

APPLICATIONS OF T-MOBILE US, INC., AND SPRINT CORPORATION FOR CONSENT TO TRANSFER CONTROL OF LICENSES AND AUTHORIZATIONS

WT Docket No. 18-197 Comments of William Rinehart¹

Executive Summary

In just two decades, Internet access has gone from a novelty to near ubiquity. What was non-existent two decades ago now boasts numerous applications layered on top of a robust network that finds endpoints both in fixed architecture like cable and fiber connection, and in wireless architecture. That dynamism continues. The wireless broadband marketplace is complex and ever changing, and, as is detailed in the trends below, the T-Mobile and Sprint merger is a response to that complexity.

This comment comes to three primary conclusions:

- First, the Federal Communications Commission (FCC) needs to adopt the lens of dynamic competition when assessing this merger;
- Second, wireless technology is clearly coming to compete with the more traditional fixed broadband market; and
- Finally, the biggest concern, the prepaid segment of cellular service, is simply part of the larger wireless market.

In all, the record suggests that the T-Mobile and Sprint merger should be allowed.

Dynamic Markets

If you had asked anyone in the cell phone space in 2002 which companies would be the most innovative, few would have cited Google and Apple and would have instead suggested Motorola or Nokia. Yet, the innovations driven by iOS and Android have completely changed the market. This is the enduring tension between static and dynamic views of market competition. Most economic and regulatory tools take a static view of the market, where changes in price, quality, and quantity are charted in response to market conditions at the current moment. Competition analysis is rooted in these kinds of tools, including the small but significant and non-transitory increase in price or SNNIP test, the “gross upward pricing pressure index” or GUPPI,² and the Lerner Index.³

On the other hand, regulators have come to recognize that markets, especially high-tech markets like broadband, need to be understood through time as well. Beyond snapshot considerations of price and quality for specific products, dynamic competition must consider the creation of new products and processes that supplant firms and add entirely new competitive pressures.⁴ The new

¹ William Rinehart is Director of Technology and Innovation Policy at the American Action Forum.

² Charles River Associates, *Scoring Unilateral Effects with the GUPPI: The Approach of the New Horizontal Merger Guidelines*, http://www.crai.com/sites/default/files/publications/Commentary-on-the-GUPPI_0.pdf.

³ Gregory Werden, *The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm*, <https://www.tib.eu/en/search/id/BLSE%3ARN137570773/The-1982-Merger-Guidelines-and-the-Ascent-of-the/>.

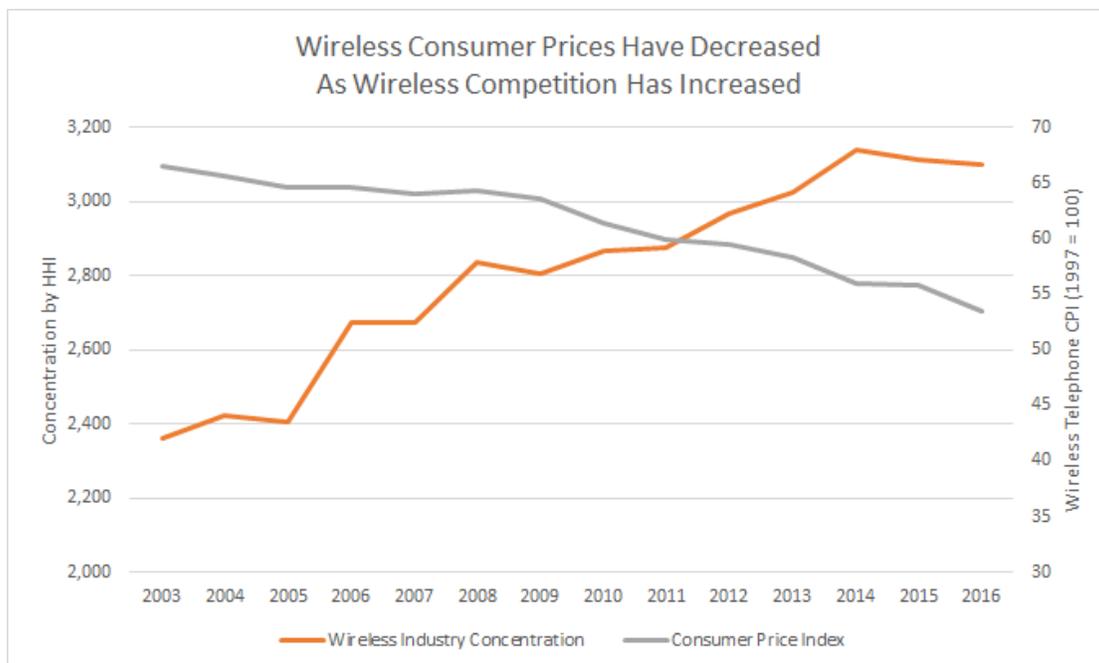
⁴ J. Gregory Sidak & David J Teece, *Dynamic Competition in Antitrust Law*, <https://academic.oup.com/jcle/article/5/4/581/755200>.

