including market segments that cater to price-sensitive customers disproportionately located in communities of color and in the large cities where T-Mobile and Sprint already have a very large market share.[3]

We documented the positive trends in the relevant geographic and product markets over the last half-decade, largely spurred by reinvigorated competition that resulted from the government's rightful rejection in 2011 of the AT&T/T-Mobile merger – the last major horizontal merger between facilities-based nationwide carriers to come before the Commission, and one that the merger proponents back then tried to justify with arguments eerily similar to and equally bad as those trotted out by T-Mobile and Sprint today.[4]

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[1] Joint Opposition of T-Mobile US, Inc. and Sprint Corporation, WT Docket No. 18-197 (filed Sept. 17, 2018) ("Joint Opposition").

[2] *See, e.g.*, Petition to Deny of Free Press, WT Docket No. 18-197 (filed Aug. 27, 2018) ("Free Press Petition to Deny").

[3] *See id*. at 10; *see also id*. at 67 ("The markets in which New -Mobile would be the dominant carrier are some of the country's largest, which have a disproportionate share of lower-income wireless users. . . . T-Mobile's and Sprint's customers are far more disproportionately lower-income individuals [and] far more likely to be a member of a racial or ethnic minority group.").

[4] *See id*. at 6, 19, 27.

Lastly, we explained that vastly overstated claims of more rapid and robust 5G deployment as a result of the transaction were not merger-specific; rebutted by Applicants' own contemporaneous statements to investors; and in any case, insufficient to overcome the harms from likely price increases and increased market power were this merger to go through.[5]

The Joint Opposition tries but fails to wave away the obvious harms from eliminating a major competitor in the wireless market and in these key market segments. It suggests that Sprint and its affiliated pre-paid brands are not in fact important when it comes to disciplining T-Mobile and its own pre-paid affiliates, or disciplining the market in general.[6] It repeats the tired lie that, whatever Sprint's impact on the competitive landscape and users' options today, the carrier cannot continue to upgrade its network or compete on price going forward.[7] And it disputes the relevance of harms to the pre-paid market segment and other price-discrimination markets in the Commission's review of this transaction, implausibly claiming that the elimination of competing pre-paid carriers and brands will somehow intensify competition.[8]

This kind of double-talk may play well in the magenta-fueled stage shows that the Applicants have mounted for gullible audiences – all the while telling Wall Street and the SEC a completely different story about everything from the prospect for competition from new entrants, to the merging carriers' actual financial fortunes and network capabilities. But the Commission must see Applicants' hyperbolic and unsupported claims for what they are, especially upon examination of protective order materials and other data showing the true benefits of the current market structure with four nationwide carriers targeting different customer segments.

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[5] *See, e.g.*, *id*. at 48, 63.

[6] *See, e.g.*, Joint Opposition at 12.

[7] *See id*. at 17-20.

[8] *See id*. at 73, 77.

II. Sprint and T-Mobile are Each Other's Closest Competitor, and Sprint Independently Competes for AT&T and Verizon Customers Who Seek Less Expensive Services.

Applicants' initial public interest statement filings and their Opposition present a simplistic and sometimes self-contradictory view of U.S. wireless marketplace competition. Applicants waive away Sprint's competitive presence as immaterial, yet argue that Mobile Virtual Network Operator ("MVNO") competition (which Sprint directly supports) and emerging cable competition will thrive post-merger and mitigate unilateral and coordinated effects. Applicants thus fail to undertake an honest examination of how competition truly operates in the U.S. wireless market, and in doing so they ignore the disproportionate impacts their merger would have on consumers in the most price-sensitive market segments.

As the wireless market becomes saturated, with all carriers having comparable quality and universal coverage in most urban areas, an increasing proportion of people will choose a carrier based on price and perceived value. As the market reaches this state, Sprint stands to gain share from Verizon and AT&T while continuing to compete most directly with T-Mobile (the other carrier that primarily caters to this more price-sensitive consumer segment).

In our Petition to Deny, we demonstrated with copious evidence that the wireless market had already entered this state during the last two years, when it entered the "return to unlimited" era across all four nationwide carriers.[9] However, even at full saturation, the U.S. wireless market still has too few carriers to operate as a true commodity market (*i.e.*, one in which price is the sole differentiator and the identity of the producer is irrelevant to the purchaser). Carriers will continue to target certain market segments (*e.g.,* price-conscious, or quality-conscious), and will continue to differentiate primarily based on non-price factors (*e.g.*, bundling of wireless service with "free" over-the-top video services; handset discounts; network quality metrics; customer

[9] *See, e.g.*, Free Press Petition to Deny at 23.

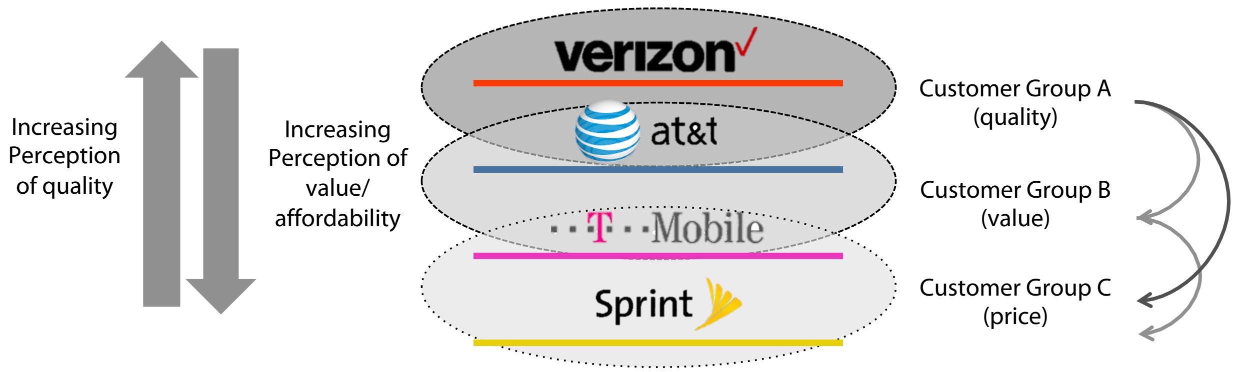
service awards; celebrity spokespersons; etc.). But so long as there are a minimum number of competitors and sufficient competition at the market's "lower" end, this saturation will result in some price discipline on the market's "top" end.

Below in Figure 1 we illustrate this aspect of the market's functioning as a "ladder of competition." It depicts each of the four national carriers as a rung on a ladder, where higher placement represents increasing consumer perception of a carrier's network quality and coverage, while lower placement represents increasing consumer perception of a carrier's affordability. The carriers' own advertisements affirm this customer perception.[10]

Because of these realities about both customer perception of value and actual prices charged, we postulate that there are generally three groups of customers: a "quality" group, with members who have a high willingness to pay for coverage and signal quality (whether or not their perception of the differences between carriers on these traits reflects reality); a "value" customer group, whose members are more-focused on quality-adjusted prices; and a "price" customer group, whose primary concern is their monthly bill. Those in the price group either do not assign significant value to the differences between carrier quality, or reside in an area where there is no discernable difference between carriers' quality and coverage. (When it comes to place of residence though, all three groups may be influenced by the local retail presence of different carriers, as we discuss below).

[10] For example, Verizon's ads frequently reference quality, while Sprint's ads have referenced a "1 percent" difference in quality. Verizon and AT&T ads do not compare their prices to other carriers' prices, while T-Mobile and Sprint ads have done so.

Figure 1: U.S. Wireless Market's Ladder of Competition



We can use the Commission's Local Number Portability ("LNP") database to test this postulation about customer movement, and gain important insight into how competition in the U.S. wireless market functions. In particular, the LNP data and Numbering Resource Utilization and Forecast ("NRUF") data provides insight into how competition works in the market's middle of three segments, the value-focused customer group; and also into how competition in this segment impacts competition in the overall wireless market.

A. Market Shares Calculated with NRUF Data Starkly Illustrate Huge Concentration Increases the Merger Would Cause Nationally and in Specific Markets.

NRUF data confirms just how concentrated the U.S. wireless market is, both at the national-level and at the Cellular Market Area ("CMA") level. In our Petition to Deny, we utilized publicly available subscriber counts to estimate an HHI of 2,875 for the U.S. wireless market, which would increase nearly 500 points to 3,342 points if T-Mobile and Sprint were allowed to merge.[11] Our estimate was imprecise, because of incomplete reporting by certain carriers.[12]

[11] Free Press Petition to Deny at 24.

[12] For example, Verizon does not publicly report the number of wholesale wireless connections it provides to resellers. Sprint and T-Mobile no longer report the number of Lifeline connections their reseller partners provide.

The NRUF data overcomes this limitation in publicly reported data and enables a more granular tabulation of market concentration, though NRUF data has some minor limitations of its own.[13] And the NRUF data **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] (see Figure 2 below).[14]

[13] Because NRUF is based on North American Numbering Plan ("NANP") 10-digit numbers, it does not capture certain Internet-of-Things ("IoT") connections that do not utilize a traditional NANP number. We expect this limitation will have a minimal impact on the HHI calculation, and there is ample economic reason to view the IoT market as a separate product market from the retail wireless market, since IoT customers at this time are largely corporate firms purchasing narrowband connectivity.

[14] In Figure 1, we present NRUF shares for the national carrier market, and for the overall U.S. The four national carriers account for 97 percent of all NRUF wireless numbers, which accounts for the minimally higher percentage shares used to calculate the HHI for the national carrier market versus those used to calculate the HHI for the entire U.S. wireless market.

Figure 2: NRUF HHI (National Unweighted)
December 2017

Carrier	Share of National Carrier NRUF	Share of All NRUF
Verizon AT&T T-Mobile Sprint	**[HIGHLY CONFIDENTIAL LNP/ NRUF INFORMATION]**	
Pre-Merger HHI Post-Merger HHI HHI Change	**[HIGHLY CONFIDENTIAL LNP/ NRUF INFORMATION]**	

Source: FCC Numbering Resource Utilization and Forecast database. (NOTE: "All NRUF" HHI assumes remaining share split amongst 10 carriers evenly.)

Because competition varies at the local level, it is more informative to weight the national HHI estimates according to the size of each CMA. In fact, this is how the Commission presents its HHI estimates in its annual wireless competition reports to Congress.[15] The CMA-level weighted HHI analysis **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** But because competition is uneven across markets, the pre-merger CMA-level weighted HHI is **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** the unweighted national value. Post-merger, the CMA-level weighted HHI would increase to **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL**

[15] Because we do not have CMA-level population counts for December 2017, we weighted by the number of NRUF connections in each CMA. We believe this is a reasonable proxy for an accurate population count, and may in fact be a more relevant weight for competition analysis.

