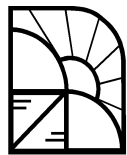


## PHOENIX CENTER POLICY BULLETIN NO. 33

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### EQUALIZING COMPETITION AMONG COMPETITORS: A REVIEW OF THE DOJ'S SPECTRUM SCREEN EX PARTE FILING

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*Abstract:* One important concern for the upcoming and highly-complex voluntary incentive auctions for broadcast television spectrum is the degree to which the largest mobile wireless providers will be allowed to participate. Recently, the U.S. Department of Justice encouraged the Federal Communications Commission to engineer the auction to favor smaller providers in an attempt to equalize competition among mobile wireless competitors. In this BULLETIN, we review the Justice Department's analysis and find significant defects. First, the DOJ's notion of "foreclosure value" is not a sufficient justification for rigging the auction. The efficiency of an auction's outcome should instead be based on relative "use value," and there are good reasons to suspect the use value of larger carriers exceeds that of smaller carriers. Economic theory therefore suggests the presumption should be in favor of non-interference. Second, we demonstrate that the DOJ's proposal is inconsistent with its own depiction of the mobile wireless market, where firms act as Cournot competitors, face spectrum exhaust, and realize a type of economies of scale in the use of spectrum. Published research shows that under such conditions, spectrum exhaust turns the standard antitrust analysis on its head—namely, that more competitors may, in fact, lead to higher prices and lower quality. Third, we show that case law holds that government intervention, whether by the FCC or the DOJ, should not be directed at equalizing competition among competitors, but the DOJ's recommendation is plainly aimed at doing so. We conclude that the Department's proposal effectively seeks to return spectrum allocation to the comparative hearing process, where government—not markets—selects deserving entities for spectrum licenses in a process disguised as an "auction" among pre-selected winners.

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## I. Introduction

Pursuant to the directions of the Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”),<sup>1</sup> the Federal Communications Commission (“FCC”) has been working out the details of a voluntary incentive auction mechanism by which the “beachfront” spectrum held by television broadcasters can be transferred to the mobile wireless broadband sector, thereby moving spectrum from a lower- to higher-value use.<sup>2</sup> This auction will likely prove the most complicated ever implemented, since the auction design will determine not only which firms receive spectrum but which broadcasters make their spectrum available.<sup>3</sup> One important concern regarding the upcoming and highly-complex auction is the degree to which the two largest mobile wireless providers (i.e., AT&T and Verizon) will be allowed to participate. While the Spectrum Act specifically prohibits the FCC from excluding eligible bidders,<sup>4</sup> the Commission remains free to “adopt and enforce rules of general applicability, including rules concerning spectrum aggregation that promote competition.”<sup>5</sup> To this end, last fall the agency issued a *Notice of Proposed Rulemaking* to re-evaluate, and potentially tighten, its existing “spectrum screen,” an analytical tool used by the agency to analyze spectrum holdings during its review of wireless transactions.<sup>6</sup> The spectrum screen operates much like a soft spectrum cap.

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<sup>1</sup> Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96 (hereinafter the “Spectrum Act”).

<sup>2</sup> <http://www.finance.senate.gov/newsroom/chairman/release/?id=c42a8c8a-52ad-44af-86b2-4695aaff5378>; <http://wireless.fcc.gov/incentiveauctions/learn-program/index.html>.

<sup>3</sup> *In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, FCC 12-118, 27 FCC Rcd 12,357, NOTICE OF PROPOSED RULEMAKING (rel. October 2, 2012).

<sup>4</sup> Spectrum Act, *supra* n. 1, Section 6404. It should be noted that FCC Chairman Julius Genachowski was a vocal proponent of auction exclusion rules. See Remarks of FCC Chairman Julius Genachowski, 2012 Consumer Electronics Show, Las Vegas (January 11, 2012) (it would be a “mistake” to “eliminate traditional FCC tools for setting terms for participation in auctions.”) (available at: [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-311974A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-311974A1.pdf)). See also B. Sasso, *Former FCC Chief Rips House Spectrum Bill*, THE HILL (Jan. 31, 2012) (reporting that former FCC Chairman Reed Hundt was worried that the Spectrum Act would “allow the largest wireless carriers to buy up all of the spectrum at auction, expanding their dominance of the airwaves. He said the carriers might not even plan to use some of the spectrum but could buy it just to kill off competition.”) (available at: <http://thehill.com/blogs/hillicon-valley/technology/207655-former-fcc-chief-rips-housespectrumbill>).

<sup>5</sup> Spectrum Act, *supra* n. 1, Section 6404.

<sup>6</sup> *In the Matter of Policies Regarding Mobile Spectrum Holdings*, FCC 12-119, 27 FCC Rcd 11710, NOTICE OF PROPOSED RULEMAKING (rel. September 28, 2012) (hereinafter “Spectrum Screen NPRM”) (available at: <http://www.fcc.gov/document/mobile-spectrum-holdings-nprm>).

Recently, the Department of Justice (“DOJ”) filed an ex parte in the FCC’s *Spectrum Screen NPRM* docket.<sup>7</sup> In its filing, the Department offers an argument that appears to call for spectrum allocation and auction rules that will prop up the two smaller nationwide mobile wireless carriers, Sprint and T-Mobile. Not surprisingly, there are those pleased by the Justice Department’s proposal to skew the auction to favor smaller providers,<sup>8</sup> including the wireless companies that stand to gain from the manipulation,<sup>9</sup> but there are also those strongly opposed to the DOJ’s proposal for picking winners-and-losers in what is unquestionably an attempt to “equalize” competition among mobile wireless competitors.<sup>10</sup>

In this BULLETIN, we evaluate the theoretical merits of the Justice Department’s argument presented in its *Ex Parte* filing; in so doing, we reveal some significant defects in the Department’s thinking on spectrum allocation. For example, in Section II of this BULLETIN, we address the primary thesis of the DOJ’s filing – i.e., that the presence of a “foreclosure value” for large wireless carriers warrants the manipulation of the voluntary broadcast spectrum incentive auction to favor smaller carriers. The Department’s argument is wrong – the critical issue for allocating spectrum is how “use value” differs among wireless carriers, not the presence or absence of foreclosure value. Economic theory suggests the presumption should be for unfettered auctions, not interference as the DOJ recommends. In Section III, we evaluate the predictions from the Department’s underlying economic model of competition for the wireless sector, and we show that the agency’s proposal to engineer the auction is inconsistent with its own model of mobile wireless competition. In Section IV, we discuss the legal and broader economic defects with the Department’s mentality on mobile wireless competition. In the final section, we provide conclusions and policy implications of our findings.

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<sup>7</sup> *In the Matter of Policies Regarding Mobile Spectrum Holdings, Ex Parte Submission of the United States Department of Justice*, WT Docket No. 12-269 (April 22, 2013) (available at: <http://apps.fcc.gov/ecfs/document/view?id=7022269624>) (hereinafter “DOJ Ex Parte”).

<sup>8</sup> See, e.g., *Public Knowledge Urges FCC to Listen to the DOJ and Adopt Pro-Consumer Spectrum Policies*, Press Release, Public Knowledge (April 12, 2013) (available at: <http://publicknowledge.org/public-knowledge-urges-fcc-listen-doj-and-adopt-0>). It should be noted that the DOJ conceded that they made their filing after close and “quiet[]” cooperation with the Commission. See L. Spiwak, *It’s Time for FCC/DOJ Inter-Agency Cooperation to Come into the Sunlight*, @LAWANDECONOMICS (May 2, 2013) (available at: <http://phoenix-center.org/blog/archives/1356>).

<sup>9</sup> See, e.g., A. Selyukh, *U.S. Spectrum Sale Must Spur Wireless Competition – Justice Department*, REUTERS (April 12, 2013) (available at: <http://www.reuters.com/article/2013/04/12/us-usa-fcc-doj-idUSBRE93B0TF20130412>).

