Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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

COMMENTS OF
THE FREE STATE FOUNDATION[*]

I. Introduction and Summary

These comments are filed in response to the Commission's request for comments concerning the agency's review of the transfer of control of licenses in connection with the proposed acquisition of Sprint Corporation by T-Mobile US, Inc. Consistent with the Free State Foundation's past practice, these comments do not specifically endorse or oppose the proposed merger. Rather, they set out basic merger review principles and examine the proposed merger in the context of those principles.

In this instance, there is strong evidence that the proposed T-Mobile/Sprint merger, if approved, would greatly benefit consumers and enterprises by enabling faster mobile broadband speeds, higher data capacity, and reduced per-megabit prices. A combined "New T-Mobile" would have the resources to rapidly deploy a nationwide 5G network and to compete more

[*] These comments express the views of Randolph J. May, President of the Free State Foundation and Seth L. Cooper, Senior Fellow. The views expressed do not necessarily represent the views of others associated with the Free State Foundation. The Free State Foundation is an independent, nonpartisan free market-oriented think tank.

effectively against AT&T and Verizon, presently the two largest wireless carriers. On its face, the proposed merger appears to satisfy the public interest standard.

The New T-Mobile would combine Sprint's 2.5 GHz spectrum with T-Mobile's nationwide 600 MHz spectrum and other assets into a nationwide 5G network to be deployed over three years. Its next-generation network may have 30 times more capacity than T-Mobile's existing network, with peak speeds up to 100 times faster.

The data traffic capacity of 5G will be essential to supply skyrocketing future wireless demand. The *Ericsson Mobility Report* forecasts global mobile data traffic to rise at a compound annual growth rate of 43%, climbing to 107 exabytes per month by 2023. T-Mobile and Sprint project their 5G network's monthly capacity would reach 6.8 exabytes in 2021 and 20.3 exabytes by 2024. Advanced 5G networks will enable "smart city" capabilities for street lighting and public transportation. Industrial, manufacturing, and other enterprise sectors will benefit from Internet-of-Things (IoT) devices connected via 5G. And increased data traffic supply will likely put downward pressure on per-megabit prices for retail consumers and businesses.

The Commission's merger precedents already recognize the public interest benefits of accelerated 5G deployment. For example, *Verizon/XO Order* (2016) characterized "the rollout of 5G technology" as an "important Commission policy priority for the general benefit of all consumers." Further, it appears unlikely that the potential benefits of accelerating 5G network deployment would be outweighed by any potential harms. T-Mobile and Sprint significantly trail the two largest nationwide providers in terms of the number of subscribers. At the end of 2016, their market shares of revenues were 15.4% and 13.4% compared to Verizon's 36.8% and AT&T's 32.8%. Post-merger, the New T-Mobile would be a stronger match. Indeed, as a result of the merger, a combined T-Mobile/Sprint might mean more robust competition in the wireless market as the new company's resources are marshalled to compete with the market leaders.

Wireless market entry by Comcast and Charter Communications using hybrid Wi-Fi/cellular mobile wireless networks as well as DISH Network's planned launches of IoT and 5G networks diminish the likelihood of significant price increases, post-merger. Commission precedents like the *CenturyLink/Level 3 Order* (2017) factor such entry into the review analysis.

Of course, reciting the market shares above might be read to suggest that mobile broadband is a properly defined market for purposes of competition analysis, but this likely is no longer the case. It is more likely that wireless and wireline broadband services properly are part of an overall broadband communications market – a broader broadband market, if you will – as these two market segments become increasingly substitutable. Traditional market definitions, such as a "mobile broadband" market, are now likely to be overly narrow, just as "cable" is certainly outdated and overly narrow as a meaningful product market definition. As Commissioner Michael O'Rielly recently said, echoing our own frequently expressed view:

> From the viewpoint of many, both the FCC and Department of Justice have been stuck in administrative molasses, seeking to apply sectoral market analysis, preserve questionable bright line tests, and continue the imposition of rigid restrictions as part of transactional reviews the same way now as in 2008, 1988, or 1958. I would posit that the entire foundation of how the government currently views the "communications" market – be it voice, video, or data – is outdated and misguided. . .

The *AT&T/DIRECTV Order* (2015) recognized that benefits of new technologies and services enabled by mergers can outweigh the loss of a competitor. Here, the potential benefits of 5G enabled by T-Mobile/Sprint would likely outweigh any potential concerns that might arise from the loss of one national wireless service provider. Data traffic capacity and speed characteristics of 5G are likely to put downward pressure on per-megabit prices and offset price increases, if any, that might be triggered by loss of the number four provider.