LNP/NRUF INFORMATION] the post-merger concentration levels that would have resulted from the rejected 2011 AT&T/T-Mobile transaction.[16]

Figure 3: NRUF HHI (CMA NRUF Count-Weighted)
December 2017

HHI (CMA NRUF Count-Weighted)	
Pre-Merger HHI	**[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**
Post-Merger HHI	
HHI Change	

Source: FCC Numbering Resource Utilization Forecast database.

Overall, the T-Mobile/Sprint merger triggers the Commission's own HHI screen in **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** CMAs, and triggers the DOJ/FTC threshold for presumed market power in **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** CMAs. The Commission's screen looks for a post-merger HHI

[16] Much of the Commission's NRUF analysis for the AT&T/T-Mobile merger is redacted in the 2011 *FCC Staff Report*. *See 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, ¶ 44 (2011) ("*FCC Staff Report*"). However, the Commission did note that the "population-weighted average HHI in [the top] 100 CMAs would increase to 3,348." *Id*. We estimate in the instant transaction that in the top 100 CMAs, the weighted HHI would **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** the post-merger market concentration that the Commission found in its AT&T/T-Mobile transaction review. *See also U.S. v AT&T Inc. & T-Mobile USA, Inc.,* Second Amended Complaint, Civil Action No. 11-01560 (ESH), ¶ 25 (D.D.C. Sept. 30, 2011) ("DOJ Second Amended Complaint") ("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.").

above 2,800 with an increase of 100 points or more,[17] while the DOJ/FTC *Horizontal Merger Guidelines* presumes a merger is "likely to enhance market power" if the post-merger HHI is above 2,500 with an increase of 200 or more points.[18]

As troubling as these summary data are, **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] (see Figure 4). In the nation's largest CMA (New York/New Jersey), T-Mobile's takeover of Sprint would increase that market's HHI by **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] In the second largest CMA (Los Angeles), the deal would increase the HHI **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** And in the third largest CMA (Chicago) we would observe **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

These **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

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[17] *FCC Staff Report* ¶ 44.

[18] *See* U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, at 19 (Aug. 19, 2010) ("*Horizontal Merger Guidelines*").

and thus suggests the importance of T-Mobile and Sprint to the price-sensitive customer segment – a segment that is disproportionately made up of lower-income people and persons of color, both of which groups are disproportionately located in large, urban U.S. markets.

Figure 4: HHI Change by Cellular Market Area
(the size of each CMA's circle is weighted by the amount of NRUF numbers in that CMA)

Change in Cma-Level HHI Post-Merger

[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

CMA Number

Source: FCC Numbering Resource Utilization Forecast database.

But as we see from Figure 4, there also are **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] It is no coincidence that many of these markets have high proportions of census-identified "Hispanic" inhabitants: the survey data we presented in our Petition to Deny indicated that Hispanic and Black wireless subscribers are disproportionately customers of T-Mobile and Sprint.[19]

B. NRUF Data, Combined With Demographic Data and Retail Store Presence, Confirms the Disproportionate Impact the Merger Would Have on People of Color, Low-Income Populations, and Other Price-Sensitive Consumers.

The NRUF data confirms that the T-Mobile/Sprint merger would have a disproportionate impact on U.S. wireless users of color, an outcome we suggested was likely in our Petition to Deny based on that same national customer survey data. Nearly **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] [END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** percent of U.S. Hispanic persons and **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] [END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** percent of U.S. Black persons reside in a CMA where the merger would increase the HHI by 200 or more points, **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] [END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** percent of all U.S. non-Hispanic White persons (see Figure 5 below). And while **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] [END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** percent of non-Hispanic White persons reside in CMAs where the merger would increase HHI by 500 or more points, this is **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] [END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** percent of all U.S. Hispanic persons and **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[19] Free Press Petition to Deny at 70, Fig. 11. The same S&P Global Market Intelligence Survey indicated that T-Mobile and MetroPCS, as well as Sprint and Boost, had approximately twice the proportion of Hispanic customers as AT&T and Verizon.

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] percent of all U.S. Black persons who reside in such CMAs most negatively impacted by the merger.

Figure 5:
The Merger's Disproportionate Harm to Communities of Color
(December 2017 NRUF Shares and 2016 CPS County-Level Population Counts)

Demographic Impact of the T-Mobile/Sprint Merger	Total U.S.	Non-Hispanic White	Hispanic	Black	American Indian/AK Native	Asian	Native Hawaiian/Pacific Islander	Multiracial
Percent of Population Living in CMAs Where Merger increases HHI by 200 or More Points	**[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**							
Percent of Population Living in CMAs Where Merger increases HHI by 500 or More Points								

Source: FCC Numbering Resource Utilization Forecast database; U.S. Census Bureau Current Population Survey.

This CMA-level data on the merger's disproportionate impact only begins to tell the story of how wide the variation is in individual carriers' market shares at more granular levels. That variation is the direct result of the different market segments that each carrier targets. The NRUF data is **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] This is an important geographic sub-market to examine. Although carriers do set prices nationally, their marketing efforts are not uniform across all CMAs or even within a particular CMA. This uneven marketing effort is seen in the variability in each carrier's local retail presence, even among the four nationwide carriers, with some neighborhoods having a far higher prevalence of certain carriers' stores.

Consider the Los Angeles CMA, a massive geographic area that covers both some of the most affluent and some of the least affluent areas in the entire United States. Below in Figure 6, we present the carrier market shares for the **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** (where 79 percent of inhabitants identify as non-Hispanic White, and median household income is $100,600) and compare those to the **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** (where only 15 percent of inhabitants identify as non-Hispanic White, and median household income is $65,300).

In the **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Figure 6: [BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

We believe that the large variability in carrier customer share between the rich, white **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** and the working class, ethnically diverse **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** is a direct result of the carriers' different business models that target different customer segments. As their national advertising campaigns indicate, T-Mobile's MetroPCS pre-paid brand, and Sprint's Boost pre-paid brand, are marketed to customers who are primarily concerned with the monthly price of service. Such customers are more prevalent in areas like **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** and much less so in areas like **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** The geographic differences in the prevalence of customers in these unique market segments is reflected in the carriers' respective retail presence too. There are no MetroPCS, Sprint, Virgin, or Boost retails stores in **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** and there is just one T-Mobile retail store there; while in **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** there are four Sprint, three Boost, six MetroPCS, and five T-Mobile retail stores.

C. LNP Data [BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] [END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

The Commission's LNP database provides deep insight into the movement of customers between carriers. This data provides definitive support for the theory, outlined in our Petition to Deny, that the T-Mobile/Sprint merger would result in unilateral and coordinated effects. It also provides further confirmation of the existence of different market segments, and confirmation that this merger would have an outsized impact on customers whose purchasing decisions are based primarily on price.

We begin with the examination of potential unilateral effects, which arise when one firm or multiple firms act to increase their profitability by increasing prices (or by exercising market power via methods other than direct price increases) after a horizontal merger, without regard for the potential responses of other firms in the market.[20] The economic evidence presented in the record suggests, and subsequent data derived from the LNP database confirms, that the loss of Sprint (along with its pre-paid brands Boost and Virgin) as an independent competitor would give post-merger T-Mobile a unilateral incentive to raise prices and otherwise exercise market

[20] *See Horizontal Merger Guidelines* at 20.

power. The loss of independent Sprint would also confer unilateral incentives upon non-merging firms (*e.g*., AT&T, Verizon) distinct from the coordinated effects the merger also engenders.

By definition, this merger would result in the elimination of the independent Sprint, Boost Mobile and Virgin Mobile product offerings (as well as changes to, if not elimination of product offerings made by various MVNOs that primarily or exclusively utilize the Sprint network). Thus the transaction would result in the removal of products that are viewed as competitive alternatives for current customers of T-Mobile and MetroPCS, as well as customers of Verizon Wireless, and of AT&T and its pre-paid brand Cricket.

Unilateral incentives result because, in a market in which products are differentiated, consumers have ranked preferences on choice of seller at current prices. Today, if T-Mobile increases prices or otherwise exercises market power, then (assuming a current, rational, and profit-maximizing equilibrium) it is likely not going to be able to sustain such action because a large enough proportion of customers would leave T-Mobile for another carrier such as Sprint. But if Sprint were eliminated, the proportion of T-Mobile customers that would have chosen a Sprint alternative product no longer can do so. These customers would look out at the market and see fewer options than existed prior to the merger. The only remaining national facilities-based carrier options would be AT&T and Verizon, which both have prices already materially higher than Sprint's. Thus, post-merger, T-Mobile would find a previously unprofitable exercise of market power profitable. This would be true not just for T-Mobile, whose closest competitor is Sprint; but also for AT&T and Verizon, both of which have appreciable numbers of current customers who view Sprint as their second-best alternative.

As we show in Figure 7 below, **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] AT&T customers who viewed T-Mobile as their second-best choice in 2011 – and can only presume, not confirm, because the *FCC Staff Report* redacts those values – as T-Mobile at the time was the nation's fourth largest carrier, while AT&T was a close second to Verizon.[21]

[21] *FCC Staff Report* ¶ 55.

Figure 7: Percent of Wireless Carrier Numbering Ports Out by Carrier – Q4 2017

Percent of Q4 2017 Wireless Number Ports Out by Carrier	Ports To (new carrier)
Ports From (old carrier)	**[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

In Figure 8 below, we present the inter-carrier porting ratios for the fourth quarter of 2017. Porting ratio is defined as the ratio of ports-in to ports-out between two carriers: a porting ratio above 1 means the carrier brings in more lines from a given carrier than it loses to that carrier, while a porting ratio of less than 1 indicates that the carrier loses more lines to a given carrier than it brings in from that carrier. Sprint's porting ratio with T-Mobile is **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** and T-Mobile's porting ratio with Sprint is **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** This indicates that T-Mobile **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF

INFORMATION] But illustrating the importance of Sprint to competition in the overall wireless market, **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Figure 8: Wireless Carrier Porting Ratios by Carrier Pairs – Q4 2017

Q4 2017 Porting Ratios (Lines In/Lines Out)	To	
From	**[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**	

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

The **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] offers further insight into how competition functions in the U.S. wireless market. In particular, the data illustrates how important standalone Sprint is for maintaining the small semblance of price competition we observe in the market currently, which is critical for customers in the price-sensitive market segment. This competition from standalone Sprint leads to better options for customers in the price-sensitive group but also exerts pricing discipline throughout all of the market's customer segments. In the fourth quarter of 2017, Sprint saw a **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[22]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

The results presented in Figures 7 and 8 above are for the U.S. wireless market as a whole. But these national results **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[22] We characterize this result as not surprising because **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Figure 9: Percent of Each National Carrier's CMAs by Closest Competitor Full-Year 2017

Carrier	Competitor	Percent of Carrier's CMAs Where Given Carrier is Closest Competitor*
AT&T	Verizon T-Mobile Sprint	**[HIGHLY CONFIDENTIAL LNP/ NRUF INFORMATION]**
Verizon	AT&T T-Mobile Sprint	**[HIGHLY CONFIDENTIAL LNP/ NRUF INFORMATION]**
Sprint	T-Mobile Verizon AT&T	**[HIGHLY CONFIDENTIAL LNP/ NRUF INFORMATION]**
T-Mobile	AT&T Verizon Sprint	**[HIGHLY CONFIDENTIAL LNP/ NRUF INFORMATION]**

*Source: FCC Local Number Portability database. * Closest competitor is defined as the carrier to which the given carrier loses the largest percentage of their outgoing ports*

The data in Figure 9 above is complemented by CMA-level analysis of porting ratios, which enables examination of the proportion of CMAs in which each carrier has a net gain or net loss of lines to each other carrier. This data confirms that T-Mobile and Sprint **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Figure 10:
Percent of Active CMAs Where Each National Carrier Gains or Loses Net Ports to Each Other National Carrier – Full-Year 2017

AT&T	AT&T to VZ	AT&T to Sprint	AT&T to TMo
Net gain Net loss Net even	**[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**		
Verizon	VZ to AT&T	VZ to Sprint	VZ to TMo
Net gain Net loss Net even	**[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**		
T-Mobile	TMo to AT&T	TMo to VZ	TMo to Sprint
Net gain Net loss Net even	**[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**		
Sprint	Sprint to AT&T	Sprint to VZ	Sprint to TMo
Net gain Net loss Net even	**[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**		

Source: FCC Local Number Portability database.