economy industries are denoted by dynamic competition, high levels innovation, and novel business hierarchies. Computer chips, operating systems, and search engines are all traditionally concentrated markets, but these markets display none of the characteristics of monopoly such as high prices and lower output.

The growing emphasis on the dynamic competition has been recognized not only by numerous scholars in law and economics, but also by numerous branches of government. The Antitrust Modernization Commission, which reported to both the president and Congress in 2007, observed that,

To be competitive, markets need not conform to the economic ideal in which many firms compete and no firm has control over price. In fact, the real world contains very few such markets. Rather, competition generally ‘refers to a state of affairs in which prices are sufficient to cover a firm’s costs, but not excessively higher, and firms are given the correct set of incentives to innovate.’ Experience has shown that intense competition can take place in a wide variety of market circumstances. Some factors—such as many sellers and buyers, small market shares, homogeneous products, and easy entry into a market—may suggest competitive behavior is likely. The absence of those factors, however, ‘does not necessarily prevent a market from behaving competitively.’⁵

Consider the chart below, which details wireless prices over time as determined by official Bureau of Labor Statistics data⁶ and the level of industry concentration as signaled by the Herfindahl–Hirschman Index (HHI) of the wireless industry. Traditionally, an HHI over 2,500 is considered highly concentrated. In the case of the wireless sector, prices have dropped even as the number of competitors has dropped.



⁵ Antitrust Modernization Commission, *Introduction And Recommendations*,

http://govinfo.library.unt.edu/amc/report_recommendation/introduction.pdf.

⁶ Bureau of Labor Statistics, *Wireless telephone services in U.S. city average, all urban consumers, not seasonally adjusted*, <https://beta.bls.gov/dataViewer/view/timeseries/CUUR0000SEED03>.

Concentration indices, like the one above, say very little about a market's dynamic methods. As one economist noted, markets are "a systematic process in which market participants acquire more and more accurate and complete mutual knowledge of potential demand and supply attitudes."⁷ The market is a continually adjusting process of knowledge on both sides of the transaction with consumers continually realizing and reconsidering what they want, and companies striving to provide those needs.

Since there are limited investment dollars to meet that need, the optimal number of wireless carriers isn't always *one more*. Beginning with the work of economists Bresnahan and Reiss, there is now a better appreciation that "competition appears to kick in relatively quickly and lead to lower margins with just a few firms, but then does not ramp up with additional entrants."⁸ At a certain point, the addition of a new firm into the mix does little to help consumers or ramp up investment. For broadband, that threshold happens around three competitors. The fourth entrant has little effect on competitive conduct, according to recent work using the Bresnahan and Reiss model.⁹ Similarly other research has found "an inverted-U relationship between the industry investment and the number of mobile operators; the maximum being reached at three or four mobile operators."¹⁰

For the Commission, the best path would aim for assessing the dynamic effects of the deal. In total, the evidence points toward continued competition in the wireless sector and spillovers in associated industries such as fixed broadband.

What Does Research Tell Us About Fixed and Wireless Broadband Competition?