<sup>10</sup> See, e.g., Letter from House Energy & Commerce Committee Chairman Fred Upton *et al.*, to the Federal Communications Commission (April 19, 2013) at 3 (available at: <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/letters/20130419FCC.pdf>).

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## II. Foreclosure Value and Auction Manipulation

In its twenty-four page *Ex Parte* filing, the DOJ claims that is not generally opposed to the use of auctions for allocating scarce spectrum resources among competing interests. The Department states that the best way to allocate new spectrum resources “is typically to auction them off, on the theory that the highest bidder, i.e., the one with the highest private value, will also generate the greatest benefits to consumers.”<sup>11</sup> In essence, the DOJ is arguing that auctions work well when the differences in “private value” are equal to the difference in “use value,” where use value to a firm is equal to the profits derived from the increased value to consumers facilitated by the additional spectrum. However, the Department appears concerned that the differences in private values may not simply reflect differences in use values but may also include “foreclosure value.” While the DOJ does not define either use value or foreclosure value, a fair reading of its arguments suggests that “use value” is the profits derived from using the spectrum while “foreclosure value” is the profits derived from keeping rivals from using the spectrum. (We provide a formal definition later.) The Department then suggests that the FCC should consider designing an auction so that Sprint and T-Mobile “have an opportunity to acquire [low-frequency] spectrum” and to ensure that AT&T and Verizon “do not foreclose [Sprint and T-Mobile’s] access to low-frequency spectrum”<sup>12</sup> by purchasing such resources in the upcoming broadcast spectrum auction.<sup>13</sup> The Department states that it “believes that a set of well-defined, competition-focused rules for spectrum acquisitions, particularly in auctions, would best serve the dual goals of putting spectrum to use quickly and promoting consumer welfare in wireless markets.”<sup>14</sup>

Absent limits on market participation, Sprint and T-Mobile have the opportunity to acquire more spectrum by offering the highest bid in the auction and thus obtaining some of the broadcast spectrum. However, the Department is concerned that the larger mobile carriers will outbid the smaller carriers because the former’s private value is based not only on a “use value” (i.e., the present value of future profits attributable to the additional spectrum) but also a “foreclosure value” of the spectrum. According to the DOJ, this foreclosure value is the “private value of foreclosing competition”<sup>15</sup> and DOJ is concerned that the larger carriers may acquire spectrum not to use it but “solely to keep it from rivals.”<sup>16</sup> (Notably, FCC rules prohibit

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<sup>11</sup> DOJ *Ex Parte*, *supra* n. 7 at p. 10.

<sup>12</sup> *Id.* at p. 18.

<sup>13</sup> *Id.*

<sup>14</sup> *Id.* at p. 1.

<sup>15</sup> *Id.* at p. 11.

<sup>16</sup> *Id.* at p. 16.

spectrum hoarding.) This “foreclosure” line of reasoning is the crux of the DOJ’s argument, and the Department encourages the Commission to “consider the serious potential ... that carriers with large market shares could pursue an input foreclosure strategy at auction ... which harms all consumers of wireless services and can have an exclusionary effect on the carrier’s competitors.”<sup>17</sup>

“Use value” and “foreclosure value” are the crucial concepts in the DOJ’s filing, but the terms are used loosely and never formally defined. In light of the strong recommendations made the Department, a failure to provide formal definitions of key terminology (with potentially nebulous meaning) is a serious deficiency. Moreover, had the agency attempted to formalize its argument, it may have seen some important shortfalls in its ideas. Since the DOJ did not define these terms, we will. In the next section, we present an economic model of competition that permits sensible definitions and derivations of use value and foreclosure value. Our model is simple and ignores real world complexities such as spectrum exhaust, but is nonetheless informative in many ways. As we discuss later, adding the complexity of spectrum exhaust to the model further weakens the DOJ’s argument for manipulating the auction.

#### A. Use Value and Foreclosure Value

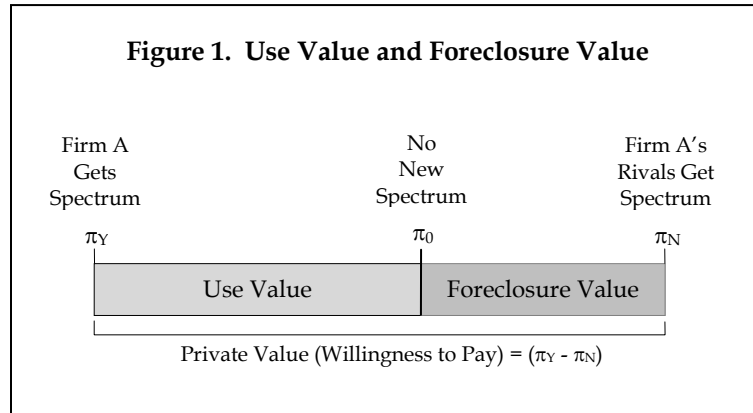
While the DOJ concedes that auctions are the best way to allocate spectrum since the “one with the greatest private value [] will also generate the greatest benefits to consumers,” the agency is concerned that the private value of some firms includes a “foreclosure value” that is not beneficial to consumers. In effect, the DOJ says that auction bids have two possible sources: (1) use value and (2) foreclosure value. While the DOJ fails to formally define either use value or foreclosure value, the Department states that foreclosure value is derived from acquiring spectrum “solely to keep it from rivals.”<sup>18</sup> Thus, we may reasonably define “use value” as the change in profits realized by obtaining the spectrum and using it to provide better services that consumers demand, and “foreclosure value” as the change in profits realized by keeping the spectrum out of the hands of rivals. More formally, let  $\pi_0$  be Firm A’s current profit. Now, assume that a new block of spectrum is made available to the market. If this new spectrum is acquired by Firm A, then its profits rise to  $\pi_Y$  as it offers better services more efficiently to subscribers. Alternately, if the spectrum is acquired by a rival, then Firm A’s profits fall to  $\pi_N$ , as the benefits of the new spectrum help the rivals take market share from Firm A. It follows that  $\pi_Y > \pi_0 > \pi_N$ . The maximum bid for the spectrum is  $(\pi_Y - \pi_N)$ , which can be decomposed into

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<sup>17</sup> *Id.* at p. 10.

<sup>18</sup> *Id.* at p. 16.

two parts: (1) use value ( $\pi_Y - \pi_N$ ); and (2) foreclosure value ( $\pi_0 - \pi_N$ ). These definitions are illustrated in Figure 1.



For clarity, consider a numerical example. Say, for example, that current profits are \$100. If Firm A gets the spectrum, then its profits rise to \$130. If a rival gets the spectrum, then Firm A's profits fall to \$80. The difference between getting the spectrum and losing the spectrum is \$50, and this is the maximum willingness to pay (and maximum bid) of the spectrum in an auction. This private value to Firm A can be decomposed into \$30 of use value and \$20 of foreclosure value.

B. *A Simulation of Use Value and Foreclosure Value*

Beginning with these definitions, we can provide more substance to the two types of value using a simulation based on a standard economic model of competition. In keeping with the DOJ's publicly-stated characterization of the domestic mobile wireless market, we assume there are four firms selling a homogeneous product.<sup>19</sup> These firms act as Cournot competitors, an assumption consistent with the DOJ's typical thinking on competition and with the use of the Hirschmann-Herfindahl Index ("HHI") of industry concentration. There are two large firms (35% market share each) and two smaller firms (about 20% and 10% market shares). These shares are comparable to those currently observed in the U.S. mobile wireless industry for

<sup>19</sup> See *Complaint of the United States Department of Justice to Enjoin the Merger of AT&T and T-Mobile*, Case: 1:11-cv-01560 (U.S. District Court for the District of Columbia, August 31, 2011) (available at: <http://www.justice.gov/atr/cases/f274600/274613.htm>) (hereinafter "DOJ Complaint").