Figures 11-14 below illustrate how competition between carrier pairs changes as local markets increase or decrease in size and demographic distribution. Figure 11 presents the percent of T-Mobile/MetroPCS ports out by the identity of the ported-to carrier, indicating that **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] Similarly, Figure 12 presents the percent of Sprint ports out by the identity of the ported-to carrier. This likewise reflects that **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] in smaller CMAs, many of which lack retail T-Mobile or Sprint stores.[23]

[23] Free Press Petition to Deny at 70.

Figure 11: T-Mobile/MetroPCS Percent of Ports Out by Ported-To Carrier CMA-Level (2017)

To ATT To Verizon To Sprint

Percent Ports Out to Other Carrier (2017)

[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

CMA Number

Source: FCC Local Number Portability database.

Figure 12: Sprint Percent of Ports Out by Ported-To Carrier
CMA-Level (2017)

To TMo/Metro To Verizon To ATT

Percent Ports Out to Other Carrier (2017)

[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

CMA Number

Source: FCC Local Number Portability database.

Figure 13: AT&T Percent of Ports Out by Ported-To Carrier
CMA-Level (2017)

To TMo/Metro To Verizon To Sprint

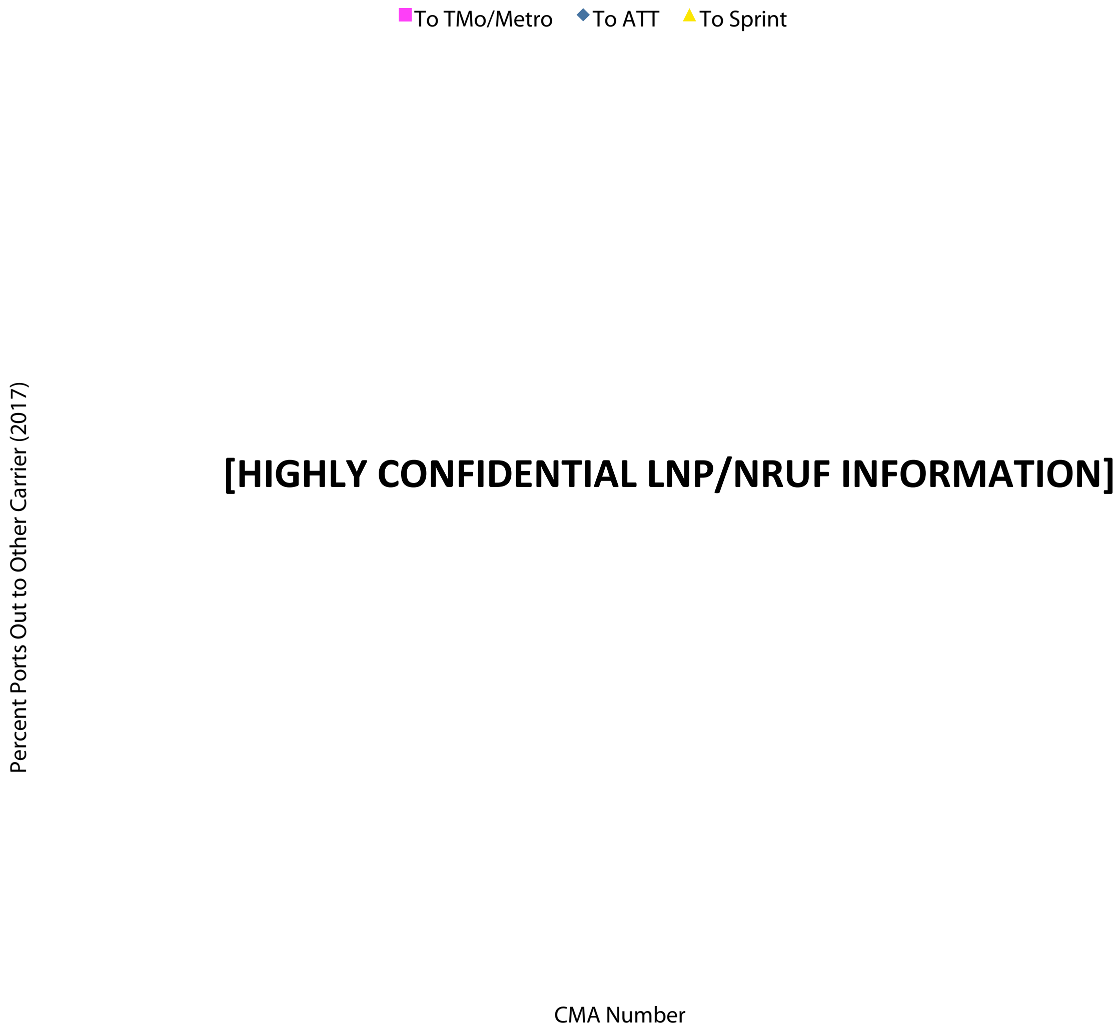
Percent Ports Out to Other Carrier (2017)

[HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

CMA Number

Source: FCC Local Number Portability database.

Figure 14: Verizon Percent of Ports Out by Ported-To Carrier CMA-Level (2017)



Source: FCC Local Number Portability database.

D. LNP Data Showing Long-Term Changes in Switching Patterns Demonstrates **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

Examining LNP data **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** [24]

[24] Though the NRUF and LNP data made available in this proceeding **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] during a time when Sprint undertook a series of aggressive moves in response to T-Mobile's "uncarrier" promotions.[25] For example, Sprint began 2014 by unveiling its so-called "Framily Plans," which promised substantial per-line savings if users purchased multi-line friends and family plans. Users could pay as little as $25 per month for unlimited talk and text and 1 gigabyte of data per line if they purchased a minimum of seven lines.[26] That same January, T-Mobile unveiled its "Contract Freedom" promotion. This involved T-Mobile paying a new customer's Early Termination Fee ("ETF"), up to $650.[27] T-Mobile's promotion itself mirrored one launched by AT&T a few weeks earlier, with AT&T offering up to $450 to T-Mobile customers who switched to AT&T.[28]

AT&T's switching promotion targeted at T-Mobile customers wasn't its only winter 2014 response to competition. On February 1st, AT&T tweaked its only family plans available at the time, decreasing the price for users who shared 10 gigabytes or more of monthly data. AT&T's move still placed its prices above T-Mobile's then-current offers; but likely came in

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[25] *See, e.g.*, Free Press Petition to Deny at 33 n.46.

[26] *See* Marguerite Reardon, "Sprint's new 'Framily Plans' offers big savings," *CNET* (Jan. 7, 2014).

[27] *See* Sean Hollister, "T-Mobile will now pay $350 for you to leave AT&T, Sprint, or Verizon," *The Verge* (Jan. 8, 2014) ("T-Mobile also won't be paying out a lump sum of $350, but rather the actual amount you pay your existing carrier if you break your contract to switch. . . . You do, however, get an instant credit for trading in your existing smartphone at the time of the deal, with T-Mobile paying up to an additional $300 depending on the phone[.]"); *see also* Marguerite Reardon, "T-Mobile will buy your AT&T or Verizon smartphone. What's the catch?" *CNET* (Mar. 22, 2015).

[28] *See* Don Reisinger, "Temptation: AT&T offers T-Mobile users $450 to switch," *CNET* (Jan. 3, 2014).

response to Sprint's Framily Plans, which were significantly less costly than the shared plans of all other carriers.[29]

Verizon – exhibiting its tendency to ignore such moves or at least wait until every other carrier has acted – finally unveiled its "More Everything" family-style plan in mid-February 2014. Technology reporter Roger Cheng summed up the state of play in the wireless market noting that "More Everything is a concession that even Verizon, which has long sought to stay above the competitive fray, is no longer immune to the pressures facing the industry. But the changes suggest Verizon is slowly, even reluctantly, wading into the intensifying price war."[30]

Also in February 2014, Sprint's Boost Mobile brand unveiled a $35 monthly unlimited talk, text and data plan, which included 2.5 gigabytes of 4G LTE data.[31] Then in March 2014, Sprint launched Sprint-branded pre-paid plans with unlimited talk, text and data for $60 per month.[32] Competition cooled somewhat during mid-2014, as Sprint and T-Mobile entered into negotiations with each other and with the U.S. government over a potential merger.[33] During this time most of the competitive moves consisted of specific handset promotions and value-adds, such as T-Mobile's "Music Freedom" zero-rated offering unveiled in June 2014.[34] This was also

[29] *See* Dante D'Orazio, "AT&T tweaks Mobile Share pricing to significantly discount 10GB or larger plans," *The Verge* (Feb. 1, 2014).

[30] *See* Roger Cheng, "So is Verizon's 'More Everything' plan a good deal?," *CNET* (Feb. 13, 2014). *But see* Free Press Petition to Deny at 37 (adding important context to the headline-level claims of wireless price wars).

[31] *See* Angela Moscaritolo, "Boost Mobile Kicks Off $35 4G LTE Promotion," *PC Magazine* (Feb. 6, 2014).

[32] *See* Phil Goldstein, "Sprint replaces Sprint As You Go with Sprint Prepaid brand: New plans at $45 and $60 for smartphones," *FierceWireless* (Mar. 14, 2014).

[33] *See, e.g.*, Michael J. De La Merced, "Sprint and SoftBank End Their Pursuit of a T-Mobile Merger," *New York Times* (Aug. 5, 2018).