The release of the iPhone and App Store didn't just upset a balance of power that favored the carriers; it made mobile broadband a viable product. Watching videos online, using apps, and mobile web surfing were pushed into the mainstream with the introduction of the iPhone. The change was dramatic for AT&T, the first carrier to sell the iPhone, as the network experienced an 8,000 percent increase in traffic from 2007 to 2010.¹¹

The demands for data in turn pressed into action new technologies to deliver those bits faster and more efficiently. Beginning at the end of 2010, the current generation of mobile technology known as LTE began to be deployed, and demand quickly skyrocketed. In 2016, mobile data traffic grew by 44 percent, nearly two times faster than fixed traffic.¹² Experts don't expect this increase to slow, with mobile data traffic expected to grow five-fold from 2016 to 2021 for a compound annual

⁷ Israel M. Kirzner, *Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach*, <http://walker.d.people.cofc.edu/400/Sobel/1B-3.%20Kirzner%20-%20Entrepreneurial%20Discovery%20and%20the%20Competitive%20Market%20Process%20An%20Austrian%20Approach.pdf>.

⁸ Liran Einav & Jonathan D. Levin, *Empirical Industrial Organization: A Progress Report*, <http://www.nber.org/papers/w15786>.

⁹ Mo Xiao & Peter F. Orazem, *Does the fourth entrant make any difference? Entry and competition in the early U.S. broadband market*, https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1349&context=econ_las_pubs.

¹⁰ François Jeanjean & Georges Vivien Hounghonon, *Optimal Number of Firms in the Wireless Markets*, <https://www.econstor.eu/bitstream/10419/127153/1/Jeanjean-Houngbonon.pdf>.

¹¹ Marguerite Reardon, *Is AT&T considering throttling heavy data users?*, <https://www.cnet.com/news/is-at-t-considering-throttling-heavy-data-users/>.

¹² Cisco, *VNI Mobile Forecast Highlights 2016-2021*, http://www.cisco.com/c/dam/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country.

growth rate of 35 percent. All the while, the cost for these services has gone down, which the Bureau for Labor Statistics has catalogued as a 26 percent decline since 2009.

Due in part to a closing gap in coverage and performance between carriers, efforts to test and standardize the newest mobile technologies, collectively known as 5G, are underway.¹³ As these technologies are embedded in consumer products, wireless networks will change dramatically. For one, 5G speeds will be comparable to the fastest fiber networks of today and could top 1 Gbps. Indeed, device manufacturer Ericsson is already working on a 1 Gig option for current LTE offerings.¹⁴ Simultaneously, the suite of technologies delivering these faster speeds will allow for dense environments, a current drawback of 4G technologies. While more people in a small area currently means worse performance for everyone, 5G is working to change that, ensuring high speeds and quality of service.¹⁵ As research has shown, the degradation of service for mobile broadband is one of the biggest barriers in it becoming a rival to fixed broadband, making the possibility of improving service and spillover competition an important plus for this merger deal.¹⁶

A going trope in the Internet conduit community is that wired and wireless broadband are not and will not be substitutes. Harvard Law Professor Susan Crawford has long been a proponent of this view and explained that, “We should also stop thinking that satellite and mobile wireless technologies are the answer.”¹⁷ And yet, the very data that she cites suggests that wireless technologies are chosen as substitutes.

Indeed, the FCC recognized some time ago that wireless carriers could be a new source of competition for the fixed broadband market:

The extent to which wireless broadband services can impose competitive discipline on wireline providers depends on many factors, including technologies, prices, consumer preferences, and the business strategies of providers that offer both wireless and wireline Internet access services. Mobile wireless Internet access service could provide an alternative to wireline service for consumers who are willing to trade speed for mobility, as well as consumers who are relatively indifferent with regard to the attributes, performance, and pricing of mobile and fixed platforms.¹⁸

The study of fixed and wireless broadband is still very much in its infancy, but, what we do know paints a complex picture of the market. First, it is important to know some terminology and a bit about methodology. Goods are typically considered either complements or substitutes.

¹³ Colin Gibbs, *T-Mobile execs call Verizon's 5G claims 'BS'*, http://www.fiercewireless.com/story/t-mobile-execs-call-verizons-5g-claims-bs/2016-02-17?utm_medium=nl&utm_source=internal&mkt_tok=3RkMMJWWfF9wsRokuq%2FBeu%2FhmjTEU5z14%2BsvUKC%2BIMI%2FOER3fOvrPUfGj14FSsZqNK%2BTFAwTG5toziV8R7LMKM1ty9MQWxTk.