Verizon, AT&T, Sprint and T-Mobile.<sup>20</sup> Given the variation in market share, we employ an asymmetric version of the linear Cournot model where market share differences are based on differences in marginal costs. For the simulation, we assume (arbitrarily and for illustrative purposes only) that the market demand curve is  $P = 50 - 2Q$ , where  $P$  and  $Q$  are market price and quantity. The four firms have marginal costs of \$6, \$6, \$11, and \$14 (rendering market shares of about 35%, 35%, 20%, and 10%).

Spectrum is an input of production, and presumably more spectrum gives a firm an advantage such as a higher relative demand (e.g., higher quality) or more efficient production (e.g., lower marginal cost). Consistent with the argument by the DOJ that spectrum acquisition “would reduce the marginal cost of service”<sup>21</sup> and given the cost-driven nature of the asymmetric Cournot model, it is most straightforward to assume that additional spectrum lowers the marginal cost of the firm obtaining it. We assume that additional spectrum reduces marginal cost by \$1.00, and this reduction will increase the market share and profits of those firms with a lower marginal cost and also lowers industry price and increases industry quantity. Given the nature of the debate, we assume that either the two large or the two small firms get the spectrum. We assume that there is no other reasonable way to impact profits in the same manner as spectrum.

**Table 1. Simulation of Use and Foreclosure Value**

	Initial State		Large Firms get Spectrum			Small Firms get Spectrum		
	Share	Profit	Share	Profit	$\Delta$	Share	Profit	$\Delta$
Firm 1	35.0%	65	36.4%	72	7.0	33.3%	60.5	-4.5
Firm 2	35.0%	65	36.4%	72	7.0	33.3%	60.5	-4.5
Firm 3	19.6%	20.5	18.2%	18	-2.5	21.2%	24.5	4.0
Firm 4	10.4%	5.8	9.1%	4.5	-1.3	12.1%	8.0	2.2
Market Quantity		16.3		16.5	0.2		16.5	0.2
Market Price		17.4		17	-0.4		17	-0.4
Consumer Surplus		265.7		272.3	6.6		272.3	6.6
Consumer Welfare		421.9		438.8	10.3		425.7	3.8
HHI		2,940		3,058	118		2,819	-120

The results of the simulation are summarized in Table 1. The status quo is presented first. As noted above, there are two large firms and two smaller firms; market shares and profits (the  $\pi_0$  for each firm) are provided. Solving for the equilibrium values gives a price of \$17.40, an aggregate quantity of 16.3 units, and a consumer surplus of \$266. The DOJ argues that the goal

<sup>20</sup> See *In the Matter of 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*, FCC 13-34, SIXTEENTH REPORT (rel. March 21, 2013) (hereinafter “Sixteenth CMRS Report”) at Table 12.

<sup>21</sup> DOJ *Ex Parte*, *supra* n. 7 at p. 17.

is to maximize “consumer welfare in wireless markets”<sup>22</sup> and the status quo consumer welfare (producer and consumer surplus) is \$422.

As a first scenario, assume that the two large firms get the spectrum and realize a reduction in marginal cost of 1.00. Consequently, the market shares of the larger firms increase, as do their profits. From the table, we see that the profits of the large firms increase by \$7 each (the  $\Delta$  column in the table), and this \$7 represents the *use value* of the spectrum ( $\pi_Y - \pi_0$ ). That is, the firms will pay up to \$7 to obtain the cost-reducing spectrum. The market shares and profits of the smaller firms fall, and the (absolute value of the) reduction in profits (\$2.5 and \$1.3) are the *foreclosure values* to the smaller firms ( $\pi_0 - \pi_N$ ). In other words, if the small firms could keep the spectrum out of the hands of the larger firms, they stand to gain profits of \$2.5 and \$1.3, and would pay up to those amounts to keep the spectrum idle. Giving the spectrum to the larger firms results in an increase in market quantity (0.2 units), a reduction in price (-\$0.4), an increase in consumer surplus (\$6.6) and an increase in consumer welfare (\$10.3).

The other option is to give the spectrum to the two smaller firms so that each realizes a 1.00 reduction in marginal cost. Naturally, the market shares of the smaller firms rise as do their profits. This increases in profits for the smaller firms are equal \$4 and \$2.2, respectively, and these values are the use value of the spectrum to the smaller firms ( $\pi_Y - \pi_0$ ). The profits of the larger firms decline by \$4.5 each, and this decline equals the foreclosure value to these firms ( $\pi_0 - \pi_N$ ). Giving the spectrum to the larger firms results in an increase in market quantity (0.2 units), a reduction in price (-\$0.4), an increase in consumer surplus (\$6.6) and an increase in consumer welfare (\$3.8).

	Initial Market Share	Use Value	Foreclosure Value	Private Value
Firm 1	35.0%	7.0	4.5	11.5
Firm 2	35.0%	7.0	4.5	11.5
Firm 3	19.6%	4.0	2.5	6.5
Firm 4	10.4%	2.2	1.3	3.5

Use and foreclosure values from the simulation are summarized in Table 2. Private value equals the sum of use and foreclosure value. Using Tables 1 and 2, we can expose the nature of and defects in the DOJ’s argument. As for the DOJ’s argument regarding foreclosure value, we can look to Table 2 and see that the larger firms’ foreclosure value of \$4.5 exceeds the use value of the smaller firms (a maximum of \$4). Thus, the larger firms would pay more for the spectrum than the smaller firms even if only to keep the spectrum from being used at all. This

<sup>22</sup> *Id.* at p. 1.



case is the sole focus of the DOJ's *Ex Parte* filing. In effect, the agency has assumed, without any evidence to support that assumption, that the use value to the large firms is zero.

With the information provided by the simulation, the problems with the DOJ's logic can plainly be seen. First, recall that foreclosure value does not equal private value (i.e., willingness to pay); as shown in Figure 1, private value (i.e., the maximum auction bid) equals use value plus foreclosure value. The presence of foreclosure value says nothing about the efficiency of the auction outcome—all firms have foreclosure values. In Table 2 we see that *the larger firms have the highest private values and the highest use value*. Thus, the spectrum, if auctioned, is properly licensed to the larger firms. Why? By doing so, the auction maximizes consumer welfare. Consumer welfare—the relevant standard for policy—is lower when the spectrum is given to the smaller firms (\$425.7) rather than the large firms (\$438.8). This difference arises because the larger firms are relatively more efficient and serve more customers, and it pays off to direct the spectrum resource to the more efficient and larger firms. Also, market output, price, and consumer surplus are identical between the two options. Thus, there is no “consumer” story for a policy favoring the smaller firms. (Note that the cost reduction for the smaller firms would need to be over three-times larger than the bigger firms for consumer welfare to favor the spectrum going to smaller firms.)

Second, the simulation reveals that all firms have foreclosure value. In fact, if we assume that the large firms use the spectrum relatively more effectively to reduce marginal cost than do the small firms (a reasonable assumption), say increasing their cost reduction to \$2 instead of \$1, then the foreclosure of Firm 3 (now \$4.80) actually exceeds the foreclosure value of the larger firms (\$4.50). So, while the DOJ is focused on the foreclosure value of the larger firms, it may well be that the foreclosure value of AT&T and Verizon is less than that the foreclosure value of Sprint and T-Mobile. Foreclosure value is not a motivation for manipulating or abandoning auctions. Foreclosure value merely arises from the scarcity of resources and is thus nearly ubiquitous in market settings. If all four firms obtained spectrum, then there is no foreclosure value, and absent a minimum bid, no auction revenue. *Foreclosure value is the inevitable byproduct of a revenue-producing auction—that is, there must be a risk of losing to induce bidding activity*. This fact is crucial to scrutinizing the DOJ's arguments. The DOJ claims to embrace auctions as the best way to allocate spectrum, except when foreclosure values affect bids. Yet, foreclosure value affects all bids, so the Department's argument is, in effect, a call to abandon spectrum auctions.