[34] *See* Chris Ziegler, "T-Mobile's 'Music Freedom' is a great feature – and a huge problem," *The Verge* (June 18, 2014).

a period when Sprint had a potential advantage against MetroPCS, which was in the final stages of its integration with T-Mobile that involved some customers needing to obtain new handsets).[35]

But by August 2014, the competition ramped back up, beginning with Sprint's replacement of its CEO and subsequent replacement of its Framily Plans with shared plans that had higher data allotments.[36] Sprint also launched a new single-user unlimited plan at a steep discount compared to any other carriers' remaining unlimited options. For example, Sprint began offering a single-line unlimited talk, text and data plan for $60 per month, which at the time was $20 cheaper than other carriers' similar plans.[37] T-Mobile responded with a slew of promotions. In late August 2014, it cut prices on family plans and launched a $10 monthly tablet data plan (which became popular with users of over-the-top VoIP and instant messaging apps in lieu of traditional mobile voice and SMS).[38] T-Mobile also responded to Sprint's single-line discounts by quadrupling the amount of monthly data on its entry-level single-line plan, offering unlimited voice, text, 3G data, and 2 gigabytes of 4G LTE data for $45 per month.[39] In September, T-Mobile unveiled a number of WiFi related promotions, including free (but restricted) in-flight WiFi access on certain flights.[40] It also implemented a device trade-in program it characterized

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[35] *See* Laura Northrup, "MetroPCS Customers Must Surrender to T-Mobile, Trade In Phones," *Consumerist* (May 30, 2014).

[36] *See* Marguerite Reardon, "Sprint CEO hits gas on price overhaul," *CNET* (Aug. 18, 2014).

[37] *See* Marguerite Reardon, "Sprint attacks T-Mobile with $60 unlimited data plan," *CNET* (Aug. 21, 2014).

[38] *See* Phil Goldstein, "T-Mobile cuts prices on family plans with 7-10 lines, launches $10/month tablet plan," *FierceWireless* (Aug. 26, 2014).

[39] *See* Malarie Gokey, "T-Mobile now offers a 2GB talk, text and data plan for $45," *Digital Trends* (Aug. 25, 2014).

[40] *See* Heather Kelly, "T-Mobile offers free cell spots to all customers," *CNN Business* (Sept. 10, 2014).

as offering the industry's "best value,"[41] only to see Sprint launch its own trade-in program a day later aimed directly at the perceived shortcomings of T-Mobile's promotion.[42]

Sprint continued to respond to T-Mobile during the fall of 2014, as the company's new CEO implemented an overhaul of the company's pricing, promotions, and culture. This included the "Sprint Spark" plan to upgrade the company's network capacity.[43] In September 2014, Sprint's brand Boost Mobile doubled the monthly data allotments on its various plans and implemented an across-the-board $5 price cut.[44] AT&T doubled the data allotments on its high-end plans a few days later.[45] AT&T's move was immediately followed by Verizon (which didn't double its data allotments, but aligned its tiers to match AT&T's on price and amount).[46] And demonstrating that Sprint does in fact compete with the carriers far above it in our ladder of competition model, Sprint responded to AT&T's and Verizon's moves in the fall of 2014 by rolling out new post-paid tiers that offered double the amount of data that the Twin Bells did at the same price points.[47] That October, Sprint tweaked its "iPhone for Life" program, allowing customers to upgrade their device every year (as opposed to every two years) if they leased the

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[41] T-Mobile, Press Release, "T-Mobile Guarantees Industry's Best Trade-In Value on Used Devices" (Sept. 8, 2014).

[42] *See* "Sprint 'Strikes Back,' Announces Tweaked Trade-in Program with Options for In-store and Account Credit," *Droid Life* (Sept. 9, 2014.)

[43] *See* Mark Davis, "Sprint CEO Marcelo Claure outlines shake-up of entire company," *Kansas City Star* (Sept. 11, 2014).

[44] *See* Mark Davis, "Sprint's Boost Mobile promotion doubles data and cuts price," *Kansas City Star* (Sept. 3, 2014).

[45] *See* Roger Cheng, "AT&T doubles data on high-end plans, starting at 15GB tier," *CNET* (Sept. 27, 2014).

[46] *See* Mark Rogowsky, "Mobile Wars: AT&T Goes Whale Hunting, But Verizon, Sprint Bite Back as Data Prices Continue to Fall," *Forbes* (Oct. 2, 2014).

[47] Sprint, Press Release, "Sprint Stands Behind Pledge to Deliver 'Double the Data,'" (Oct. 1, 2014).

device from Sprint for a $30 per-month payment.[48] In mid-October, Sprint's Boost Mobile became the first pre-paid carrier to offer the latest iPhone.[49]

Sprint ended 2014 with an aggressive promotion: it announced it would charge customers who switched from AT&T or Verizon half of what they were paying previously.[50] Sprint's overall porting ratios as well as its carrier-pair porting ratios **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[48] *See* Roger Cheng, "Sprint's 'iPhone for Life' plan to offer annual upgrade," *CNET* (Oct. 24, 2014).

[49] *See* Bobby Burch, "Sprint's prepaid brand releases iPhone 6 pricing," *Kansas City Business Journal* (Oct. 10, 2014).

[50] *See* Chris Welch, "Sprint promises to cut Verizon and AT&T bills in half if customers switch," *The Verge* (Dec. 2, 2014).

Figure 15: Wireless Carrier Porting Ratios (lines in/lines out)
[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

The primary beneficiaries of the wireless market competition during 2014 were, of course, wireless consumers. But T-Mobile and Sprint benefited as well, with their promotions bringing in a slew of new customers that ultimately improved each company's financial metrics. AT&T and Verizon were not so fortunate. After years of reaping the bounty of their market power, T-Mobile's and Sprint's competitive moves finally ate into the Twin Bells' profits.[51]

In a market with a modicum of competition, we should expect actions to spur reactions, and therefore observable competitive outcomes (such as porting ratios) should constantly change. **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** After Sprint's ascendency during 2014 and early 2015, T-Mobile responded, as did AT&T and Verizon. In particular, T-Mobile's MetroPCS rolled out a series of price cuts and promotions aimed directly at Sprint's cost-conscious customer base. In January 2015, MetroPCS reduced the monthly price of its unlimited LTE plan from $60 to $50.[52] At the same time, T-Mobile unveiled its "smartphone equality" promotion, which extended no down-payment device financing to pre-paid customers and eliminated credit checks.[53] Sprint's Boost Mobile responded quickly with a suite of unlimited plans ranging from $35 to $55 monthly, depending on the amount of 4G LTE data chosen.[54] In March 2015, MetroPCS introduced a $30 unlimited

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[51] "AT&T and Verizon warn investors of higher Q4 churn as Sprint and T-Mobile increase competition," *9 to 5 Mac* (Dec. 9, 2014).

[52] *See* Amit Chowdhry, "MetroPCS Is Offering An Unlimited LTE Data Plan For $50 Per Month," *Forbes* (Jan. 22, 2015).

[53] *See* Chris Welch, "T-Mobile will ignore bad credit if you pay your bill on time for a year," *The Verge* (Jan. 22, 2015).

[54] *See* Bertel King Jr., "Boost Mobile $35 Plan Will Supply 2.5GB Of 4G LTE To Customers Who Commit To Automatic Payments Starting Feb. 3rd," *Android Police* (Jan 22, 2015).

talk/text/data plan with no additional taxes or fees.[55] These promotions continued apace throughout the spring and summer of 2015. T-Mobile aggressively used MetroPCS to take customer share from Sprint, which had previously faced aggressive pre-paid competition only in the regional markets in which Cricket and MetroPCS operated prior to their acquisitions.[56]

With several carriers having dropped prices in January 2015, many additional promotions in that spring shifted to value-adds, such as handset discounts and data plan allotment increases. T-Mobile introduced rollover data to its pre-paid customers in March 2015.[57] Shortly thereafter, AT&T unveiled a rollover data promotion for its pre-paid "GoPhone" customers, though only available on plans priced at $45 monthly and higher.[58] One month later, perhaps feeling the pressure from T-Mobile's move and sensing an opportunity with the limited nature of AT&T's promotion, Sprint introduced a data rollover plan for its own pre-paid customers and extended it to all pricing tiers (which ranged at the time from $35 to $55).[59] These promotions in pre-paid followed T-Mobile's late 2014 introduction of post-paid rollover data,[60] a move that analysts surmised would not be matched by the other carriers but that was in fact matched quickly by

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[55] *See* Lance Whitney, "MetroPCS crafts unlimited phone plan for $30 a month," *CNET* (Mar. 24, 2015).

[56] *See, e.g.*, Nick Terry, "MetroPCS and Boost Mobile Battle It Out for Subscribers," *AndroidHeadlines*, (May 21, 2015).

[57] *See* Phil Goldstein, "T-Mobile brings 'Data Stash' rollover data plan to prepaid customers," *FierceWireless* (Mar. 16, 2015).

[58] *See* Phil Goldstein, "AT&T brings 'Rollover Data' to some of its GoPhone prepaid customers," *FierceWireless* (May 11, 2015).

[59] *See* Phil Goldstein, "Sprint unveils rollover data for some prepaid customers, Boost Mobile TV service geared toward sports," *FierceWireless* (June 2, 2015).

[60] *See* Phil Goldstein, "Analysts: T-Mobile rollover data plan unlikely to provoke response from Verizon, AT&T or Sprint," *FierceWireless* (Dec. 17, 2014).

AT&T.[61] Illustrating the structure and function of the ladder of competition, and the vulnerability of carriers at the top to "trickle-up" competitive effects, Verizon refused to introduce rollover data plans even after T-Mobile and AT&T did, while flatly stating that Verizon did not believe it needed to compete for the price-sensitive customer.[62] However, Verizon did lower the costs of many of its "buckets of data" plans by $10 shortly after AT&T's introduction of rollover data.[63]

Yet the battle for the price-sensitive customer segment didn't stop with rollover data. In June 2015, Sprint pushed the market with a promotion that cut Cricket and MetroPCS customers' prices in half if they switched to Boost Mobile. This resulted in customers being able to pay as little as $20 per month for unlimited voice and text with 2.5 gigabytes of data.[64]

During this time carriers also started to pursue more aggressively the customers in the pre-paid market segment that make voice calls to other countries, particularly Mexico. In late 2014 and early 2015, both Sprint and T-Mobile introduced add-on plans that allowed their customers to make unlimited phone calls to a host of other countries, with add-on plans ranging from $10 to $20 depending on the ability to call mobile phones or landlines. AT&T added unlimited Mexico voice calling to its $60 monthly pre-paid GoPhone plans in February 2015.[65] In July 2015, T-Mobile unveiled its "Mobile without Borders" promotion that allowed customers

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[61] *See* Phil Goldstein, "AT&T to offer rollover data for Mobile Share Value customers," *FierceWireless* (Jan. 7, 2015).