¹⁴ Sue Marek, *1-Gigabit LTE will incorporate unlicensed spectrum*, <https://www.fiercewireless.com/tech/1-gigabit-lte-will-incorporate-unlicensed-spectrum>.

¹⁵ Jo Best, *The race to 5G: Inside the fight for the future of mobile as we know it*, <https://www.techrepublic.com/article/does-the-world-really-need-5g/>.

¹⁶ Akihiro Nakamura, *Mobile and fixed broadband access services substitution in Japan considering new broadband features*, <https://www.sciencedirect.com/science/article/abs/pii/S0308596115000051>.

¹⁷ Susan Crawford, *Big Cable Owns Internet Access. Here's How to Change That.*, <https://medium.com/backchannel/big-cable-owns-internet-access-here-s-how-to-change-that-131fe62cd98f>.

¹⁸ Federal Communications Commission, *16th Mobile Competition Report*, <https://www.fcc.gov/document/16th-mobile-competition-report>.

Complementary goods are linked in their demand, so higher quantity demanded of good A translates into higher quantity for good B, while lower demand for good A translates into lower supply for good B. In contrast, substitute goods mean that higher demand for good A translates into lower demand for good B. The classic example of complementary goods is computers and paper. Higher demand for computers leads to higher demand for paper. Yet, it is important to note that higher demand for paper doesn't necessarily translate into higher demand for computers, as those who use more paper might be eschewing the use of computers. To figure out if wireless and wired are complements or substitutes, research typically uses one of two methods; either it looks at the diffusion rates of the two technologies or it estimates how changes in the price for wired Internet affect the demand for wireless.

Studies from before 2008 at first seem contradictory. Research that focused on the price found substitutability between the wired and wireless broadband for some geographic areas, while adoption-based methods found that fixed broadband stimulates the growth of mobile broadband.¹⁹ Even though these studies are relatively recent, the research is still dated because it comes from before the widespread adoption of the smartphone. An appropriate demarcation date is mid-2008, when Apple went live with the App Store and made mobile broadband mainstream, thus sparking the smartphone revolution.

A study of 193 countries from 2007 to 2011, straddling this point, found that a part of the fixed broadband market was filled by mobile broadband services, while at the same time, fixed adoption helped to stimulate mobile adoption.²⁰ In Slovakia, where fixed broadband has struggled to perform because of longstanding deployment issues, researchers found that mobile broadband could be considered a substitute for fixed service.²¹ Similarly, a study of Swedish household data from 2009 found that mobile broadband could also be considered a substitute for fixed broadband in some geographic areas.²² In both of these studies, the authors concluded that their findings call into question many of the assumptions held by regulators, and that further study is needed.

One could reasonably interpret these results in the same manner as computers and paper. While increased demand for fixed broadband stimulates growth for mobile, mobile demand increases take a chunk out of the wired market. Evidence from Japan, which was among the first to adopt 4G wireless standards, supports this view. In 2012, fiber broadband providers were forced to drop their prices some 34 percent due to competition from 4G.²³ Even though the wireless networks had data caps and other downsides, young adults were turning away from cheap fiber towards wireless LTE.

In the United States, empirical research on this subject is thin. Surveys suggest, however, that wireless can be a substitute for fixed broadband. Pew recently found that 4 in 10 TV cord-cutters

¹⁹ The Organisation for Economic Co-operation and Development, *Broadband Growth and Policies in OECD Countries*, <http://www.oecd.org/sti/broadband/40629067.pdf>.

²⁰ Ibid.

²¹ Lukasz Grzybowski, Rainer Nitsche, Frank Verboven, Lars Wiethaus, *Market definition of broadband internet in Slovakia: are fixed and mobile in the relevant market?*, <https://lirias.kuleuven.be/retrieve/288559>.

²² Chalita Srinuan, Pratompong Srinuan, and Eric Bohlin, *Fixed and mobile broadband substitution in Sweden*, https://www.researchgate.net/publication/257162678_Fixed_and_mobile_broadband_substitution_in_Sweden.