Importantly, it is not certain that T-Mobile and Sprint separately would have the capital resources necessary to deploy 5G networks in a timely fashion that could compete effectively against AT&T and Verizon. T-Mobile lacks mid-band spectrum while Sprint lacks low-band spectrum. Separately, the two providers would require longer periods to transition existing spectrum resources from older-generation networks to 5G.

Given the competitive conditions of the wireless market, it is quite unlikely that the merger would result in increases in the wholesale prices for wireless market resellers or for price increases in the pre-paid market segment. Also, Commission precedents properly reject narrow reseller or prepaid market definitions. There is no justification for the Commission to consider requiring divestiture of any part of T-Mobile/Sprint's pre-paid business because, whatever the differences between the pre-paid and post-paid products in the past, these two products obviously now compete with one another as many of the features of their service plans have converged and become more similar. The reality is that the pre-paid and post-paid products compete for many of the same customers and this competition extends across multiple demographics. The Commission ought to focus on innovative and competitive market forces that produce service, product, and pricing choices rather than prescribing how and by whom certain choices ought to be made available to consumers.

In sum, the proposed T-Mobile/Sprint merger's enablement of a rapidly deployed nationwide 5G network would significantly benefit consumers and enterprises. Such benefits appear to outweigh any potential harm in the competitive wireless marketplace.

II. Dynamic and Competitive Marketplace Conditions Make It Unlikely Consumer Welfare Would Be Harmed by the Merger

T-Mobile is currently the third largest mobile broadband service provider in the U.S., serving approximately 72.6 million residential and business enterprise customers.[1] Sprint is currently the fourth largest mobile broadband service provider in the U.S., offering retail and business services and serving approximately 54.6 million combined retail and wholesale customers.[2] Under the terms of the proposed merger, T-Mobile and Sprint will combine to form the New T-Mobile.

Today's competitive and dynamic conditions in the markets for mobile wireless broadband services and for digital communications services more generally provide critical context for the Commission's assessment of the potential public interest benefits and harms of the proposed T-Mobile/Sprint merger. Several signs of such competitiveness and dynamism in the mobile broadband market were observed in the FCC's 2017 *Wireless Competition Report* (*"Twentieth Report"*). In particular, the *Twentieth Report* identified robust competition among mobile broadband service providers, heavy investment in infrastructure, rapid technological innovation, expanding data and pricing plans, continuously changing consumer habits, and consistently declining per-megabit prices. Based on those characteristics and others identified in the *Twentieth Report*, the FCC concluded: "[T]here is effective competition in the mobile wireless services marketplace."[3]

[1] T-Mobile and Sprint, Public Interest Statement, Applications of T-Mobile US, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 18-197 (June 18, 2018), at 1.
[2] T-Mobile and Sprint, Public Interest Statement, at 2.
[3] Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services, *Twentieth Report* ("*Twentieth Report*"), WT Docket No. 17-69 (September 27, 2017), at ¶ 2, available at https://www.fcc.gov/document/fcc-releases-20th-wireless-competition-report-0. *See also* Comments of the Free State Foundation, Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket No. 18-203 (July 26, 2018), at:

The post-merger wireless market would include three national carriers – the new T-Mobile, plus AT&T and Verizon. Importantly, the proposed merger is of the two national carriers with the smallest coverage areas in terms of revenues, connections, and geography. At the end of 2016, T-Mobile maintained a wireless revenues market share of 15.4% while Sprint maintained a 13.4% share. As such, both providers ranked a distant third and fourth compared to market leaders Verizon (36.8% market share of revenues) and AT&T (32.8%).[4] In terms of connections, T-Mobile had 74.5 million (17.1% of all connections) and Sprint had 59.5 million (14.3 %) at year's-end 2016, while Verizon had 145.8 million connections (35%) and AT&T had 134.8 million (32.4%).[5]

Currently, AT&T covers approximately 99.3% of the U.S. population and 71.9% of the U.S. land area, while Verizon covers about 97.4% of the population and 67% of land area. The coverage areas for T-Mobile and Sprint are smaller. T-Mobile covers 95.2% of the U.S. population and 47.6% of U.S. land area. And Sprint covers 92.1% of the population and 27.5% of land area.[6] Thus, if an area is currently reached by three or fewer carriers today, in most cases that is because either T-Mobile or Sprint does not reach the area.

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https://ecfsapi.fcc.gov/file/107262486903703/FSF%20Comments%20-%20Mobile%20Wireless%20Market%20Competition%20072618.pdf.

4 *Twentieth Report*, at pg. 20 – Table II.C.1.

5 *Twentieth Report*, at pg. 14 – Table II.B.1.

6 *Twentieth Report*, at ¶ 76.