[62] *See* Roger Cheng, "Verizon: Don't expect us to offer a data rollover plan," *CNET* (Jan. 22, 2015) ("We did not go to places where we did not financially want to go to save a customer. . . there's going to be certain customers who leave us for price, and we are just not going to compete with that because it doesn't make financial sense for us to do that.").

[63] *See* Amit Chowdhry, "Verizon Drops Prices On Most Data Plans By $10," *Forbes* (Feb. 5, 2015).

[64] *See* "Boost Mobile Invites All Cricket and MetroPCS Customers to Slash Their Payment in Half," *PR Newswire* (June 19, 2015).

[65] *See* Phil Goldstein, "AT&T adds unlimited calling to Mexico on $60 GoPhone prepaid plan," *FierceWireless* (Feb. 17, 2015).

on its Simple Choice plans to use their unlimited talk/text/data services in Mexico and Canada.[66] One week later, T-Mobile brought this promotion to its pre-paid MetroPCS customers (for free initially, then for an additional monthly charge of $5 after the promotional period expired).[67]

The moves and counter-moves in the pre-paid sector continued throughout 2015, but cooled somewhat as carriers turned their attention back to their primary brands.[68] But the impact of this "year of the pre-paid promotion" **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] But we can glean further insight by examining the carrier-pair porting ratios.

We begin with Sprint, for which carrier-pair percent outgoing ports and porting ratios during 2014-2017 appear below in Figure 16. **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[66] *See* Alex Wagner, "T-Mobile's Mobile Without Borders will let you use your phone in Canada and Mexico without extra fees," *TMo News* (July 9, 2015).

[67] *See* Andrea Chang, "MetroPCS introduces Mexico Unlimited plan," *Los Angeles Times* (July 15, 2015).

[68] *See, e.g.*, Scott Webster, "Boost Mobile debuts 'Growing Data' rate plans," *CNET* (Oct. 1, 2015).

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Figure 16: Sprint Percent of Wireless Carrier Numbering Ports Out by Carrier and Porting Ratios by Carrier [BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

That Sprint has **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] is an important indicator of the likely harm that would result from the loss of competition in the lower-priced market segment. The data also strongly indicates how Sprint's removal from the market would reduce the "trickle-up" price competition that has disciplined AT&T and Verizon (the latter of which only relatively recently dipped its toe into the pre-paid market).[69] **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] (see Figure 17 below).

[69] *See, e.g.*, Colin Gibbs, "Verizon introduces customizable prepaid family plans," *FierceWireless* (Oct. 3, 2017) ("Verizon has launched a series of prepaid family plans as it continues to pursue a market it once all but ignored.").

Figure 17:
[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] MetroPCS (brand) Percent of Wireless Carrier Numbering Ports Out by Carrier and Porting Ratios by Carrier

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Figure 18: [BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] T-Mobile (brand) Percent of Wireless Carrier Numbering Ports Out by Carrier and Porting Ratios by Carrier

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

The data further indicates that service offered **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] (see Figure 18).

The total company carrier-pair porting history for T-Mobile is presented below in Figure 19. This data clearly demonstrates that **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Figure 19:
T-Mobile (company) Percent of Wireless Carrier Numbering Ports Out by Carrier and Porting Ratios by Carrier [BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

The close competition between Sprint and T-Mobile is critical to the price-sensitive market segment. Yet competition from independent Sprint is important for other reasons as well. The carrier-pair data for AT&T and Verizon (shown below in Figures 20 and 21 respectively) **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] but also captures the importance of Sprint to overall competition. Though Sprint **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] The more aggressive competitive moves in the pre-paid segment have forced AT&T to respond with its GoPhone brand and Cricket Wireless pre-paid subsidiary. This competition is seen **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] The competitive pressures that produced these results would be greatly diminished if T-Mobile removes Sprint as an independent competitor and consolidates market power within the pre-paid/value-focused customer segment.

Verizon has **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] Verizon's late entry into the unlimited data market, and its modest attempts at promotions aimed at the value-conscious customer **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** **[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]** The forces of a saturated market and the migration of the market towards price competition prodded Verizon's moves, as those factors weakened Verizon's ability to use its brand's perceived superior quality to avoid price competition. Removal of independent Sprint from the market would lessen the competitive pressures on Verizon. That would allow Verizon to return to its preferred state of maintaining its profitability without needing to respond to the competitive moves made by the carriers below it on the ladder of competition.

Figure 20: AT&T Percent of Wireless Carrier Numbering Ports Out by Carrier and Porting Ratios by Carrier [BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Figure 21: Verizon Percent of Wireless Carrier Numbering Ports Out by Carrier and Porting Ratios by Carrier [BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

Source: FCC Local Number Portability database. * **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

III. Sprint Is Positioned to Survive and Even Thrive Without the Merger, As Robust Wireless Competition Benefits Not Only Consumers But Competitive Carriers Too.

The porting ratio data discussed above indicates **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] during what some industry observers have seen as a recent wireless competition renaissance. But that data doesn't capture the shifts in carriers' overall market share. We now turn to a time-series examination of the NRUF data to understand how market shares changed during this period of increased competition **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] illustrates the operation of the ladder of competition in the wireless market. T-Mobile's use of MetroPCS to mount an aggressive expansion into the most-price sensitive market segment was competition that **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

This history lesson is one the Commission must understand fully: T-Mobile came to the Commission in 2011 arguing that the carrier was doomed, and that a merger was the only thing that could save it. At the time, T-Mobile's financials and market position looked similar to Sprint's current position, though Sprint is now reporting a much higher EBITDA margin than T-Mobile was at that time.[70] But T-Mobile's merger pleas, and its predictions of impending doom without the U.S. government's approval for a merger to make the market less competitive, were all completely wrong. Upon being told that a merger with AT&T was not possible, T-Mobile took a series of bold steps that shook up the wireless market and increased its competitiveness relative to all carriers, with that increase felt most by the carriers ten closest to it on the ladder of competition: Sprint and AT&T. And even though Sprint lost market share largely to T-Mobile because of T-Mobile's competitive moves, Sprint's own financial situation improved too, as discussed below. This is a strong indicator that the U.S. wireless market functions best when competitive pressures force firms to respond, not when regulators grant merger approvals and thus protect firms from competition.

[70] T-Mobile's EBITDA margin was negative 16.3 percent in 2011 at the time of the acquisition that AT&T proposed, while Sprint's has been above positive 30 percent over the past four financial quarters.

Figure 22: National Wireless Carrier Market Share [BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]

There's no reason to expect that Sprint itself could not follow a similar path if the U.S. government does the right thing now, by rejecting this latest proposed horizontal merger's attempt to reduce marketplace competition. That path is even clearer for Sprint today than it was for fourth-place T-Mobile in 2012. Today, the wireless market is completely saturated, not just for basic services but for mobile broadband too. Consumers are now more likely to vote with their wallets and choose their carrier based on price, not on legacy coverage or device exclusivity advantages.

A. Sprint Does Not Need to Merge with T-Mobile to Survive.

Just as T-Mobile did in 2011, Sprint has come to the Commission pleading poverty and begging for a government bailout. It is now clear that T-Mobile's predictions of impending doom were completely wrong, and the record evidence before the Commission in this docket indicates that Sprint is wrong today too. It would not be forced to shutter its doors, or even reduce its network quality, if it were forbidden to merge with T-Mobile.

But that likelihood understood, it is still critical to note that neither the DOJ's and FCC's standards of review consider the standalone firm's expected future profitability. For the Commission, the standard is simply whether the proposed license transfers would "serve the public interest, convenience, and necessity."[71] To make this assessment, the Commission first evaluates whether the transaction would "result in public interest harms, by substantially frustrating or impairing the objectives or implementation of the Communications Act or related statues, or public interest benefits." The Commission then "employs a balancing test, weighing any potential public interest harms of the proposed transaction against any potential public

[71] 47 U.S.C. §§ 214(a), 310(d).

interest benefits" that are merger-specific and cognizable. Applicants bear the burden of proof "by a preponderance of the evidence" on all of these issues.[72]

The record in this transaction review docket is already clear, and it is becoming more so as new evidence and new data subject to the protective order continues to pour in: the merger of T-Mobile and Sprint would destroy the primary competitive force that has brought wireless consumers substantial, tangible public interest benefits during the past seven years.

Applicants have made no credible claims to the contrary, instead relying on wildly optimistic predictions about the merged firm's future capacities as their offsetting benefit, while ignoring the wealth of economic evidence that indicates the merger would confer substantial new market power on the merged firm as well as the other two remaining national carriers.

Applicants have also relied on the false argument that approving the merger would not harm the public interest simply because Sprint is a dying firm, and thus cannot be counted on as a competitive option for the future. But even if this assertion were true – which it is not – Sprint's future does not factor into the transaction review. If Sprint's claims about its lack of a viable future were somehow to prove true, the firm would not simply shutter its network. It would become an attractive takeover target not only for its current national wireless competitors in this blatantly destructive horizontal merger, but for one of the myriad U.S. telecommunications firms already dabbling in the wireless market (such as Comcast or Charter) or a traditional Local Exchange Carrier seeking to enter the wireless market as a hedge against its slowly shrinking wired businesses (*e.g.*, CenturyLink, Frontier, or Windstream).[73] While the

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[72] *FCC Staff Report* ¶11.

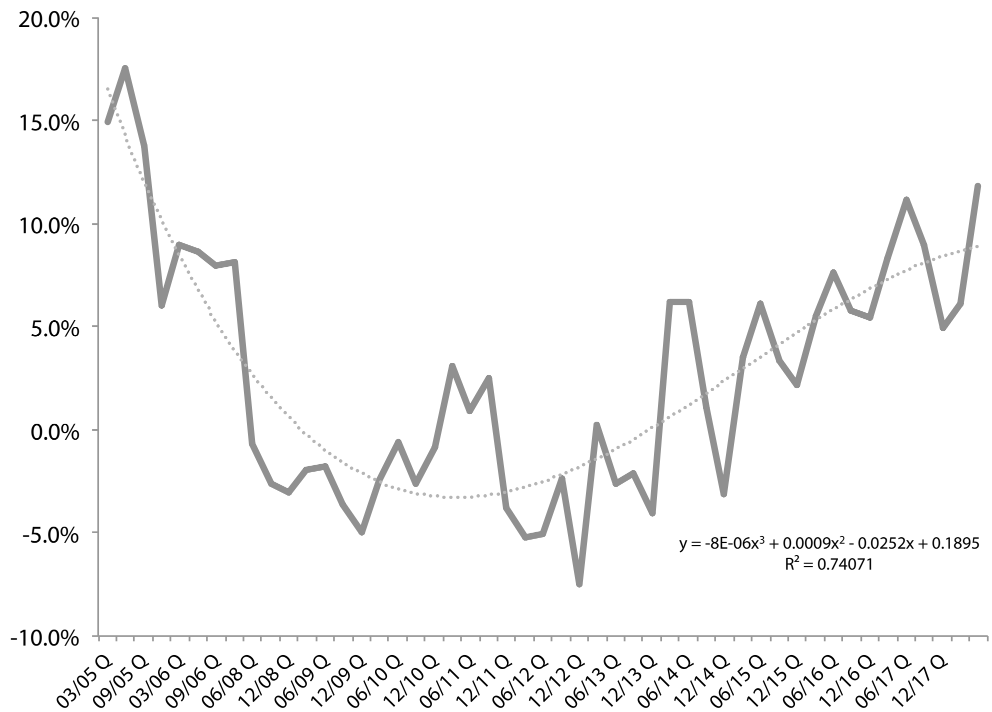
[73] *See, e.g.*, Max Greve, "Sprint's New iPhone Strategy: A Win For Apple, Sprint Or Both?," *Seeking Alpha* (Oct. 17, 2018) ("At non-fire sale prices, I already calculated Sprint is worth at least $16 per share, and probably somewhere in the $20s. Meanwhile, the worst it can do is go to

Commission's standard of review does not permit it to consider specific hypothetical alternative transactions, it is required to weigh the Application against the general "but-for" world. And it is clear that in the world without the currently proposed transaction, all potential outcomes are more favorable to the public interest than contraction of the wireless market via T-Mobile's acquisition of Sprint.