²³ Tammy Parker, *LTE beating out FTTH in Japan*, <http://www.fiercewireless.com/tech/story/lte-beating-out-ftth-japan/2012-11-25>.

are primarily using their cellular devices to stream shows and movies.²⁴ Tech journalist Brian Fung explained the importance, saying, "It's not just that some customers could move from Comcast's TV bundle to Comcast's standalone Internet plan. It's that they could abandon Comcast entirely." While some might claim that the cost of wired broadband is causing the shift toward wireless, decreases in wired broadband are occurring across all socioeconomic demographics, except for households making \$75K to \$100K. Americans of all races, ages, regions, and classes are switching to a smartphone-only connection, as Pew data shows.²⁵

Analysis by the financial firm Cowen predicts that fixed 5G services are sizing up to be the bullies that will steal some of cable broadband's lunch money. T-Mobile comes in as one of the biggest threats to the cable incumbents, according to Cowen.²⁶ Indeed, at the center of an approved deal between T-Mobile and Sprint would be the further development of fixed wireless services.²⁷

Consider the following developments, which have all occurred in the last year.

- Verizon announced plans to launch 5G-based fixed wireless services in four markets, including Houston, Indianapolis, Sacramento, and Los Angeles.²⁸
- Eastern Carolina Broadband has started offering high-speed wireless Internet in Pink Hill, North Carolina and plans to make the service available in rural Duplin and Jones counties. The company is beaming the service to homes from high vertical structures, like grain bins and water towers.²⁹
- Belmont County, Ohio entered into an agreement with Agile Networks, a provider of hybrid fiber wireless broadband data networks, to establish greater broadband access in the county.³⁰
- Breeze Broadband, a wholly owned subsidiary of Union Pacific Railroad, is building out a fixed wireless network.³¹
- U.S. Cellular now has a fixed wireless offering.³²

²⁴ Brian Fung, *42 percent of cord-cutters don't even subscribe to home broadband*, <https://www.washingtonpost.com/news/the-switch/wp/2015/12/21/42-percent-of-cord-cutters-dont-even-subscribe-to-home-broadband/>.

²⁵ John B. Horrigan & Maeve Duggan, *Home broadband adoption: Modest Decline from 2013 to 2015*, <http://www.pewinternet.org/2015/12/21/1-home-broadband-adoption-modest-decline-from-2013-to-2015/>.

²⁶ Jeff Baumgartner, *5G Fixin' to Become 'Largest Existential Threat' to Broadband Providers – Analysts*, <https://www.lightreading.com/mobile/5g/5g-fixin-to-become-largest-existential-threat-to-broadband-providers---analysts/d/d-id/745755>.

²⁷ Mike Dano, *Merged T-Mobile/Sprint to challenge Comcast, Charter to become nation's 4th largest in-home ISP*, <https://www.fiercewireless.com/wireless/merged-t-mobile-sprint-to-challenge-comcast-charter-to-become-nation-s-4th-largest-home>.

²⁸ Dan Jones, *Indy Is Verizon's 4th Fixed 5G City*, <https://www.lightreading.com/mobile/5g/indy-is-verizons-4th-fixed-5g-city/d/d-id/745402>.

²⁹ Eddie Fitzgerald, *Pink Hill business brings high-speed Internet to rural areas*, <http://www.kinston.com/news/20171031/pink-hill-business-brings-high-speed-internet-to-rural-areas>.

³⁰ Robert A Defrank, *Broadband Expansion Mulled*, <http://www.timesleaderonline.com/news/local-news/2017/10/broadband-expansion-mulled/>.

³¹ Dave Brewer, *One of America's oldest companies is getting into fixed wireless*, <https://www.fiercewireless.com/wireless/one-america-s-oldest-companies-getting-into-fixed-wireless>.

³² Mike Dano, *U.S. Cellular launches fixed services over existing LTE network*, <https://www.fiercewireless.com/tech/u-s-cellular-launches-fixed-services-over-existing-lte-network>.