Table 1: Wireless Coverage by National Carriers
(in percentages of United States)

Carrier	Population	Road Miles	Land Area
AT&T	99.3%	91.0%	71.9%
Verizon	97.4%	87.2%	67.0%
T-Mobile	95.2%	70.9%	47.6%
Sprint	92.1%	51.7%	27.5%

Source: *Twentieth Report*, at ¶ 76.

The coverage story is similar for high-speed LTE wireless broadband coverage by the four national carriers. If an area is covered by three or fewer LTE broadband carriers it is usually due to either T-Mobile or Sprint not reaching the area.

Table 2: LTE Mobile Broadband Coverage by National Carriers
(in percentages of United States)

Carrier	Population	Road Miles	Land Area
AT&T	97.6%	76.7%	53.1%
Verizon	97.0%	85.1%	64.5%
T-Mobile	94.6%	69.5%	46.3%
Sprint	87.8%	42.3%	19.9%

Source: *Twentieth Report*, at ¶ 78.

Post-merger, consumers would also continue to have a choice from rural and regional providers. As the *Twentieth Report* observed, U.S. Cellular is a multi-regional service provider and the nation's fifth largest provider. At the end of 2016, U.S. Cellular provided services to its customers with approximately five million connections. And C Spire, the sixth largest provider, provides service to nearly one million subscribers in the Southeastern United States. Dozens of other facilities-based service providers offer service in rural geographic areas. The *Twentieth Report* explained: "These non-nationwide service providers increase choice for consumers and help to promote deployment in rural areas."[7]

[7] *Twentieth Report*, at ¶ 14.

Indeed, consumers have shown willingness to switch providers – a further indication of vigorous competition. The amount of "churn," or percentage of connections that are disconnected from mobile wireless service, has been increasing. The *Twentieth Report* cited fourth quarter 2016 churn rates of 1.3% for Verizon Wireless, 1.7% for AT&T and T-Mobile, as well as 2.2% for Sprint. Further: "In the fourth quarter of 2016, industry weighted monthly churn was 1.61 percent, its highest in two years."[8]

Furthermore, recent wireless market entry by Comcast and Charter and potential entry from other entities also provides choices for consumers as well as competitive checks against anticompetitive conduct in the market. Traditional cable providers are already established providers of bundled voice, video, and data services, and therefore are suited to provide competitive mobile wireless services, leveraging their existing broadband network capacity and nationwide deployment of Wi-Fi hotspots. Indeed, the Commission's *Voice Telephone Services Report* indicates that at year's end 2016, interconnected VoIP connections outnumbered switched access lines offered by traditional incumbent local exchange carriers, 63 million to 58 million.[9]

In particular, Comcast launched its Xfinity Mobile service in April 2017. The service for mobile wireless voice calling, texting, and mobile data relies on Comcast's network capacity – including 18 million Xfinity Wi-Fi hot spots – in combination with network capacity leased from Verizon Wireless for out-of-area voice and data transmission. Xfinity Mobile enrolled 577,000 subscribers through the first quarter of 2018. Analysts have predicted new subscriber numbers will continue climbing. It is reported, for instance, that New Street Research expects Comcast's new enrollments to sharply increase during the second half of 2018 and that Xfinity Mobile

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[8] *Twentieth Report*, at ¶ 27.
[9] Voice Telephone Services: Status as of December 31, 2016 (2018)("*Voice Telephone Services Report*"), at 2, available at: https://www.fcc.gov/voice-telephone-services-report.

subscribership could reach 2 million connections within the near future.[10] Meanwhile, Charter has announced the introduction of a similar hybrid Wi-Fi/cellular mobile wireless service called Spectrum Mobile. Also, DISH Network owns valuable spectrum licenses and has announced plans to launch an IoT network as well as 5G network services.

These competitive conditions, including entry or potential entry by new competitors, diminish the likelihood of significant and sustained price increases above market levels, post-merger. Importantly, Commission precedents like the *CenturyLink/Level 3 Order* factor future competitive entry into the competitive analysis.[11]

Of course, the market shares above suggest that mobile broadband is a defined market for purposes of antitrust analysis. Traditional market definitions, such as a "mobile broadband" market, are now likely to be overly narrow when it comes to evaluating the market power of Verizon, AT&T, and the new T-Mobile. Indeed, in a recent speech FCC Commissioner Michael O'Rielly warned against using overly narrow and outdated market definitions in transaction reviews:

> From the viewpoint of many, both the FCC and Department of Justice have been stuck in administrative molasses, seeking to apply sectoral market analysis, preserve questionable bright line tests, and continue the imposition of rigid restrictions as part of transactional reviews the same way now as in 2008, 1988, or 1958. I would posit that the entire foundation of how the government currently views the "communications" market – be it voice, video, or data – is outdated and misguided. . .
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> The problem with such an approach, of course, is that when you narrowly define a marketplace and narrowly recognize competition – far devoid from market realities – the result typically leads to the application of additional regulations or limitations beyond what is necessary to protect consumers. Perhaps that's just the nature of the beast. But, as Judge Leon recognized in his decision [in the DOJ

[10] Mike Dano, "Analyst: Wireless customers will begin flocking to Comcast's Xfinity Mobile," *Fierce Wireless* (April 9, 2018), at: https://www.fiercewireless.com/wireless/analyst-wireless-customers-will-begin-flocking-to-comcast-s-xfinity-mobile.
[11] *See CenturyLink/Level 3 Order* (2017), at ¶ 18.