But Sprint's claims of poverty are particularly egregious considering that the firm, after years of struggling with the aftermath of its prior merger with Nextel, has finally put its financial house in order. Sprint has returned to profitability. That happened because it was forced to invest and compete more effectively against a revitalized T-Mobile following both the government's rejection of the proposed AT&T/T-Mobile merger, and the government's signal to Sprint in 2014 that it would not be permitted to merge with T-Mobile. Between 2005 and 2012, Sprint's operating margin was in steady decline, as the company struggled with the aftermath of its disastrous Nextel merger. However, since 2012 Sprint has seen its operating margin improve.

$0, and realistically someone would buy it before that so the real worst case is selling for less than the $7 imputed value of the current merger proposal.").

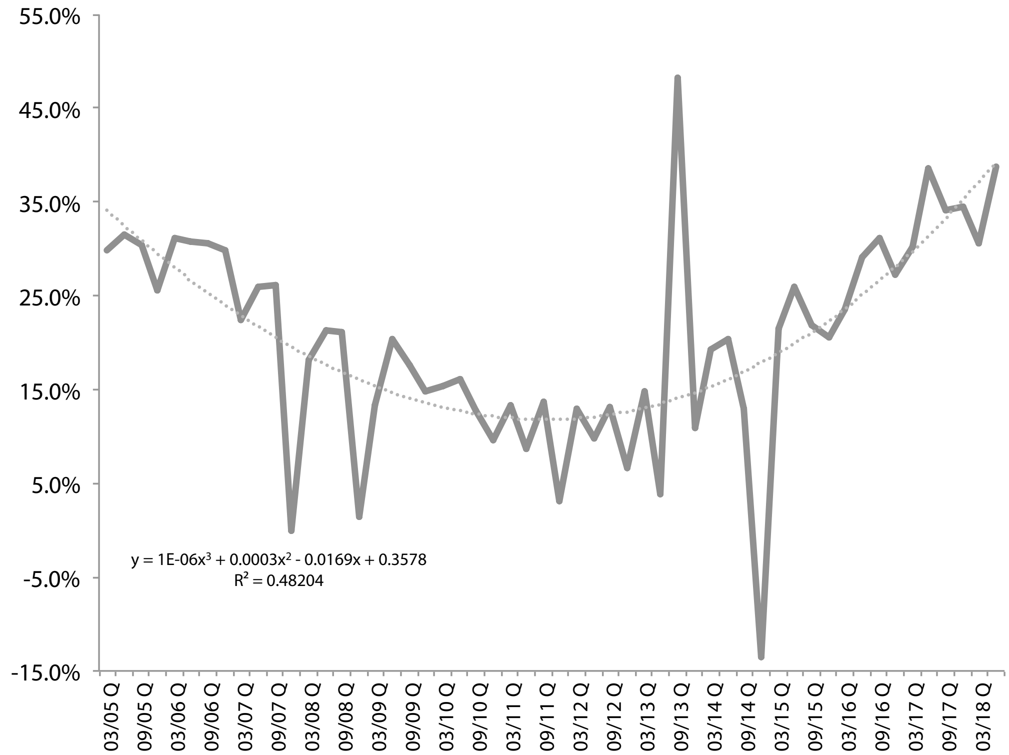
Figure 23: Sprint - Operating Margin (Q1 2005–Q1 2018)



Source: Sprint quarterly SEC filings. Curved-dotted line (and equation) represents a polynomial curve fitted to the data.

A similar trend is seen in Sprint's EBITDA margin (for Earnings Before Interest, Tax, Depreciation and Amortization, a metric that is similar to operating margins but adds back in the cost of depreciation and amortization). Between 2005 and 2012, Sprint's EBITDA margin steadily declined. But ever since Sprint was forced to respond starting in 2012 to revitalized competition in the wireless market competition that was driven by T-Mobile, Sprint has seen its EBITDA margin improve. Sprint's EBITDA margin for the three-month period ending on June 30, 2018, was its highest since the Nextel merger.

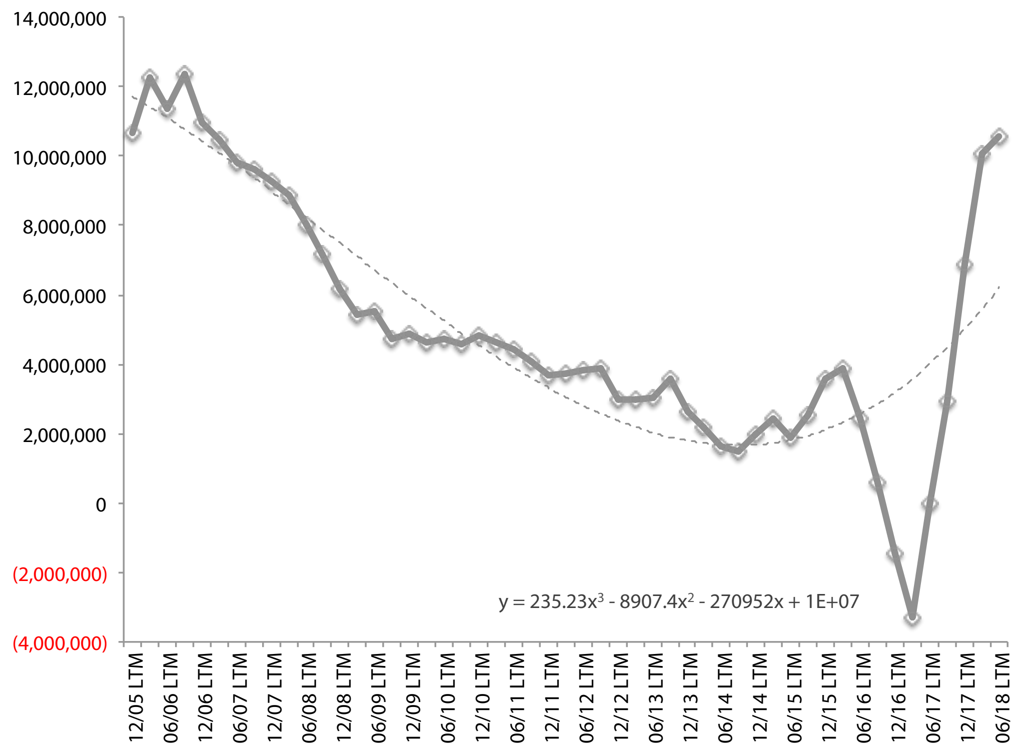
Figure 24: Sprint - EBITDA Margin (Q1 2005–Q1 2018)



Source: Sprint quarterly SEC filings. Curved-dotted line (and equation) represents a polynomial curve fitted to the data.

Other financial data likewise indicates the success of Sprint's turnaround plans, implemented in 2014 by then-CEO Marcelo Claure. Sprint's operating cash flow declined steadily following the Nextel merger (see Figure 25 below). It stabilized under Claure's leadership during 2015, before dipping sharply into negative territory during 2016. That 2016 dip, however, was due to Sprint's massive capital expenditures made during that time to improve its network. After that temporary activity peaked, Sprint returned to positive operating cash flows exceeding the levels it has enjoyed at any time since 2006.

Figure 25: Sprint – Operating Cash Flow (12-Month Trailing, Dec. 31 2005–June 30, 2018)



Source: Sprint quarterly SEC filings. Curved-dotted line (and equation) represents a polynomial curve fitted to the data.

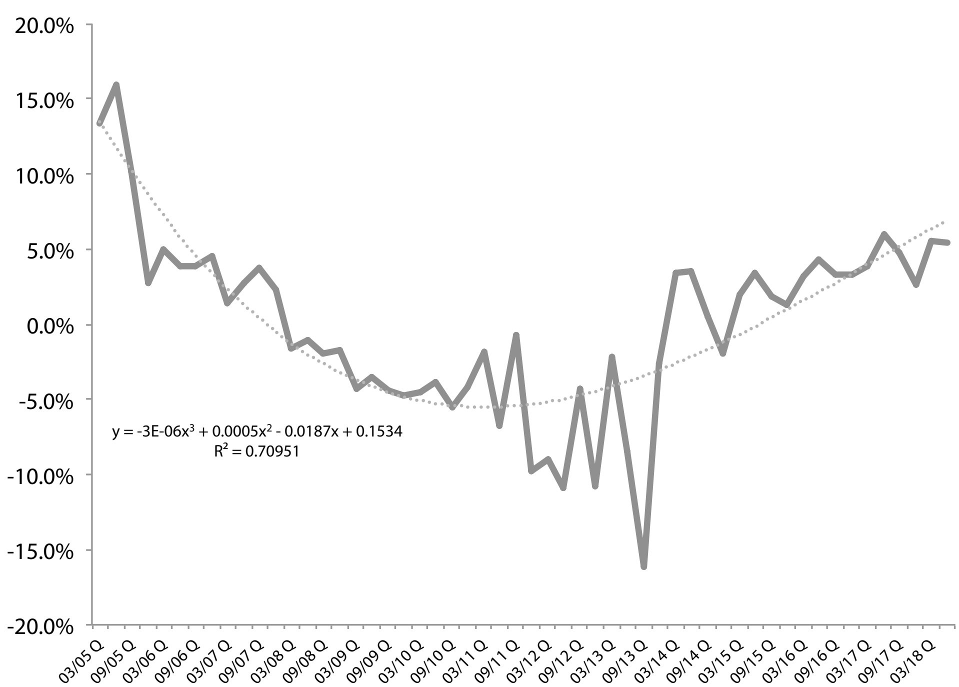
While all of these metrics are important to assessing a firm's fiscal health, many analysts believe that there is only "one metric that truly matters": Return on Invested Capital ("ROIC").[74] ROIC is calculated as the ratio of Net Operating Profit (less taxes) to invested capital, with invested capital calculated as the sum of all assets less liabilities and cash. ROIC is an important fiscal metric, because investors ultimately invest in order to earn a positive return on their invested capital; and that's essentially what ROIC measures at the firm level.