Third, note that in Table 1 the HHI increases when the spectrum is given to the large firms and decreases when given to the small firms. However, consumer welfare is highest if the spectrum is given to the large firms. Thus, the simulation shows that changes in the HHI are not a reliable indicator of changes in consumer welfare.

Perhaps the key insight provided by the simulation is this: *it is the differences in use value, not merely the presence or absence of foreclosure value, which determines the efficiency of the auction results.*

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Larger, more efficient carriers should be expected to have higher use values, other things constant, than will smaller, less efficient carriers, and thus consumer welfare will be larger from an open auction. There are other reasons for use value to differ across firms. In fact, the Department's *Ex Parte* provides reasons for use value to differ among carriers, noting "the value to any wireless carrier of any particular spectrum license depends in part on how complementary that license is to the carrier's other wireless holdings."<sup>23</sup> In our paper *Using Auction Results to Forecast the Impact of Wireless Carterfone Regulation on Wireless Networks*, we presented econometric evidence showing that such complementarities may lead to sizeable premiums in auction bids.<sup>24</sup> Such premiums reflect use value, not foreclosure value, and may be large enough to overwhelm the use value of other bidders that lack complementary assets. Also, market share statistics suggest that AT&T and Verizon offer better price-quality combinations to consumers than do the smaller carriers. AT&T and Verizon each serve nearly twice the number of customers and earn over twice the revenue than do either Sprint or T-Mobile.<sup>25</sup> Second, AT&T and Verizon have subscriber growth rates over the past five years that are about twice that of Sprint and many times larger than T-Mobile (which had very little subscriber growth over the period).<sup>26</sup> Third, data show that T-Mobile has been losing subscribers, primarily to Verizon and AT&T, for more than two years.<sup>27</sup> Fourth, survey results from J.D. Power show that Sprint and T-Mobile receive from customers relatively low marks for customer care and network quality, and T-Mobile receives relatively low marks for purchase experience.<sup>28</sup> While these anecdotes are only suggestive, it is not unreasonable to believe, absent other compelling evidence, that the larger wireless carriers may have use value that exceeds that of the smaller carriers, so that even if there is a foreclosure value its presence has no bearing on the efficient outcome of the auction.

### C. Foreclosure Value and Policy: Summary

While admittedly a simplistic depiction of the mobile marketplace, this simulation is vastly superior to the total lack of any analysis offered by the DOJ to the FCC in its *Ex Parte* filing.

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<sup>23</sup> DOJ *Ex Parte* supra n. 7 at p. 22.

<sup>24</sup> G.S. Ford, T.M. Koutsky, and L.J. Spiwak, *Using Auction Results to Forecast the Impact of Wireless Carterfone Regulation on Wireless Networks*, PHOENIX CENTER POLICY BULLETIN NO. 20 (May 2008) (available at: <http://www.phoenix-center.org/PolicyBulletin/PCPB20Final2ndEdition.pdf>).

<sup>25</sup> *Sixteenth CMRS Report*, supra n. 20 at Table 13. Company annual and quarterly financial filings for 2012.

<sup>26</sup> *Id.*

<sup>27</sup> P. Svensson, *T-Mobile to Ditch 2-Year Cellphone Contracts*, BOSTON GLOBE (March 26, 2013) (available at: <http://www.bostonglobe.com/business/2013/03/25/mobile-gets-rid-contracts-for-cellphones/LF7HH8NUkDzpYFmChU1Ebl/story.html>).

<sup>28</sup> <http://www.jdpower.com/consumer-ratings/telecom/index.htm>. Some rankings suggest a more even evaluation. See, e.g., *Sixteenth CMRS Report*, supra n. 20 at Table 43.

And unlike the DOJ, we do not make strong recommendations to the FCC about its spectrum screen, but merely issue a word of caution on the blind acceptance of the Department's recommendations that rest on a demonstrably incomplete conceptual framework.

Also, while the simulation is based on a rather simple model, we believe it (or something like it) to be rigorous enough to serve the role of establishing a presumption with regard to spectrum policy. In its filing, the DOJ argues that the FCC should rig the auction to favor Sprint and T-Mobile "[a]bsent compelling evidence that the largest incumbent carriers are already using their existing spectrum licenses efficiently and their networks are still capacity-constrained..."<sup>29</sup> Note, however, that the simulation above does not assume capacity constraints. Additional spectrum, whether the firm is under a capacity constraint or not, has use value, so the DOJ's argument regarding foreclosure and use values improperly hinges on capacity shortages. As we show above, society is better off if the spectrum goes to the larger and more efficient providers of service, since basic economic analysis suggests that the use value of the bigger firms is larger than for the smaller firms. This analysis seems to support the presumption that an unfettered auction is best and, as such, "absent compelling evidence" that the use value of the small firms is greater than the use value of large firms, there should be no favoritism designed into the auction.

#### D. Protections Against Foreclosure

We stress that while theory permits a formal conceptualization of use value and foreclosure value, this exercise does not say anything about the practical ability to implement such a strategy. The FCC's build-out and substantial service requirements would make a foreclosure strategy very difficult to implement.<sup>30</sup> In fact, this "foreclosure" argument has been levied at wireless carriers for years, typically in the form of an alleged "hoarding" strategy. The FCC has conducted studies of spectrum exhaust and evaluated the "hoarding spectrum" claim. Just recently, the agency concluded in its *National Broadband Plan* that spectrum exhaust was real and that there was no evidence that wireless carriers are hoarding spectrum.<sup>31</sup> FCC Chairman

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<sup>29</sup> DOJ *Ex Parte*, *supra* n. 7 at p. 12.

<sup>30</sup> [http://wireless.fcc.gov/licensing/index.htm?job=const\\_req\\_home](http://wireless.fcc.gov/licensing/index.htm?job=const_req_home).

<sup>31</sup> CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN, Federal Communications Commission (March 16, 2010) (available at: [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-296935A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296935A1.pdf)) (hereinafter the *National Broadband Plan*) at Chapter 5; see also *President Obama Details Plan to Win the Future through Expanded Wireless Access*, The White House—Office of the Press Secretary (available at: <http://www.whitehouse.gov/the-press-office/2011/02/10/president-obama-details-plan-win-future-through-expanded-wireless-access>); White House White Board: Austan Goolsbee on the National Wireless Initiative (available at: <http://www.whitehouse.gov/blog/2011/02/11/white-house-white-board-austan-goosbee-national-wireless-initiative>).

Julius Genachowski rejected outright the idea of spectrum hoarding, stating “[i]t is not hoarding if a company paid millions or billions of dollars for spectrum at auction and is complying with the FCC’s buildout rules. There is no evidence of non-compliance.”<sup>32</sup>

### III. The DOJ’s Model of Wireless Competition is Inconsistent with its Proposal

Foreclosure is the primary focus of the DOJ’s *Ex Parte* filing, but it is possible to levy additional criticisms related to the theoretical underpinnings of the Department’s analysis. For example, the Department’s filing includes sufficient dicta to permit the formulation of its implicit (if not explicit) model of mobile wireless competition. Since the DOJ devotes a significant portion of its filing claiming expertise in market analysis about the telecommunications sector, it is worth assessing what the Department’s implicit economic model says about its recommendations.