> challenge to the AT&T/Time Warner merger], there has been a "veritable explosion" in the media marketplace in just the last five years. . . Broadly, this means that, given the extensive competition from new technologies, the current generation of legacy media will only flourish, and perhaps survive, if the government recognizes this marketplace reality.[12]

Thus, the Commission should heed the lesson from the AT&T/Time Warner decision and avoid defining the market overly narrowly. The merger and faster 5G deployment will also have benefits for consumers of non-wireless broadband. T-Mobile and Sprint raise this important point in their merger application to the FCC:

> New T-Mobile's robust, nationwide 5G network will eliminate the speed and capacity differential between mobile and in-home wired broadband for many Americans, allowing millions more Americans to free themselves from the grip of traditional in-home broadband providers. The new 5G network's speeds, capacity, and low prices will allow consumers to "cut the cord" and use their mobile wireless service as their broadband service both inside and outside the home and pocket the savings from eliminating an unnecessary and costly wired broadband bill month after month. New T-Mobile will also offer an aggressively priced wireless in-home broadband solution to compete head-on with the traditional providers. [13]

Even if full 5G deployment does not entirely eliminate the speed and capacity differential between mobile and wired broadband, it will make mobile broadband a more viable option for a substantial share of wireline customers. As such, faster deployment will make 5G wireless broadband more competitive with wireline, and therefore increase competition in any market that includes wireline services, further blurring the distinction between the previously more distinct wireless and wireline market segments.

III. T-Mobile/Sprint Merger Likely Would Provide Public Interest Benefits by Enabling Rapid Nationwide 5G Network Deployment

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[12] Michael O'Rielly, "Remarks of FCC Commissioner Michael O'Rielly Before the Mackinac Center for Public Policy: Smart Regs for Smart Tech: How Government Can Allow Next Gen Internet Networks to Flourish," (speech, Lansing, MI, June 20, 2018), available at https://www.fcc.gov/document/comm-orielly-remarks-mackinac-center-public-policy.

[13] Application of T-Mobile US, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 18-197 (June 18, 2018), at ii, available at https://ecfsapi.fcc.gov/file/10618281006240/Public%20Interest%20Statement%20and%20Appendices%20A-J%20(Public%20Redacted)%20.pdf.

T-Mobile and Sprint have declared their intention to combine spectrum resources and other assets in order to quickly build a nationwide 5G mobile broadband network. Certainly, the Commission should recognize the proposed next-generation network deployment as a primary public benefit of the merger.

Near-future 5G wireless networks will feature faster speeds, higher capacity, and improved reliability. Indeed, 5G potentially will enable average speeds up to 10 times faster than 4G networks and peak speeds up to 100 times faster.[14] The increased data traffic capacity of 5G will be essential to supply skyrocketing future demand. According to the June 2018 *Ericsson Mobility Report*: "Total mobile data traffic is forecast to rise at a compound annual growth rate (CAGR) of 43 percent, reaching close to 107 exabytes (EB) per month by the end of 2023."[15] In comparison, global mobile data traffic totaled about 15 exabytes per month in 2017. Video viewing will continue to drive mobile data demand, with mobile video traffic forecast to increase 45% annually through 2023 and account for 73% of mobile data traffic that year. Ericsson also projects that more than 20% of U.S. mobile data traffic will be carried by 5G networks in 2023. And it predicts that 48% of mobile subscriptions in North America in 2023 will be for 5G. Against this backdrop of sharply increasing demand for data, T-Mobile and Sprint project that their 5G network's monthly capacity would reach 6.8 exabytes in 2021 and climb to 20.3 exabytes by 2024. Importantly, the increased data traffic supply to be realized from the proposed merger will likely put downward pressure on per-megabit prices for retail consumers as well as business enterprises.

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[14] *See* Thomas K. Sawanobori & Paul V. Anuszkiewicz, High Band Spectrum: The Key to Unlocking the Next Generation of Wireless, CTIA, at 5 (June 13, 2016), at http://www.ctia.org/docs/default- source/default- document-library/5g-high-band-white-paper.pdf.