Sprint's ROIC steadily declined following the Nextel merger, entering negative territory in 2008 and remaining there until mid-2014. However, Sprint's ROIC returned to positive

[74] *See* "Why This Metric Will Ensure You Pick Wonderful Stocks," *Seeking Alpha* (Dec. 31, 2015); *see also* David Trainer, "CEOs Who Focus On ROIC (Return on Invested Capital) Outperform," *Forbes* (Sept. 12, 2018).

territory following the ouster of former CEO Dan Hesse and the implementation of Marcelo Claure's turnaround plans. Sprint's ROIC in the two most-recent quarters was 5.6 percent then 5.4 percent. This is above the values of T-Mobile's ROIC for 2013 (3.8 percent) and 2014 (3.1 percent), the period of time when T-Mobile was universally recognized as ascendant and independently viable. (T-Mobile's ROIC in the two most-recent quarters was 9.3 percent then 10.4 percent). It is difficult to meaningfully compare Sprint's ROIC with AT&T's or Verizon's, as those firms are vertically integrated conglomerates that operate in many other industries outside of wireless telecommunications. However, Sprint's recent ROIC is above U.S. Cellular's (the only other wireless carrier in the U.S., outside of the big four, that is publicly traded), which reported a first quarter 2018 ROIC of 5.5 percent, and a second quarter ROIC of 4.9 percent. Sprint may not be generating the level of returns enjoyed by certain tech industry darlings, but it is generating positive returns and is clearly on the upswing.

Figure 26: Sprint – Return on Invested Capital (Q1 2005–Q1 2018)



Source: Sprint quarterly SEC filings. Curved-dotted line (and equation) represents a polynomial curve fitted to the data.

Sprint's pleadings in this review are laden with tales of woe concerning its ability to compete in the 5G era if Sprint is forced to go it alone. These claims mirror T-Mobile's 2011 assertions that it had "no path" to 4G LTE if it was forced to go it alone – claims that of course were completely wrong (see deployment discussion below). But as we enumerated in our Petition to Deny, Sprint has an easy path to 5G (which its CFO recently described as "literally a flick of the switch" conversion) thanks to its 2.5 GHz holdings, its previous network upgrades, its improved fiscal situation, and its commitment to allocating the capital needed to continue to compete effectively.[75] And while company-specific capital investment is a reflection of a complex variety of factors (including competition as well as technology cycles), it is a useful metric to assess a company's commitment to compete and its confidence in its future financial prospects (*i.e.*, if a firm expected to lose money on invested capital, it would reduce its capital investments).

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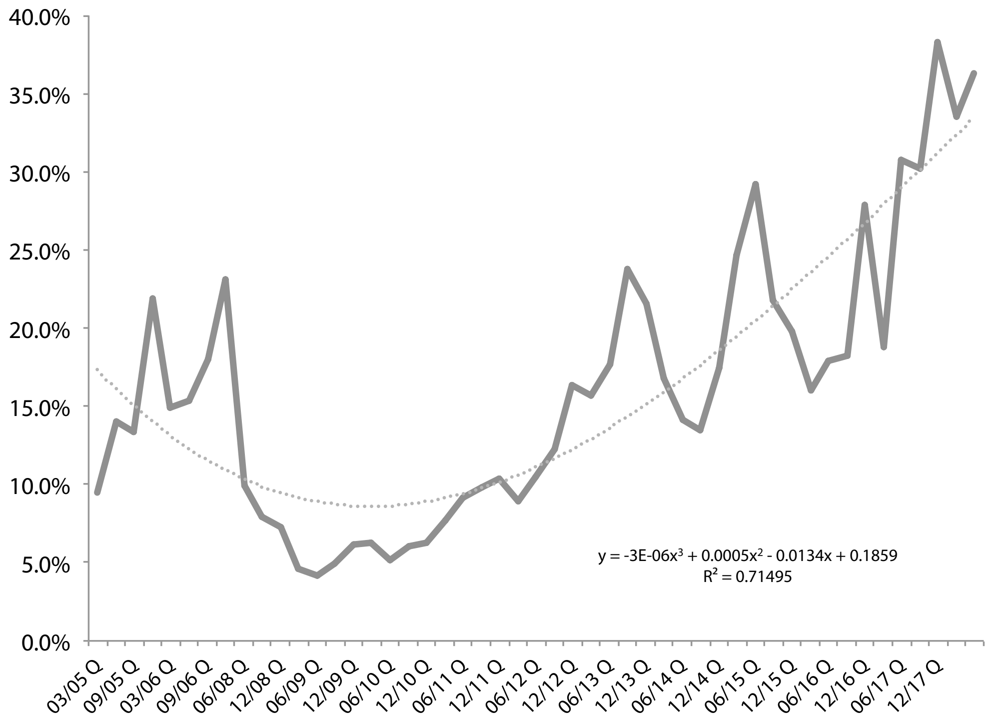
[75] *See, e.g.*, Comments of Andrew Mark Davies, Chief Financial Officer, Sprint Corporation, Deutsche Bank 26th Annual Leveraged Financial Conference (Oct. 2, 2018) ("We just started to deploy Massive MIMO. Very, very pleased with the progress so far where we've deployed that technology. We are seeing quadruple the speeds compared to the previous technology as well as providing a little bit of coverage[ ] benefit and some improvement in cell edge performance as well. So really pleased with the Massive MIMO. Focusing obviously on then deploying the 2.5 GHz across all of the network, again, making solid progress there. The intention being, which we are currently on track for, that by the end of this year[t]he vast majority of our macro sites will be tri-banded. 2.5 GHz is great spectrum for us. We can deploy it and still allow it to carry both LTE and 5G traffic. The technology itself is software-upgradable. <u>So as the 5G standards become definitized, it is literally a flick of a switch to convert to 5G rather than having to reclaim the tower one more time, et cetera…</u>. So again, really pleased with the 2.5 rollout. Fundamentally, we see we can gain competitive advantage by being the first operator to offer a truly mobile 5G network, and we are still on track to be able to do a commercial launch of that by the middle of next year. We have recently announced a partnership with LG to bring the first 5G smartphone to the U.S. <u>And all of that work is still very consistent with the CapEx guidance that we've given for this year</u>, which is CapEx cash flow of somewhere between $5 billion and $6 billion, and you'd probably see spending in 2019 of roughly the same order of magnitude." (Emphases added.)).

In Figure 27 below we present Sprint's quarterly capital expenditures as a percentage of its revenues. This metric is known as "capital intensity," and is useful as a comparative metric between firms of different sizes within the same industry. Sprint's capital intensity exhibited a trend of decline following the Nextel merger, then flattened out before a slow increase starting in 2011. However, this upward trend accelerated during the post-2014 wireless competition renaissance era, and Sprint's capital intensity is now far higher than it has been in the company's history. Thus, it is clear that Sprint has ample resources and a commitment to compete in the 5G era as a standalone firm, and is confident that its turnaround will last.[76]

[76] While Sprint continues to feed Commission staff tales of fiscal woe, the company's own CFO continues to tell a completely different story to Wall Street investors and the Securities and Exchange Commission. Indeed, Sprint's CFO recently admitted that its dire merger story is spun to sway regulators. *See id.* When asked to explain some of the dire comments Sprint had made "around the need to have to do the transaction to help offset what were some structural issues that you had seen in the business," Sprint's CFO responded, "<u>there was no new news in those filings last week</u>. It was all in the public interest statement, right, every bit of it. What happens though, right, you take a several hundred page long [PIS] document and you have to distill it into 15 to 20 pages of PowerPoint to help you then have a conversation with the regulators. And in that distillation process, right, you end up with <u>words on a slide that look much more brutal</u>, if you will, … And then I think you also have to recognize that, <u>you have to be able to tailor your message based on the same set of facts to different audiences dependent on what point you're trying to make</u>." (Emphases added.)

Figure 27: Sprint – Capital Expenditures as a Percent of Revenues (Q1 2005–Q1 2018)



Source: Sprint quarterly SEC filings. Curved-dotted line (and equation) represents a polynomial curve fitted to the data.

B. Sprint's Facilities-Based Network Coverage Does Lag Behind Other Carriers in Rural Areas, but It Overcomes This Gap Through Reciprocal Roaming Agreements with Regional Wireless Carriers, and This Incentivizes Sprint to Compete on Price.

A recent Sprint *ex parte* presentation, in which it used national geographic coverage maps to argue its case for merging with T-Mobile, garnered a number of eye-catching headlines.[77] That Sprint's network coverage is inferior to its national carrier rivals is not notable: Sprint's competitors have attempted to make hay of this fact in their commercials, and Sprint has even recognized this fact in its own advertisements, using it as a rationale for why customers that do not value coverage in areas they'll never visit should save money by choosing Sprint.[78]

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[77] *See, e.g.*, Sam Rutherford, "Sprint Convincingly Argues Its LTE Coverage Sucks," *Gizmodo* (Sept. 28, 2018).

[78] *See, e.g.*, Mike Gikas, "Can You Believe Cell-Phone Carrier TV Ads?" *Consumer Reports* (Feb. 1, 2017).

Sprint's *ex parte* represents an unfortunate but all too common technique of misleading with maps. The U.S. is a vast but very sparsely populated geographic space, where people are packed together in cities. According to the U.S. Census Bureau, nearly 63 percent of the U.S. population lives in cities that occupy just 3.5 percent of the nation's land area.[79] Sprint's overlay of its facilities-based LTE coverage area with its competitors on a map of the U.S. is therefore highly misleading, and also irrelevant.

A 2016 *Washington Post* article demonstrates this clearly. The *Post* presented a map with shaded areas showing counties that collectively contain 42 percent of the land in the United States but just 1 percent of the total U.S. population.[80] Many of these areas overlap with the areas on Sprint's *ex parte* map. The more informative metric is simply to measure what percentage of the U.S. population lives in areas where Sprint has deployed LTE (and even that is not completely informative, as roaming agreements have long been an important aspect of Sprint and other carriers' rural coverage). Below in Figure 28 we present each carrier's total and LTE coverage, calculated using the Commission's mobile 477 deployment data and its Census block-level population estimates. According to this data, Sprint's facilities-based LTE network covers blocks containing 88.1 percent of the U.S. population, compared to 94.9 percent for T-Mobile, 97.3 percent for Verizon, and 97.8 percent for AT&T.

[79] "U.S. Cities are Home to 62.7 Percent of the U.S. Population, but Comprise Just 3.5 Percent of Land Area," United States Census Bureau (Mar. 4, 2015).