- Midco, a midtier cable operator with around 385,000 customers across South Dakota, North Dakota, Minnesota, Kansas and Wisconsin, decided that wireless technology is cheaper and easier to deploy than fiber in rural and other hard-to-reach areas.³³

Among the biggest changes in the market for 2018 is that fixed broadband is inching toward saturation. When that transition happens, which a merged T-Mobile and Sprint could help bring about, a new sort of ecosystem is likely to emerge, putting pressure on cable providers.³⁴

The Prepaid Market

Among the issues the New York Attorney General is exploring regarding this deal is how the merger might affect the market for prepaid cellular services.³⁵ Together, T-Mobile and Sprint have about 30 million prepaid customers.

To investigate the competitive effects of the T-Mobile-Sprint deal on prepaid and postpaid services, it is important first to understand how they operate. A prepaid mobile service requires that the user purchase credits ahead of time, such that at the beginning of each month, a user has an allotment of minutes, texts, and data she can use. When this bundle runs out, the service is usually throttled until the next month or when the user purchases more. On the other hand, a postpaid mobile service bills a user at the end of each month after he uses the service. Postpaid service requires that the user enter into a contract that specifies a limit to how many minutes, text messages, or days can be used in that month. If a user goes over that limit, he incurs extra charges. Contracts also usually include some sort of payment plan for a physical phone.

What really differentiates prepaid and postpaid services is the extent to which a company extends a loan, both for the phone (in most cases) and for the charges that may be incurred over a month. In other words, they are differentiated by the underlying contract, not by a difference in market.

Bucking analysts' predictions, both the prepaid and postpaid subscriber base expanded in the second quarter of 2018, according to the most recent data filed by wireless carriers.³⁶ Yet, the overall trend in the number of prepaid users is downward, as the Federal Communications Commission (FCC) detailed in their most recent wireless competition report.³⁷ Below, these data are mapped, showing the number of prepaid customers as a percent of all retail connections.

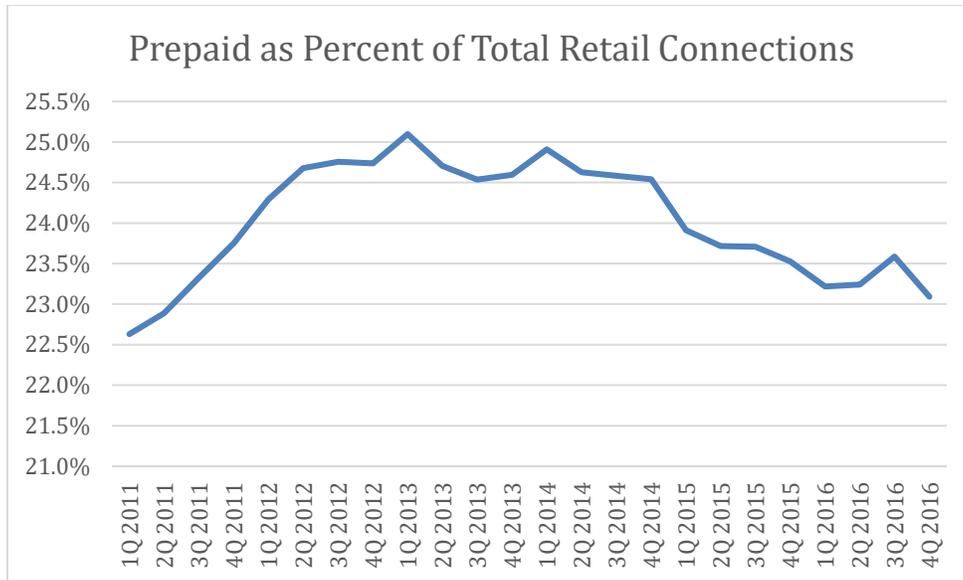
³³ Mike Dano, *Another major cable operator ditches fiber for fixed wireless on rural build-outs*, <https://www.fiercewireless.com/tech/another-major-cable-operator-ditches-fiber-for-fixed-wireless>.

³⁴ Jeff Baumgartner, *Broadband 'Inching Toward Saturation,' Analyst Says*, <https://www.multichannel.com/news/broadband-inching-towards-saturation-analyst-416389>.