[15] Ericsson, *Ericsson Mobility Report* (June 2018), at: https://www.ericsson.com/assets/local/mobility-report/documents/2018/ericsson-mobility-report-june-2018.pdf.

Advanced 5G networks will enable "smart city" capabilities such as smart lighting that will automatically dim street lights when pedestrians and vehicles are not present. Public transportation systems and electric utilities will be optimized by 5G-enabled smart devices. Cities are expected to realize millions in cost savings from such capabilities. Further, industrial, manufacturing, and other enterprise sectors will benefit from Internet-of-Things (IoT) devices connected via 5G networks. Smart device and sensor-embedded equipment connectivity will enable precision agriculture to produce optimum yields at reduced costs and also enable safe manufacturing operations involving heavy equipment that requires pinpoint accuracy. Accenture has projected global IoT-related real GDP contributions of $10.6 trillion dollars by 2030.[16] FCC precedents recognize the public interest benefits of mergers that enable more rapid and widespread deployment of next-generation broadband networks. In its *T-Mobile/MetroPCS Order* (2013), for instance, the Commission recognized that the proposed merger of two providers and their network assets and spectrum "would provide for a broader, deeper, and faster LTE deployment than either company could accomplish on its own."[17]

More recent Commission precedents expressly recognize the public interest benefits of transactions that accelerate 5G network deployment. For example, the *Verizon/XO Order* (2016) recognized the public interest benefits to be realized from acquiring "wireline backhaul capability in areas where Verizon does not have fiber facilities to connect wireless cells… will allow Verizon to more quickly deploy 5G than if it had to build or lease the fiber assets itself."[18] And the order characterized "the rollout of 5G technology" as an "important Commission policy

[16] Accenture Strategy, "Smart Cities: How 5G Can Help Municipalities Become Vibrant Smart Cities" (January 2017), at 1, at: https://newsroom.accenture.com/content/1101/files/Accenture_5G-Municipalities-Become-Smart-Cities.pdf.
[17] *T-Mobile/MetroPCS Order* (2013), at ¶ 74.
[18] *Verizon/XO Order* (2016), at ¶ 57.

priority for the general benefit of all consumers."[19] Similarly, the *Verizon/Nextlink Leasing Order* (2016), recognized the public interest of "facilitating in the near-term the development of innovative 5G services" by approving a proposed lease transaction that would advance Verizon's "aggressive schedule in developing 5G technology" beyond what it could achieve in the absence of the transaction.[20] Additionally, the *Verizon/Straight Path Order* (2018) affirmed the Wireless Bureau's crediting of "the expeditious use of this spectrum for the potential introduction of innovative 5G services to the benefit of American consumers."[21] The Commission should thus recognize that many of the same public interest benefits from expeditious 5G deployment that were observed in prior merger review orders are presented by the proposed T-Mobile/Sprint merger and are likely to be obtained if the transaction is approved.

IV. Public Interest Benefits of Rapid 5G Deployment Likely Outweigh Potential Harms From Loss of One National Wireless Provider

Horizontal mergers result in the elimination of one choice for products or services in the market. But such integrations only pose market power and anticompetitive conduct concerns where the market in question is or will become concentrated or offers consumers limited choices. Importantly, the potential harm to consumers from horizontal integrations is significantly diminished where the market in question is characterized by rapidly changing technologies, service offerings, and consumer habits. Furthermore, the potential public benefits resulting from horizontal integrations – including the deployment of new and advanced services – can outweigh potential concerns resulting from the loss of one competing provider. And, as in this case, when

[19] *Verizon/XO Order*, at ¶ 57.
[20] *Verizon/Nextlink Leasing Order* (2016) ¶ 9; *id*. at ¶ 25.
[21] Application of Verizon Communications Inc. and Straight Path Communications, Inc. For Consent to Transfer Control of Local Multipoint Distribution Service, 39 GHz, Common Carrier Point-to-Point Microwave, and 3650-3700 MHZ Service Licensees, ULS File No. 0007783428, Memorandum Opinion and Order ("*Verizon/Straight Path Order"*) (released July 2, 2018); *Consent Order* (WTB), at ¶ 1 (released January 18, 2018). *See also Consent Order*, at ¶ 29.

the two weakest of four rivals merge, competition may, in fact, be strengthened if the new entity now has available resources (financial, talent, spectrum, etc.) to compete more effectively.