First, as is always the case with the DOJ, the agency assumes that the more competitors there are, the more competition there is and the lower are prices.<sup>33</sup> Statements in its filing such as “the fewer competitors in a market,”<sup>34</sup> “significant national concentration,”<sup>35</sup> and “highly concentrated industry,”<sup>36</sup> as well as its analysis in its complaint challenging the AT&T/T-Mobile merger,<sup>37</sup> reveal the underlying competitive interaction assumed by the Department. This “head count” approach to competition, which permits the relevance of the Hirschman-Herfindahl Index (“HHI”) of industry concentration, is derived from the economic model of Cournot Competition, which has the property of declining prices and profits as the number of

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<sup>32</sup> S. Jerome, *Genachowski Shoots Down Broadcast ‘Hoarding’ Claim: Not True*, THE HILL (March 16, 2011) (available at: <http://thehill.com/blogs/hillcon-valley/technology/150005-genachowski-shoots-down-broadcast-hoarding-claim-not-true>); T. Ford, *NAB, CTIA, CEA Spar over Incentive Auctions*, RCR WIRELESS (March 17, 2011) (available at: <http://www.rcrwireless.com/article/20110317/capital-markets/nab-ctia-cea-spar-over-incentive-auctions>); see also Remarks of FCC Chairman Julius Genachowski, *The Clock is Ticking* (March 16, 2011) (“The looming spectrum shortage is real—and it is the alleged hoarding that is illusory.”) (available at: [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-305225A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-305225A1.pdf)).

<sup>33</sup> Contrary to the DOJ’s simple textbook “headcount” approach, it is important to recognize that in industries such as telecommunications which are characterized by high fixed and sunk costs, intense competition between a few competitors may render market performance good or better than weak competitive interactions among many competitors. See, e.g., *Competition After Unbundling: Entry, Industry Structure and Convergence*, G. Ford, T. Koutsky and L. Spiwak, 59 FEDERAL COMMUNICATIONS LAW JOURNAL 331 (2007) (available at: <http://www.phoenix-center.org/papers/FCLJCompetitionAfterUnbundling.pdf>).

<sup>34</sup> DOJ *Ex Parte*, *supra* n. 7 at p. 7.

<sup>35</sup> *Id.* at p. 8.

<sup>36</sup> *Id.* at p. 11.

<sup>37</sup> DOJ *Complaint*, *supra* n. 19.

firms increase (or concentration decreases).<sup>38</sup> Notably, the FCC has on a number of recent occasions rejected this approach to assessing competition, opining, “[h]igh market concentration is not synonymous with a non-competitive market or with market power.”<sup>39</sup> Nevertheless, let’s keep the DOJ’s assumption of Cournot Competition for now.

Second, the DOJ recognizes that the industry is facing spectrum exhaust. For example, the agency’s filing states that “changes in technology and demand have made spectrum a critically scarce resource”<sup>40</sup> driven by an “exploding demand for wireless broadband.”<sup>41</sup> In response to this scarcity, the Department opines that “carriers will need to acquire additional spectrum and make more efficient use of spectrum if they are to respond to growing consumer demand for a wide array of wireless services and devices,”<sup>42</sup> and it encourages the FCC to “reallocate a considerable array of spectrum and make it available for mobile wireless services.”<sup>43</sup> Plainly, the DOJ believes that the mobile wireless industry faces a capacity constraint and needs more spectrum, a scarcity condition frequently referred to as spectrum exhaust.<sup>44</sup> This position is consistent with the *National Broadband Plan*, released in 2010, which concluded that the present inventory of commercial spectrum represents “just a fraction of the amount that will be necessary to match growing demand.”<sup>45</sup> FCC Chairman Julius Genachowski has cautioned that

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<sup>38</sup> See, e.g., J. Friedman, OLIGOPOLY THEORY (1983); *Competition After Unbundling*, *supra* n. 34.

<sup>39</sup> See, e.g., *Sixteenth CMRS Report*, *supra* n. 20 at ¶ 61.

<sup>40</sup> DOJ *Ex Parte*, *supra* n. 7 at p. 9.

<sup>41</sup> *Id.* at p. 22.

<sup>42</sup> *Id.* at p. 9.

<sup>43</sup> *Id.*

<sup>44</sup> Notwithstanding the above, the Department appears to be of two minds on the issue of spectrum exhaust. See, e.g., DOJ *Ex Parte*, *id.* at p. 12 (“Absent compelling evidence that the largest incumbent carriers are already using their existing spectrum licenses efficiently and their networks are still capacity-constrained ....”); *id.* at p. 17 (“in the course of investigating the proposed merger between AT&T and T-Mobile, the Department cast doubt on the parties’ claims that there were few alternatives to deal with spectrum shortages.”) If that is indeed the case, then it is interesting to note that subsequent to abandoning the acquisition of T-Mobile, AT&T believed it necessary to engage on a spectrum buying spree in an effort to satisfy its spectrum needs. See, e.g., M. Dano, *AT&T to Buy Spectrum, 21,000 Customers from C Spire’s Corr Subsidiary*, FIERCEWIRELESS (April 5, 2013) (“Since the 2011 collapse of AT&T’s \$39 billion bid for T-Mobile USA, the carrier has been working to acquire spectrum from a variety of other sources.”) (available at: <http://www.fiercewireless.com/story/att-buys-spectrum-21000-customers-c-spires-corr-subsidiary/2013-04-05>). Moreover, AT&T is not alone in its quest for more spectrum. According to the same article, since the time of the AT&T/T-Mobile deal fell through, “Verizon Wireless paid \$3.9 billion to acquire AWS spectrum licenses from a group of cable companies. And T-Mobile USA is hoping to merge with flat-rate rival MetroPCS in order to bolster its nascent LTE network with Metro’s spectrum.”

<sup>45</sup> *National Broadband Plan*, *supra* n. 31 at p. 75.

“[w]ithout action, demand for spectrum will soon outstrip supply.... If we don’t tackle the spectrum crunch now, network congestion will grow, and consumer frustration will grow with it.”<sup>46</sup> Even the White House is concerned, concluding that there is a “current[] spectrum crunch that will hinder future innovation.”<sup>47</sup> In fact, the broadcast spectrum auction at issue is one attempt of many to aid in the alleviation of spectrum exhaust.

Third, the Department assumes that spectrum is subject to a type of scale economy, in that “twice the spectrum may under certain conditions provide over twice the amount of capacity.”<sup>48</sup> In fact, the DOJ advises the FCC to consider whether these scale effects are sufficient to offset the risk of “foreclosure value.”<sup>49</sup>

These three assumptions—Cournot Competition, spectrum exhaust, and scale effects in spectrum use—provide a foundation for a theoretical model of competition in the wireless industry. The predictions from such a model of competition have been derived and presented in a paper we recently published in the FEDERAL COMMUNICATIONS LAW JOURNAL entitled *Wireless Competition Under Spectrum Exhaust*.<sup>50</sup> Unfortunately, at least for the DOJ, when you model prices under these assumptions, you get a result entirely at odds with the Department’s purported expert take on the question of spectrum allocation in the mobile wireless sector. Specifically, if wireless firms face a binding spectrum constraint, then using standard models of Cournot competition, *fewer firms will lead to lower prices, less congestion, and higher quality*—turning the standard antitrust view that more competitors leads to lower prices on its head.<sup>51</sup>

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<sup>46</sup> Prepared Remarks of Chairman Julius Genachowski, Federal Communications Commission, 2011 International Consumer Electronics Show, Las Vegas, NV (January 7, 2011) (available at: [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-303984A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-303984A1.pdf)).

<sup>47</sup> *President Obama Details Plan to Win the Future through Expanded Wireless Access*, *supra* n. 32.