³⁵ Sarah Krouse & Corinne Ramey, *New York Attorney General Probes T-Mobile-Sprint Deal's Impact on Prepaid Services*, <https://www.wsj.com/articles/new-york-attorney-general-probes-t-mobile-sprint-deals-impact-on-prepaid-services-1530135272>.

³⁶ Mike Dano, *Analysts wonder where wireless phone growth is coming from*, <https://www.fiercewireless.com/wireless/analysts-wonder-where-wireless-phone-growth-coming-from>.

³⁷ Federal Communications Commission, *Mobile Wireless Competition Report (20th Annual)*, <https://www.fcc.gov/reports-research/reports/mobile-wireless-competition-reports/mobile-wireless-competition-report-20th>.



T-Mobile CEO John Legere explained what was driving the change in a recent earnings call:

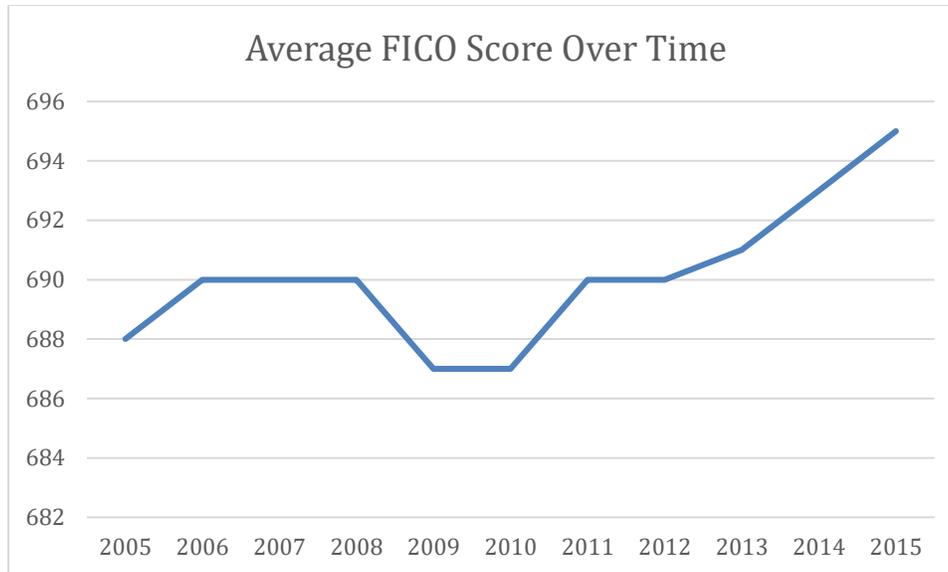
So what's happening is more people are qualifying for postpaid than they were a year or two ago and when you can qualify for postpaid, a lot of people take it because they want these device financing deals that they're now qualifying for. So I think that's been a healthy trend for the industry and it's at least in part driven by the economy.³⁸

Putting it all together, the trend makes sense. As the economy has improved and consumers have more income, average credit scores have been marching upwards.³⁹ Thus, those who would have previously been limited to prepaid accounts have the opportunity to switch to postpaid services, which they take. The chart below details the increase of average FICO scores in the last couple of years.⁴⁰

³⁸ T-Mobile US, Inc. (TMUS) CEO John Legere on Q2 2018 Results - Earnings Call Transcript, <https://seekingalpha.com/article/4193405-t-mobile-us-inc-tmus-ceo-john-legere-q2-2018-results-earnings-call-transcript?part=single>.

³⁹ Kaitlin Mulhere, This Is the Average Credit Score for Every Age, <http://time.com/money/5112478/average-credit-score-by-age/>.

⁴⁰ Alina Comoreanu, Average Credit Score – By Age, State, Year & More, <https://wallethub.com/edu/average-credit-scores/25578/#average-credit-score-by-year>.



The relationship between credit and contracts helps to explain why Sprint began using Progressive Finance in 2016 to conduct credit checks.⁴¹ Because the company has developed methods to better understand credit risk, as one industry insider, “Sprint may be able to continue to court consumers with subpar credit while minimizing the risk of not getting paid for devices and services.”