Commission precedent expressly recognizes that the potential public benefits of new technology and service offerings enabled by mergers can outweigh the loss of a market competitor. In the *AT&T/DIRECTV Order* (2015), for instance, the Commission "recognize[d] that because AT&T and DIRECTV both offer video services, post transaction, there w[ould] be a loss of a video provider within the U-verse video footprint." But the Commission concluded: "[T]his very limited potential for competitive harm, when balanced against the benefits of the transaction, does not require a condition" to regulate standalone prices of DIRECTV in approving the merger.[22] The Commission's approval was based on its determination that the AT&T/DIRECTV merger would "result in greater competition for bundles of video and broadband and that this increased competition will benefit consumers, thus serving the public interest" and that "the benefits of a stronger combined competitor" outweighed the "loss of an independent competitor" in U-verse's video footprint.[23]

Similarly, it is likely that the potential benefits of 5G deployment enabled by the proposed T-Mobile/Sprint merger would outweigh any potential concerns from the loss of one national wireless service provider. According to T-Mobile's application to the FCC, the merger will result in the parties doubling their capacity and lowering their costs of delivering data to customers, so that New T-Mobile will be able to "compete aggressively with lower prices to take market share from Verizon and AT&T."[24] The economic analysis included with the application

[22] *AT&T/DIRECTV Order* (2015), ¶ 127.
[23] *Id*. at ¶ 399.
[24] Declaration of G. Michael ("Mike") Sievert, President and Chief Operating Officer, T-Mobile US, Inc., Appx. C (June 18, 2018), at ¶ 21, available at https://ecfsapi.fcc.gov/file/10618281006240/Public%20Interest%20Statement%20and%20Appendices%20A-J%20(Public%20Redacted)%20.pdf.

claims this faster 5G buildout by the merging companies and the competitive responses from Verizon and AT&T will lead to as much as a 55% decrease in price per GB and a 120% increase in cellular data supply for all wireless customers.[25] If these claims are even halfway correct, these benefits should greatly outweigh any increase in prices, assuming for the sake of argument that there are any, that result from the loss of one competitor that is far smaller than the market leaders.

As indicated previously, competition in the wireless services market from nationwide, regional, and new entrants diminish the likelihood of significant and sustained price increases above market levels, post-merger. T-Mobile/Sprint is likely to be a much stronger competitor to market leaders AT&T and Verizon. Also, both enterprise customers and retail consumers are likely to realize benefits from the availability of the new T-Mobile's proposed 5G network – the timely deployment of which appears to depend upon the merger's approval.

V. T-Mobile/Sprint Merger Is Likely the Only Realistic Path to a 5G Network That Can Compete With Market Leaders

Rapid deployment of 5G networks is necessary for consumers, enterprises, and cities to maximize the promised benefits. Absent a merger, it is questionable whether T-Mobile or Sprint would be able to finance and construct nationwide 5G networks separately in as timely a fashion and to the same extent.

T-Mobile lacks mid-band spectrum while Sprint lacks low-band spectrum. Separately the two providers have reduced 5G network capacities. And each would likely require longer periods to transition existing spectrum resources from prior-generation networks to 5G. Additionally, the

[25] David S. Evans, Market Platform Dynamics, "Economic Analysis of the Impact of the Proposed Merger of TMobile and Sprint on the Deployment of 5G Cellular Technologies, the 5G App Ecosystem, and Consumers, Enterprises, and the Economy," Appx. G, Section V.C. (June 18, 2018), at ¶¶220-44, available at https://ecfsapi.fcc.gov/file/10618281006240/Public%20Interest%20Statement%20and%20Appendices%20A-J%20(Public%20Redacted)%20.pdf.

merging parties' application to the FCC indicates Sprint would initially be able to provide 5G network coverage only in major metropolitan areas and that Sprint would face major financial obstacles in adding new cell sites necessary for 5G deployment.

The record of the past several years shows that wireless service providers have made significant investments in infrastructure to expand network coverage and improve capacity. However, the two leading carriers, AT&T and Verizon, have been investing significantly more than T-Mobile and Sprint, both in absolute terms and relative to their market shares.

Table 3: Yearly Capital Expenditure by Provider
(millions of nominal U.S. dollars)

Carrier	2010	2011	2012	2013	2014	2015	2016	Carrier Total
AT&T	$ 9,171	$ 9,764	$10,795	$11,191	$11,383	$ 9,400	$ 9,750	$ 71,454
Verizon	$ 8,438	$ 8,973	$ 8,857	$ 9,425	$10,515	$11,725	$11,240	$ 69,173
T-Mobile	$ 2,819	$ 2,729	$ 2,901	$ 4,241	$ 4,317	$ 4,724	$ 4,702	$ 26,433
Sprint	$ 1,444	$ 2,416	$ 4,884	$ 6,833	$ 4,886	$ 4,026	$ 1,797	$ 26,286
Yearly Total	$21,872	$23,882	$27,437	$31,690	$31,101	$29,875	$27,489	$ 193,346

Source: *Twentieth Report*, at ¶ 68.