<sup>48</sup> DOJ *Ex Parte*, *supra* n. 7 at p. 15

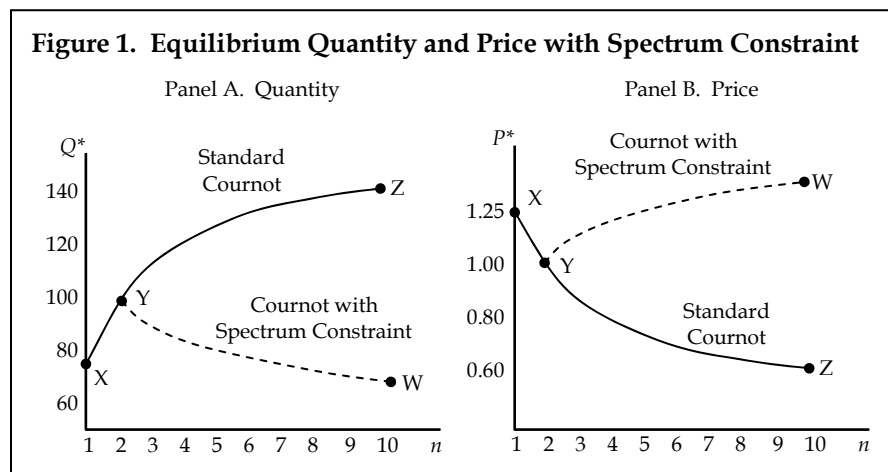
<sup>49</sup> *Id.* at p. 16-7.

<sup>50</sup> T.R. Beard *et al.*, *Wireless Competition Under Spectrum Exhaust*, 65 FED COMM. L.J. 79 (2012) (available at: <http://www.phoenix-center.org/FCLJSpectrumExhaust.pdf>). For an additional analysis of the relevant trade-offs involved in allocating spectrum among firms, *see also* T.R. Beard, *et al.* *A Policy Framework for Spectrum Allocation in Mobile Communications*, 63 FEDERAL COMMUNICATIONS LAW JOURNAL 693 (2011) (available at: <http://www.phoenix-center.org/papers/FCLJSpectrum.pdf>).

<sup>51</sup> Simple descriptions of the economic model can be found in a number of Phoenix Center @LAWANDECONOMICS blog posts. *See, e.g.*, L. Spiwak, *Julius Genachowski’s Speech at CES Part 1*, @LAWANDECONOMICS (Jan. 17, 2012) (available at: <http://phoenix-center.org/blog/archives/120>); G. Ford, *Julius Genachowski’s Speech at CES Part 2*, @LAWANDECONOMICS (Jan. 18, 2012) (available at: <http://phoenix-center.org/blog/archives/163>); G. Ford, *The Effect of Spectrum Exhaust on Mobile Market Structure and Performance*, @LAWANDECONOMICS (Feb. 2, 2012) (available at: <http://phoenix-center.org/blog/archives/340>); G. Ford, *Wireless Competition Under Spectrum Exhaust (CliffsNotes*

(Footnote Continued....)

The prediction of the theory is illustrated in Figure 1; the model's parameters are assigned arbitrary values to produce the figure.<sup>52</sup> Both the standard and the capacity-constrained (i.e., "spectrum exhaust") Cournot outcomes are illustrated. In Panel A, we have equilibrium industry quantity ( $Q^*$ ) measured on the vertical axis and the number of firms ( $n$ ), or the inverse of the HHI given symmetry, along the horizontal axis. The standard Cournot equilibrium quantity (without a capacity constraint) is illustrated by the line segment labeled XYZ in Panel A. As  $n$  rises, quantity rises—the standard result. The line segment labeled XYW illustrates the equilibrium quantity when the capacity constraint is binding, where it is assumed (for illustrative purposes) that the capacity constraint is binding at duopoly ( $n = 2$  at point Y). The figure shows that output rises as the number of firms increases from monopoly to duopoly, but then output falls (along segment YW) when the number of firms exceeds duopoly. So, while the standard Cournot-type framework holds that six firms have lower prices than two firms, under a spectrum constraint this need not be true. Indeed, for the chosen parameters, the six-firm outcome is essentially the same as the monopoly outcome.



Edition), @LAWANDECONOMICS (Feb. 8, 2012) (available at: <http://phoenix-center.org/blog/archives/362>); L. Spiwak, *Are Spectrum Caps Back?* @LAWANDECONOMICS (Feb. 28, 2012) (available at: <http://phoenix-center.org/blog/archives/445>); G. Ford, *A Response to Steven Crowley at GigaOm*, @LAWANDECONOMICS (March 29, 2012) (available at: <http://phoenix-center.org/blog/archives/535>); G. Ford, *Julius Genachowski's Speech at CTIA*, @LAWANDECONOMICS (May 22, 2012) (available at: <http://phoenix-center.org/blog/archives/572>); G. Ford, *Spectrum Exhaust and the Monopolization Narrative*, @LAWANDECONOMICS (April 3, 2013) (available at: <http://phoenix-center.org/blog/archives/1310>); L. Spiwak, *Will the FCC Exclude Bidders from the Upcoming Voluntary Incentive Auction?* @LAWANDECONOMICS (April 4, 2013) (available at: <http://phoenix-center.org/blog/archives/1323>).

<sup>52</sup> This figure is based on Figure 1 from *Wireless Competition and Spectrum Exhaust*, *supra* n. 50.

In Panel B, we observe what happens to equilibrium price as the number of firms increase. In the standard Cournot case, price falls as the number of firms increases (line segment XYZ). Once the spectrum constraint is binding ( $n = 2$ ), however, price rises as the number of firms increases, following line segment XYW. With a binding constraint, the more firms there are in the industry, the higher are prices. Clearly, the spectrum constraint invalidates the standard thinking on the relationship between prices and concentration—*if the constraint is binding, then fewer firms leads to lower prices*.<sup>53</sup> (Note that if we assume there is no scale effect in spectrum, then after the constraint is binding—at point Y in the figure—an increase in the number of firms has no effect on quantity and price. In such a case, the line segments YW would be horizontal, implying a larger number of firms, or a lower HHI, has no effect on price or quantity.)

These figures illustrate clearly the primary results from adding a spectrum constraint to the standard Cournot model. If the constraint is binding, then equilibrium quantity is lower and the price is higher as the number of competitors increases. Obviously, the presence of a spectrum crunch requires substantial modification to the standard competitive model used in most cases by antitrust and regulatory agencies. As of yet, the DOJ has not modified its thinking on spectrum policy and mobile wireless competition to better fit its views (and those of the FCC) on the supply- and demand-side conditions of the market.

Importantly, the unquestioned findings in *Wireless Competition Under Spectrum Exhaust* do not suggest that the DOJ's near exclusive reliance on the predictions of Cournot Competition is improper; instead, our paper suggests that if the DOJ insists on relying upon that assumed model of competition—and the DOJ appears incapable of thinking about competition in any other way—then the “critically scarce resource” of spectrum means that more firms are not going to produce lower prices, but may instead increase prices, reduce quality, and curb innovation. If the Justice Department is correct in asserting that the “goal in assigning licenses to spectrum ... should be to ensure that it generates the greatest ultimate benefit to the consumer of those services,”<sup>54</sup> then the DOJ's recommended course of action is inconsistent with its own depiction of the relevant conditions facing the industry.

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<sup>53</sup> Other research has evaluated the peculiar effects of competition and mergers under capacity constraints. See, e.g., L. Froeb, S. Tschantz, and P. Crooke, *Bertrand Competition with Capacity Constraints: Mergers Among Parking Lots*, 113 JOURNAL OF ECONOMETRICS 49-67 (2003); T. Puu and A. Norin, *Cournot Duopoly when the Competitors Operate under Capacity Constraints*, 18 CHAOS, SOLITONS & FRACTALS 577-592 (2003).

<sup>54</sup> DOJ *Ex Parte*, *supra* n. 7 at p. 9-10.