[80] Christopher Ingraham, "Look at the jaw-dropping emptiness of America," *Washington Post* (Jan. 20, 2016).

Figure 28: U.S. Wireless Carrier Facilities-Based Mobile Broadband Deployment U.S. Population Coverage

Percent of U.S. Population (2016 est.)	Any Mobile Broadband Facilities	LTE
AT&T	99.3%	97.8%
Verizon	97.5%	97.3%
T-Mobile	95.2%	94.9%
Sprint	92.2%	88.1%

Sources: FCC Form 477 data as of Dec. 31, 2017 (centroid methodology); FCC 2016 block-level population estimates; Free Press research. Values do not reflect coverage offered via roaming agreements.

Sprint's LTE deployment gap relative to the other national carriers is almost entirely due to a gap in rural-area coverage. As we see in Figure 29, Sprint's urban area population coverage is nearly universal (at 95.5 percent) and comparable to its competitors.[81]

Figure 29: U.S. Wireless Carrier Facilities-Based Mobile Broadband Deployment U.S. Urban Area Population Coverage

Percent of U.S. Urban Population (2010 block-level)	Any Mobile Broadband Facilities	LTE
AT&T	99.8%	99.4%
Verizon	98.2%	98.1%
T-Mobile	98.0%	97.7%
Sprint	97.6%	95.5%

Sources: FCC Form 477 data as of Dec. 31, 2017 (centroid methodology); 2010 Census block-level population counts; Free Press research. Values do not reflect coverage offered via roaming agreements. Values are imprecise due to the use of 2010-census population counts and the possibility of previously unpopulated blocks becoming urban blocks.

[81] Though the Commission publishes annual block-level population counts (with the most-recent being for year-end 2016), it has not produced block-level urban and rural population estimates. Thus we are forced to rely on the U.S. Census Bureau's actual urban and rural population counts, collected in the 2010 census. This approach introduces some uncertainty in our estimates, as previously uninhabited blocks could become populated urban blocks or populated rural blocks in the interim. Furthermore, the use of population counts from the 2010 Census will fail to capture movement between blocks. We do not expect these limitations to materially change our conclusions that Sprint has a small rural deployment gap but not a material urban deployment gap.

Rural coverage is a different story. Sprint's LTE network reaches just 56.2 percent of the rural U.S. population, well behind the proportion of the rural population reached by T-Mobile's owned LTE facilities (83.1 percent), and even further behind AT&T's and Verizon's facilities-based LTE reach (91.2 percent and 93.7 percent, respectively; see Figure 30).

Figure 30: U.S. Wireless Carrier Facilities-Based Mobile Broadband Deployment U.S. Rural Area Population Coverage

Percent of U.S. Rural Population (2010 block-level)	Any Mobile Broadband Facilities	LTE
AT&T	97.4%	91.2%
Verizon	93.9%	93.7%
T-Mobile	83.3%	83.1%
Sprint	68.6%	56.2%

Sources: FCC Form 477 data as of Dec. 31, 2017 (centroid methodology); 2010 Census block-level population counts; Free Press research. Values do not reflect coverage offered via roaming agreements. Values are imprecise due to the use of 2010-census population counts and the possibility of previously unpopulated blocks becoming populated rural blocks.

Rural coverage is of course an important factor in the choice of cellular carrier for the persons who live in, or frequently travel through these areas. But Sprint can (and does) increase its rural availability through roaming agreements. Such agreements can be reciprocal: small regional rural carriers provide Sprint with favorable roaming terms in exchange for similar terms for their customers when those individuals leave these rural carriers' facilities-based coverage footprints. But for the vast majority of the U.S. population, remote rural coverage is simply not a factor they weigh when choosing their carrier. This reality is reflected in our presentation of the CMA-level market share data discussed above. In several of our country's largest markets such as Chicago, Dallas, St. Louis, Miami and others, Sprint has a higher market share than Verizon, which boasts the largest overall rural LTE coverage.

But more important to the Commission's public interest review here is the economic reality that Sprint's fourth-placed rural coverage actually creates a public interest benefit in the form of a competitive pressure to discount Sprint's service price, in order to offset the resulting gap in consumer perception of network coverage and quality. In other words, just as Verizon uses its vast rural network coverage as a differentiation factor that enables it to charge more – particularly to those consumers who value rural coverage more – Sprint is able to target consumers who do not value rural coverage as much by differentiating itself with lower prices. This is precisely the expected outcome in a non-monopoly (but non-commodity) product market: suppliers will differentiate and maximize their profits along the portions of the overall demand curve that contain the customer segments which each supplier is best suited to serve.

IV. The Relevant Product Market is the Cellular Services Market, But the Pre-paid/Value-Focused Market Segment is a "Price Discrimination Market" that Deserves Special Attention.

As we argued in our Petition to Deny, the relevant product market for which a hypothetical monopoly provider would be able to profitably impose at least a "small but significant and non-transitory increase in price" (or "SSNIP") is the cellular services market (and the wholesale cellular services market). Applicants do not dispute this definition, but do dispute the relevance of certain cellular market segments to the Commission's review.

It is true that cellular customers can and do move between pre- and post-paid service plans, and that the boundaries of these market segments have blurred somewhat as the market has moved away from requiring a post-paid subscription with a two-year contract in order for the customer to obtain the latest popular smartphone. However, there are still important differences between pre- and post-paid services, and users face substantial barriers especially when considering moving from pre-paid into post-paid.

First, post-paid plans typically require a customer to pass a credit check. For millions of lower-income users, this is an insurmountable switching barrier. Second, post-paid services are markedly more expensive than pre-paid. This is the case on a quality-adjusted basis, but more importantly, it's also the reality for the bottom line price. As the national post-paid carriers recently moved back to only marketing unlimited data plans, those users who do not make heavy use of mobile data find themselves with few affordable and valuable options. Those options are exclusively the domain of pre-paid carriers, particularly MVNOs.

The evidence before the Commission indicates that a SSNIP would not result in a critical level of pre-paid customers substituting with post-paid services. Pre-paid products are not merely differentiated by service or product-quality claims.[82] Instead, they represent fundamentally distinct products that most pre-paid consumers would not likely view as substitutes when faced with small but significant and non-transitory service price increases. The prices of the unlimited talk, text and data plans from post-paid carriers are already more expensive than the unlimited pre-paid plans, and far more costly than the pre-paid limited or "metered" data plans.

Using the *Horizontal Merger Guidelines*, it is clear that the pre-paid customer segment – which Sprint and T-Mobile dominate – is what is known as a "price discrimination market."

> When examining possible adverse competitive effects from a merger, the Agencies consider whether those effects vary significantly for different customers purchasing the same or similar products. Such differential impacts are possible when sellers can discriminate, e.g., by profitably raising price to certain targeted customers but not to others. The possibility of price discrimination influences market definition (see Section 4), the measurement of market shares (see Section 5), and the evaluation of competitive effects (see Sections 6 and 7).
>
> When price discrimination is feasible, adverse competitive effects on targeted customers can arise, even if such effects will not arise for other customers. A price increase for targeted customers may be profitable even if a price increase for

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[82] *See e.g. United States v. Gillette Co.*, 828 F. Supp. 78, 81 (D.D.C. 1993), where a district court upheld the DOJ's definition of a separate premium pen market. In so holding, the court recognized that "the determination of what constitutes the relevant product market hinges on a determination of those products to which consumers will turn given reasonable variations in price. Therefore, the definition must exclude those items to which only a limited number of buyers will turn." *Id.* (internal citation and quotation marks omitted).

> all customers would not be profitable because too many other customers would substitute away. When discrimination is reasonably likely, the Agencies may evaluate competitive effects separately by type of customer.[83]

The guidelines indicate that price discrimination for a customer segment is feasible if suppliers are able to target a group of customers, and the targeted customers cannot defeat the price increase via arbitrage methods (such as purchasing service through the suppliers' non-targeted customers). These conditions are clearly met here. Carriers can easily identify and target pre-paid customers who sign up for the parent carrier's branded pre-paid plan, or its pre-paid subsidiary (*e.g.*, MetroPCS, Virgin Mobile, Boost Mobile). And the notion that post-paid carriers would resell services at a discount to random pre-paid customers is obviously ludicrous.

But most important to this consideration of examining the pre-paid segment separately is the gap in the price between post-paid and pre-paid services. According to Sprint's most recent quarterly SEC filings, its Average Revenue per User ("ARPU") was $43.55 for post-paid customers and $36.27 for pre-paid customers – a 20 percent difference.[84] For branded-T-Mobile, the difference between pre-paid and post-paid ARPU was also 20 percent ($46.59 for post-paid vs. $38.69 for pre-paid customers).[85] It is therefore quite apparent that New T-Mobile would have substantial increased market power in the pre-paid customer segment, the ability to target this customer segment, and very little remaining competition stopping it from exercising its market power by increasing pre-paid prices. As we've shown, this market power abuse would disproportionately impact lower-income consumers and people of color.

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[83] *Horizontal Merger Guidelines* at 6.

[84] Sprint Corp., Financial Supplement, for the three month period ending June 30, 2018.

[85] T-Mobile US Inc., Financial Supplement, for the three month period ending June 30, 2018.

V. Conclusion

This merger proposes to consolidate the two primary firms that have propelled the U.S. wireless industry from a competitively stagnant one to one in which price competition is no longer unheard of. Approval of this transaction would severely reduce competition and the competitive forces that led to this improvement. The NRUF/LNP data clearly shows that **[BEGIN HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION]**

[END HIGHLY CONFIDENTIAL LNP/NRUF INFORMATION] are fierce competitors in this market segment that is of particular importance to lower-income and other customers who prioritize price above all other factors. There can be no doubt: the negative impacts of this merger would be most acutely felt by low- and middle-income consumers, who are disproportionately persons of color.

Despite Applicants' claims, it is clear that the prospects for competitive entry or competitive responses by remaining carriers are non-existent. And though Applicants continue to make grand claims about the merger's supposed benefits (while ignoring the basic economics as to why this merger would create massive unilateral and coordinated effects), these claimed benefits are speculative and non-merger specific. The Commission has ample evidence to reach the conclusion that this merger is not in the public interest, including the porting evidence presented herein that conclusively demonstrates the importance of an independent Sprint to overall wireless market competition and price-sensitive customers. There is simply no good reason, from either an antitrust or public interest perspective, to approve this transaction.

/s/ S. Derek Turner

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October 31, 2018

CERTIFICATE OF SERVICE

I, Matthew F. Wood, Policy Director for Free Press, certify that on this 31st day of October, 2018, I have caused true and correct copies of the foregoing letter and redacted Reply to Opposition of Free Press to be served on the following individuals by electronic mail, and have caused true and correct copies of the unredacted version to be served on the Applicants and Commission by electronic mail:

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