From 2010 to 2016, AT&T's capital investment was $71 billion, Verizon's was $69 billion, and the combined investment by T-Mobile and Sprint lagged behind at $53 billion. The difference is even greater in 2016, when AT&T invested $10 billion, Verizon $11 billion, and the combined investment by T-Mobile and Sprint was only $6 billion. Investment by the two leading mobile service providers, AT&T and Verizon, is disproportionate even to their market shares. The market shares of AT&T and Verizon will each be a little larger than the share of a combined T-Mobile and Sprint.

It appears unlikely that T-Mobile and Sprint separately would have the capital resources necessary to invest in and timely deploy nationwide 5G networks that could compete effectively with AT&T and Verizon. Furthermore, build-out and operation of a next-generation mobile wireless network involves significant costs in migrating subscribers onto the new network and closing down older-generation networks. Such migration would be particularly challenging to T-Mobile and Sprint separately given their relatively smaller pool of financial and spectrum resources.

VI. The Merger Is Likely to Enhance Competition for Mobile Wireless Enterprise Services

Furthermore, Commission precedents such as the *CenturyLink/Level 3 Order*, the *Verizon/XO Order*, the *Charter/Time Warner Cable Order* (2016), and *Time Warner Cable /Insight Order* (2012) recognize the public interest benefits from expanded network capacities and locations for serving interstate business enterprises. As the *Charter/Time Warner Cable Order* declared: "[A]n expanded footprint may increase a firm's ability to compete for multi-location customers for business services that have operations beyond the firm's pre-transaction service area."[26] By increasing their reach and control over in-network services, enterprise broadband providers can provide more customized price and service offerings, reduce data traffic handoffs to other providers, and identify and resolve service disruptions for enterprise customers.

Both T-Mobile and Sprint offer mobile wireless services to business enterprises. By combining their backhaul and other network assets, the new T-Mobile would be better positioned to attract and retain multi-site business enterprises. Indeed, merger-enabled acceleration of 5G network capabilities would enhance the new T-Mobile's competitiveness in the enterprise services market. It is widely expected that manufacturing, industrial, and other business enterprises stand to be the primary beneficiaries of 5G network capabilities.

[26] *Charter/Time Warner Cable Order* (2015), at ¶ 377 (internal cite omitted).

VII. The Commission Should Not Analyze MVNOs and the Pre-Paid Segment in Isolation or Target Them with Special Regulatory Conditions

Based on observations that T-Mobile and Sprint are the largest wholesalers of mobile wireless network capacity to mobile virtual network operators (MVNOs) – or "resellers" – it has been claimed that the reduction of one wholesaler could raise wholesale prices for MVNOs and therefore harm consumers by causing their retail subscribers' prices to rise. However, given the competitive conditions of the wireless market identified above – including the new T-Mobile's likely enhanced ability to compete with wireless market leaders AT&T and Verizon – it is quite unlikely that wholesale prices would significantly increase post-merger. A rigorous economic analysis should be required to demonstrate that significant and non-transient price increases are likely to occur before the Commission should credit such an argument as a possible merger-related concern. And even assuming such a demonstration were made, it is unlikely that concern would outweigh the 5G and other potential benefits of the proposed merger.

Moreover, the Commission should not analyze competitive effects involving MVNOs in isolation. Although the Commission previously has acknowledged the benefits of MVNO options for consumers, its merger precedents have focused on facilities-based providers in their competitive analyses. In prior merger orders involving mobile wireless providers, the Commission's competitive analysis was framed by a combined "mobile telephony/broadband services" product market. That product market is comprised of mobile voice and data services, including mobile voice and data services provided over advanced broadband wireless networks (mobile broadband services). And Commission precedents, such as the *AT&T/Leap Order* (2014),[27] the *Sprint/Softbank/Clearwire Order* (2013),[28] and the *T-Mobile/MetroPCS Order*

[27] *AT&T/Leap Order* (2014), at ¶ 37.
[28] *Sprint/Softbank/Clearwire Order* (2013), at ¶ 43.

(2013)[29] have rejected calls that competitive analyses use narrower market definitions such as the MVNO market. The Commission should adhere to those precedents. And the Commission should not condition its approval of this merger in ways intended to manage, prop up, or protect the agency's or any competitors' vision of how wholesaler or MNVO segments should operate.