#### IV. The Design of the Wireless Telecommunications Market

Quite plainly, the Justice Department's recommendation to the Commission is for the agency to seriously consider using the spectrum screen or auction rules to *equalize competition among mobile wireless competitors*. Explicitly, the Department views "the design of the wireless telecommunications market"<sup>55</sup> as its responsibility and, in this particular case, states its belief that spectrum should be allocated "to enable smaller or additional providers to mount stronger challenges to large wireless incumbents."<sup>56</sup> Without belaboring the point, we now summarize the legal problems with the DOJ's "responsibility to design markets" perspective.

The case law is clear—for both the FCC and the DOJ—that *competition policy is designed to protect competition and not individual competitors*.<sup>57</sup> This maxim is particularly true for the FCC, given the well-known fact that stakeholders regularly seek to use the regulatory process to hamstring a competitor.<sup>58</sup> For example, in the 1981 case of *Hawaiian Telephone v. FCC*,<sup>59</sup> the D.C. Circuit overturned an FCC grant of Section 214 authority for service between the U.S. mainland and Hawaii because it found that the Commission had engaged in an *ad hoc* approach which improperly aimed at "equalizing competition among competitors." The D.C. Circuit stated that FCC public interest analysis must be more than an inquiry into "whether the balance of equities and opportunities among competing carriers suggests a change." The court found that it was "all too embarrassingly apparent that the Commission has been thinking about competition, not in terms primarily as to its benefit to the public, but specifically equalizing *competition among competitors*."<sup>60</sup> Similarly, when the Regional Bell Operating Companies challenged the FCC's approval of AT&T's acquisition of McCaw Cellular licenses on the ground that the agency should have imposed the Modified Final Judgment restrictions on the merged entity, the D.C. Circuit, citing *Hawaiian Telephone*, found that the application of the MFJ restrictions to the merged entity would "serve the interests only of the RBOCs rather than those of the public."

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<sup>55</sup> *Id.* at p. 2.

<sup>56</sup> *Id.* at p. 11-2.

<sup>57</sup> *See, e.g., Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488, 97 S. Ct. 690, 697, 50 L. Ed. 2d 701 (1977) (quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 320, 82 S. Ct. 1502, 1521, 8 L. Ed. 2d 510 (1962)).

<sup>58</sup> *See, e.g.,* T.R. Beard, G.S. Ford, L.J. Spiwak, and M. Stern, *Taxation by Condition: Spectrum Repurposing at the FCC and the Prolonging of Spectrum Exhaust*, PHOENIX CENTER POLICY PAPER NO. 44 (September 2012) (available at: <http://www.phoenix-center.org/pcpp/PCPP44Final.pdf>).

<sup>59</sup> *Hawaiian Telephone v. FCC*, 498 F.2d 771 (D.C. Cir. 1974). The "public interest" standard in the Communications Act is applied in many contexts, such as the granting of licenses, so court decisions on those topics, like *Hawaiian Telephone* and other cases discussed *infra*, provide important insight on the limitations of the FCC authority in this area.

<sup>60</sup> *Id.* at 775-76 (emphasis supplied).

The court stated that when the Commission considers whether a proposed merger serves the public interest, the “*Commission is not at liberty . . . to subordinate the public interest to the interest of ‘equalizing competition among competitors.’*”<sup>61</sup> Without question, the DOJ’s recommendation is aimed at equalizing competition among competitors and, as such, a legally-risky policy that may lead to litigation delays which could postpone the use of the broadcast spectrum for decades.

The DOJ’s recommendation is exactly that—a recommendation. The FCC is not bound to act in lockstep with the DOJ. While the regulatory agency and the antitrust authorities share many of the same goals, the two have different core missions. As the D.C. Circuit first stated in 1968 and later reaffirmed in 1980 in *United States v. FCC*, the “basic goal of governmental regulation through administrative bodies and the goal of indirect governmental regulation in the form of antitrust law is the same—to achieve the most efficient allocation of resources possible.”<sup>62</sup> According to (now) Supreme Court Justice Stephen Breyer, these goals are “low and economically efficient prices, innovation, and efficient production methods.”<sup>63</sup> Supreme Court Justice Felix Frankfurter opined over fifty years ago, “[t]here can be no doubt that competition is a *relevant* factor in weighing the public interest.”<sup>64</sup> As a result, courts have

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<sup>61</sup> *SBC Communications v. FCC*, 56 F.3d 1484, 1491 (D.C. Cir. 1995) (emphasis supplied) (citing *Hawaiian Telephone*, *supra* n. 60); see also *W.U. Telephone Co. v. FCC*, 665 F.2d 1112, 1122 (D.C. Cir. 1981) (“equalization of competition is not itself a sufficient basis for Commission action”). One of the counter-arguments to this position is the often misguided notion that the naked “protection of competitors” is analytically the equivalent to attempting to promote tangible new entry into a market currently dominated by a monopoly incumbent. It is not. As the FCC’s former chief economist argued, it is very “important that the playing field should be leveled upwards, not downwards” because “rules that forbid a firm from exploiting efficiencies just because its rivals cannot do likewise” do nothing but harm, rather than improve, consumer welfare. Joseph Farrell, *Creating Local Competition*, 49 FED. COMM. L.J. 201, 212 (1996). In highly concentrated industries, the focus of policy should be on regulation that promotes competitive entry, rather than regulation that “protects competition.” The later will often turn into the mere protection of the private interests of competitors.

<sup>62</sup> *United States v. FCC*, 652 F.2d 72, 88 (D.C. Cir. 1980) (quoting *Northern Natural Gas co. v. FPC*, 399 F.2d 953, 959 (D.C. Cir. 1968)).

<sup>63</sup> *Town of Concord v. Boston Edison Co.*, 915 F.2d 17, 22 (1<sup>st</sup> Cir. 1990) (Breyer, J.), *cert. denied*, 499 U.S. 931 (1991); see also *Verizon v. Trinko*, 540 U.S. 398, 411 (2003) (“Antitrust analysis must always be attuned to the particular structure and circumstances of the industry at issue. Part of that attention to economic context is an awareness of the significance of regulation. As we have noted, ‘careful account must be taken of the pervasive federal and state regulation characteristic of the industry.’”)

<sup>64</sup> *FCC v. RCA Communications, Inc.*, 346 U.S. 86, 94-95 (1953); see also *Northern Natural Gas v. FPC*, *supra* n. 62, 399 F.2d at 961 (emphasis supplied) (“In short, the antitrust laws are merely another tool which a regulatory agency employs to a greater or lesser degree to give ‘understandable content’ to the broad statutory concept of the ‘public interest.’”); *United States v. AT&T*, 498 F. Supp. 353, 364 (D.D.C. 1980) (Green, J.) (it is “not appropriate to distinguish between Communications Act standards and antitrust standards” because “both the FCC, in its enforcement of the

(Footnote Continued....)

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“insisted that the [FCC] consider antitrust policy as an important part of their public interest calculus.”<sup>65</sup>

Yet, while FCC review must include some degree of competitive analysis, the FCC—as the expert regulatory agency—is plainly permitted to come to different conclusions about competition and evolving market structure than the antitrust enforcement agencies. Indeed, the seminal case regarding the FCC’s public interest authority resulted from the DOJ disagreeing with, and challenging in court, the FCC’s approval of an important transaction in the satellite industry in the 1970s which the DOJ believed was anticompetitive but the FCC believed to be in the public interest. The D.C. Circuit ruled in favor of the FCC, stating that all the FCC must do, in the exercise of its responsibilities, is “*make findings related to the pertinent antitrust policies, draw conclusions from the findings, and weigh these conclusions along with other important public interest considerations.*”<sup>66</sup> Accordingly, the *United States v. FCC* decision vividly shows that the FCC can easily disregard the Department of Justice’s recommendations if circumstances warrant. Case law therefore implies that the Commission’s standard is broader and perhaps more subtle than that of the DOJ and may lead to conclusions that conflict with the typical “head count” thinking of the Justice Department.<sup>67</sup>

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Communications Act, and the courts, in their application of the antitrust laws, guard against unfair competition and attempt to protect the public interest”).