Thus, the prepaid and postpaid distinction isn’t due to a difference in markets, but a difference in the contract and consumer choice. In exploring the difference between a prepaid and postpaid contract, the FCC agreed that the difference comes “largely because prepaid subscribers may lack the credit background or income necessary to qualify for postpaid service.” Moreover, the agency previously agreed with this assessment in its analysis of the failed AT&T merger with T-Mobile, noting,

We recognize the product market we define encompasses differentiated services (e.g., voice-centric or data centric), devices (e.g., feature phone, smartphone, tablet, etc.), and contract features (e.g. prepaid vs. postpaid), and that wireless providers often recognize such distinctions in their internal analyses of the marketplace. While such distinctions may suggest the possibility of smaller markets nested within the product market we define, we find it unnecessary to examine that possibility in order to analyze the potential competitive effects of this transaction. We consider these aspects of product differentiation, as appropriate, when we analyze the competitive effects of the transaction within the markets we define.⁴²

Because prepaid customers are moving toward postpaid plans, the prepaid segment is best understood as a subset of the larger cellular market. Any analysis of this merger that focuses simply on its effect on the prepaid subset will necessarily provide an incomplete understanding.

⁴¹ Colin Gibbs, *Sprint using Progressive Finance to provide loans to customers for devices without a credit check*, <https://www.fiercewireless.com/wireless/sprint-using-progressive-finance-to-provide-loans-to-customers-for-devices-without-a->

⁴² Federal Communication Commission, *Staff Analysis and Findings*, <https://docs.fcc.gov/public/attachments/DA-11-1955A2.pdf>.

To take on the New York Attorney General's question directly, however, if this current merger were to go through, the prepaid sub-market could change for the better. Overall, the broad wireless market has been competitive, but the rate of new consumers has been slowing. Combined, those features have driven carriers increasingly to focus on the prepaid segment to spark revenue growth.⁴³ For example, Verizon hadn't put much effort into courting the prepaid market, since the carrier assumed that offering more prepaid services would lead to "potential cannibalization from its high-value postpaid subscriber base."⁴⁴ But the pressures of the market and the possibility of a rival in a combined T-Mobile and Sprint drove the company to double the data allowance on their prepaid offerings in late June.⁴⁵

Indeed, in 2013 T-Mobile helped to blur the lines between prepaid and postpaid choices when began to offer postpaid service on a month-to-month basis without contracts.⁴⁶ This deal also gave consumers the ability to pay for a portion of their cellular device up-front and then pay off the rest over time. When the payments were completed, the user would own the phone, in contrast to the subsidy model where consumers would continue paying an additional fee until they upgraded to a new device. Today, consumers differentiate less between prepaid and postpaid as the characteristics that historically separated these services have blurred into an array of financing and purchase options.

The question over the prepaid segment being a separate market is just one part of several that regulators are diving into to approve the companies' merger. But, as it stands now, this aspect doesn't call for the deal to be sunk. Cellular customers overall are moving toward postpaid services, which offer better benefits, and the threat of more competition is encouraging some companies to offer more to prepaid customers.

⁴³ Colin Gibbs, *T-Mobile and AT&T are killing the gap between prepaid and postpaid*, <https://www.fiercewireless.com/wireless/t-mobile-and-at-t-are-killing-gap-between-prepaid-and-postpaid>

⁴⁴ Trefis, *Why Verizon May Be Slowly Warming Up To The Prepaid Wireless Market*, <https://www.nasdaq.com/article/why-verizon-may-be-slowly-warming-up-to-the-prepaid-wireless-market-cm745109>.

⁴⁵ Aaron Pressman, *Verizon Gets More Generous With Data on Prepaid Plans*, <http://fortune.com/2018/06/27/verizon-prepaid-more-data/>.

⁴⁶ Wikipedia, *Simple Choice - No Service Contracts (Un-carrier 1.0)*, [https://en.wikipedia.org/wiki/Un-carrier#Simple_Choice_-_No_Service_Contracts_\(Un-carrier_1.0\)](https://en.wikipedia.org/wiki/Un-carrier#Simple_Choice_-_No_Service_Contracts_(Un-carrier_1.0)).