According to several news reports, a former executive of a pre-paid mobile service provider likewise has called on the Commission to condition its approval of the proposed merger in a manner that would carve out pre-paid mobile wireless services for special treatment.[30] The Commission has even been urged to confer what would amount to special privileges on an unmistakably self-interested former CEO of Boost Mobile, now a third-party hypothetical potential competitor who seeks a forced divestiture of Sprint's Boost Mobile pre-paid service brand as a condition for merger approval.[31] But post-merger competition among existing national, regional, and local mobile service providers, as well as by new entrants such as hybrid Wi-Fi/MVNO wireless network providers Comcast and Charter, likely will counterbalance any upward pressure on pre-paid prices. Of course, economic analysis should likewise be required to demonstrate the likelihood that the merger would increase pre-paid prices. And such a demonstration is rendered less likely by the existence of nationwide pricing plans by competing providers as well as market trends – reflected in the *Twentieth Report* and prior reports – showing continued decreases in ARPU, wireless CPI, and per-megabit prices.[32] Of course,

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[29] *T-Mobile/MetroPCS Order* (2013), at ¶ 37.

[30] *See, e.g.*, James Langford, "Boost founder: T-Mobile-Sprint merger would kill prepaid wireless market," *Washington Examiner* (June 12, 2018), at: https://www.washingtonexaminer.com/business/boost-founder-t-mobile-sprint-merger-would-kill-prepaid-wireless-market.

[31] *See* Globe Newswire, Press Release: "Boost Founder Commits to Offer $9.95 Unlimited Data Plan for Prepaid Fixed Wireless Broadband Customers and Will Rollout 4G Fixed Broadband Network in Select Low Income Areas if Government Conditions T-Mobile/Sprint Merger to Divest 60 MHz in 2.5 GHz Band" (July 16, 2018), at: https://globenewswire.com/news-release/2018/07/16/1537805/0/en/Boost-Founder-Commits-to-Offer-9-95-Unlimited-Data-Plan-for-Prepaid-Fixed-Wireless-Broadband-Customers-and-Will-Rollout-4G-Fixed-Broadband-Network-in-Select-Low-Income-Areas-if-Gov.html.

[32] *See, e.g.*, *Twentieth Report*, at ¶¶ 6, 58, 59.

assuming that demonstration could be made, it remains unlikely pre-paid-related concerns would outweigh the proposed merger's potential benefits.

Equally important, the Commission should adhere to its merger precedents and thereby refrain from treating pre-paid service products in isolation. As described above, the Commission's competitive analysis in prior orders was based on the "mobile telephony/ broadband services" product market. In the *AT&T/Leap Order*, the Commission expressly rejected calls that it separately and narrowly define a pre-paid services product market.[33] Rather, the Commission rightly recognized that differentiated services, devices, and contract features are all included within the overall "mobile telephony/broadband services" product market.[34] The Commission's analysis ought to be concerned with the vitality of the underlying innovative, competitive market forces that produce service, product, and pricing choices rather than with trying to prescribe how and by whom such choices ought to be delivered to consumers.

Given the rapidly changing competitive landscape of the wireless market, and of the broader convergent communications market, the Commission must not freeze specific pricing plans, offerings of various features and functions, or other business judgments into place through regulatory intervention. Indeed, the *Twentieth Report* observed: "Service providers frequently revise their pricing plans to attract customers."[35] The Commission's reports have recognized the recent emergence of no-contract plans, early termination fee buyouts, and equipment installment plans as well as the re-emergence of unlimited data and free-data plans.[36] So, increasingly, both the pre-paid and post-paid product segments feature overlapping or similar service terms and

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[33] *AT&T/Leap Order*, at ¶ 26.
[34] *AT&T/Leap Order*, at ¶ 26.
[35] *Twentieth Report*, at ¶ 50.
[36] *See, e.g. Twentieth Report*, at ¶¶ 51, 52. *See also, e.g*., *Eighteenth Wireless Competition Report*, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket No. 15-125, at ¶ 73, ¶ 90 (released December 23, 2015), available at: http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db1223/DA-15-1487A1.pdf.

device choices. There is no doubt that both the pre-paid and post-paid products appeal broadly across demographic boundaries. Merger approval conditions directed to pre-paid plans would be unwise and unjustifiable in today's fast-changing wireless market.

Also, the Commission should not brush aside the likely consumer welfare-enhancing benefits of the proposed T-Mobile/Sprint merger because a third party, desirous of becoming a new entrant, pledges to offer pre-paid services and could benefit personally from a merger approval condition that the merging parties divest one of their pre-paid service brands. The Commission's analysis should focus on the likely benefits of mergers proposed by the parties that actually bear the risks of the merger and not hypothetical scenarios posited by third parties seeking to benefit personally from requested merger conditions. It would be an abuse of agency power to attempt to fashion a new competitor through merger review conditions.

VIII. Conclusion

For the foregoing reasons, the Commission should act in accordance with the view expressed herein.

Respectfully submitted,

Randolph J. May
President

Seth L. Cooper
Senior Fellow

Free State Foundation
P.O. Box 60680
Potomac, MD 20859
301-984-8253

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