<sup>65</sup> *United States v. FCC*, *supra* n. 62.

<sup>66</sup> *United States v. FCC*, *id.* 652 F.2d at 81-82 (quoting *Northern Natural Gas Co. v. FPC*, *supra* n. 62). See also *FCC v. National Citizens Comm. for Broad.*, 436 U.S. 775, 795 (1978); *Gulf States Utils. Co. v. FPC*, 411 U.S. 747, 755-62 (1973) (regulatory agencies must consider “matters relating to both the broad purposes” of their enabling statutes “and the fundamental national economic policy expressed in the antitrust laws”); *FCC v. RCA*, *supra* n. 64, 346 U.S. at 94 (“There can be no doubt that competition is a relevant factor in weighing the public interest.”). Significantly, this principle has long-been recognized by the respective agencies themselves. See, e.g., *ABC Cos. Inc.*, 7 F.C.C.2d 245, 249 (1966) (“Antitrust Division is charged with the enforcement of the antitrust laws . . . while the Commission is charged with effectuating the policies of the Communications Act.”); Dissenting Statement of FTC Commissioner Mary L. Azcuenaga in *Time Warner, Inc.*, FTC File No. 961-0004 (Aug. 14, 1996) (because FCC already had rules in place prohibiting discriminatory prices and practices, there was “little justification” for the FTC to require Time Warner to “comply with communications law” and, therefore, to the extent that the proposed consent order offered “a standard different from that promulgated by Congress and the FCC, it arguably is inconsistent with the will of Congress”; as such, “[t]here is much to be said for having the FTC confine itself to FTC matters, leaving FCC matters to the FCC.” (emphasis supplied)).

<sup>67</sup> For a broader examination of this point, see T. Koutsky and L. Spiwak, *Separating Politics from Policy in FCC Merger Reviews: A Basic Legal Primer of The “Public Interest” Standard*, 18 COMM.LAW CONSPECTUS 329 (2010) (available at: <http://www.phoenix-center.org/papers/CommLawConspectusMergerStandard.pdf>).

The case law’s requirement that competition policy should be focused on “its benefit to the public” and not on “equalizing competition among competitors” is compelling.<sup>68</sup> Indeed, read correctly, legal precedent dictates that that the FCC should not target particular market structures, but rather consider what structure will provide consumers with quality services at reasonable prices. Although buried in its recent *Sixteenth CMRS Report*, the Commission has at least recognized this basic maxim, noting that:

Competitive rivalry among providers is desirable not as an end in itself, but rather as a means of bringing tangible benefits to consumers, such as lower prices, higher quality, and greater choice of services.<sup>69</sup>

In contrast, the DOJ—with its publicly stated “market design” perspective that the optimal market structure of the mobile wireless communications market is four roughly identical competitors—has not.<sup>70</sup>

The error in the DOJ’s thinking is that equalizing competition is the same as maximizing the benefits of competition. Homogeneity among products or firms is not necessarily good for consumers, and differences in spectrum holdings or other assets may lead to different business plans (e.g., low price or non-contract plans). Variety may better serve the heterogeneous preferences of consumers and thus improve consumer welfare. Also, our paper *Wireless Competition and Spectrum Exhaust*, discussed above, clearly illustrates the danger of such of a heavy reliance on “head count” models of competition.<sup>71</sup> Indeed, the DOJ’s steady reliance on “head counts” and homogenous firms demonstrates why the final authority for telecommunications policy rests not at the DOJ but at the FCC—the Department’s thinking is too general and ignores the harsh economic realities specific to providing telecommunications services and the complexities of managing scarce spectrum resources.

## V. Conclusions and Policy Recommendations

Auctions for spectrum are based on the idea that efficiency is served by surrendering to the market the task of allocating spectrum based on private values, thereby rejecting the comparative hearing or lottery approaches of the past. However, for federal agencies intent on “designing markets,” the auctioning of unencumbered spectrum to the highest bidder from an open pool of participants has no appeal. We have already seen in the C-Block rules for the 700

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<sup>68</sup> *Hawaiian Telephone*, *supra* n. 59 at 775-76.

<sup>69</sup> *Sixteenth CMRS Report*, *supra* n. 20 at ¶ 242.

<sup>70</sup> *See DOJ Complaint*, *supra* n. 19.

<sup>71</sup> *See supra* n. 50.

MHz auctions of 2008 and the discussion around the AWS-III auction that the country may be moving away from a true market-based approach to spectrum allocation and toward the auctioning of spectrum encumbered so as to encourage agency-favored business plans.<sup>72</sup> Now, the Department of Justice argues that the auction approach should effectively be abandoned, instead encouraging the Commission to direct spectrum to the “rivals to the leading firms.”<sup>73</sup> We fear that this proposal and those like it effectively return spectrum allocation to the comparative hearing process, where government, not markets, selects deserving entities for spectrum licenses, perhaps with a financial kicker at the end equal to what little proceeds arise in an “auction” among pre-selected winners.<sup>74</sup>

How the Commission should use or modify its spectrum screen is a complex issue and is not the purpose of this BULLETIN, but we do find the Department’s economic foundation for manipulating auctions via some sort of incumbent exclusion rules to be very weak. The DOJ’s “foreclosure” argument is alone an inadequate justification for intervention and its depiction of the industry suggests its recommendations may be counterproductive. In effect, since all firms have a foreclosure value, the DOJ’s “foreclosure” argument is a call for the end of spectrum auctions and a return to comparative hearings. Furthermore, the Department’s proposal is legally risky. Case law holds that interventions, whether by the FCC or the DOJ, should not be directed at equalizing competition among competitors, and the DOJ’s recommendations are plainly aimed at doing so.

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<sup>72</sup> See, e.g., *Using Auction Results*, supra n. 24; see also G. Ford, PHOENIX CENTER PERSPECTIVE NO. 08-01: *Calculating the Value of Unencumbered AWS-III Spectrum* (June 25, 2008) (available at: <http://www.phoenix-center.org/perspectives/Perspective08-01Final.pdf>); G. Ford, PHOENIX CENTER PERSPECTIVE NO. 08-02: *Valuing the AWS-3 Spectrum: A Response to Comments* (July 21, 2008) (“the FCC’s auction process has become an exceedingly thin veil for what effectively amounts to a comparative hearing.”) (available at: <http://www.phoenix-center.org/perspectives/Perspective08-02Final.pdf>); B. Santo, *M2Z’s Hopes for a Wireless Network Are Crushed*, WIRELESS WEEK (September 1, 2010) (available at: <http://www.wirelessweek.com/news/2010/09/m2z%E2%80%99s-hopes-wireless-network-are-crushed>).

<sup>73</sup> DOJ *Ex Parte*, supra n. 7 at p. 12.

<sup>74</sup> The recent spectrum auction in Thailand reveals the revenue consequences of such an auction. In that country, as many licenses were auctioned as there were potential bidders, so the final revenue was essentially equal to the minimum acceptable bids. See, e.g., *Thailand 3G Spectrum Auction Attracts \$1.36 Billion in Bids*, REUTERS (October 15, 2012) (available at: <http://www.reuters.com/article/2012/10/16/us-thailand-telecoms-3g-idUSBRE89F0GJ20121016>); *Thailand Raises \$1.4 bln in 3G Mobile Auction*, PHYS.ORG (October 16, 2012) (available at: <http://phys.org/news/2012-10-thailand-3g-mobile.html#inlRly>).