structure at the CMA level. Rather, AT&T develops its rate plans, features, and prices in response to competitive conditions and offerings at the regional and national level – primarily the plans offered by the other national carriers.[50]

1. Local Markets

59. In previous mergers, the Commission has defined local markets corresponding to CMAs and CEAs. Indeed, the Commission has considered only local markets in its review of past wireless mergers. For example, in its consideration of the AT&T-Dobson Communications merger, the Commission noted that, although the applicants "argue that there may be substantial similarity in the prices of national rate plans amongst nationwide service providers, they admit to adjusting prices in local markets. We conclude that these assertions regarding the nationwide service providers do not establish the existence of a national market."[51] In concluding that the relevant geographic market was local, the Commission noted that there was significant local variation in wireless prices. The Commission's analysis also may have been motivated by the

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50 Public Interest Statement, attached to Applications of AT&T Inc. and Dobson Communications Corp. for Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 07-153, at 18-19 (July 13, 2007) (footnotes omitted). As the Commission noted in the Verizon-ALLTEL transaction, "the Applicants argue that the market for mobile telephony/broadband services is increasingly national in scope." *Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC for Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and De Facto Transfer Leasing Arrangements, and Petition for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act*, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC Rcd 17444, ¶ 50 (2008) ("Verizon-Atlantis Merger Order").

51 *Applications of AT&T Inc. and Dobson Communications Corp. For Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 22 FCC Rcd 20295, ¶ 25 (2007).

smallest market principle in the earlier versions of the Merger Guidelines.[52] However, as we have noted above, consideration of *both* local and national markets would be consistent with the new Guidelines.[53]

60. Local markets likely also would satisfy the hypothetical monopolist test, just as would the national market. Carriers do have the ability to set distinct prices in each local area, although that clearly is not the norm for the national carriers. Arbitrage likely would be limited because subscribers need to provide address information for a credit check and billing relationship for postpaid service. We provide market concentration information at the local market level in Section III, based on our preliminary analysis of the NRUF data.

2. National Market

61. A national geographic market is relevant to the analysis of this merger because national carriers like AT&T and T-Mobile set their conduct based on a number of key competitive dimensions for all of the areas that they serve. These dimensions include pricing, service plans and product positioning, handsets, and advertising. Moreover, their innovative activities are intended to develop new products for all of the areas that they serve, not for individual geographic areas. For the four national carriers, this equates to nationwide competition, whereas for the regional carriers the scope is much narrower. It also may be relevant to analyze competition on a national basis because the quality of a carrier's product in

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52 *See, e.g., Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 19 FCC Rcd 21522, ¶ 89 (2004).

53 *See* Guidelines at 9-10 ("The Agencies may evaluate a merger in any relevant market satisfying the test, guided by the overarching principle that the purpose of defining the market and measuring market shares is to illuminate the evaluation of competitive effects.").

one local area (*e.g.*, the quality of service that it offers) affects the perceived desirability of the carrier by consumers who reside in other areas but roam.

a. Price Competition

62. Although, in the past, Sprint sometimes set different prices for customers that resided in different areas, that no longer is the case.[54] Moreover, the other major national carriers generally have uniform national pricing.

63. The national carriers might offer geographically uniform national pricing plans for several reasons. The carriers present a national product, which they support with national advertising. National pricing is simpler for resellers and internal customer service people. Localized pricing might be perceived as inconsistent with the ubiquity they are promoting.[55]

b. Product Positioning and Service Plan Competition

64. National carriers also compete nationwide with respect to fundamentally important non-price attributes that comprise the "brand equity" of each national carrier. These attributes include network quality, product positioning, and innovation. The four national carriers each make investments and position themselves in product space for the entire nation, not separately for each local area. The strength of each of the brands in any local area is based on the national attributes of the carriers, not just the attributes in that particular area. For

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[54] Souder Decl. ¶ 3.

[55] This is not to say that local conditions have no bearing on pricing. In setting its uniform national price, each carrier may as an economic matter take into account local conditions and aggregate them up into an overall effect on the total national demand for its own product and the type of competitive interaction that it would expect. However, as a practical matter, Sprint would not change its national prices in response to price changes in just a few local geographies. *Id.*

example, Sprint has positioned itself as offering reliable service and strong value. Sprint's innovations include having the first all-digital voice network, the first nationwide 3G network, the first 4G network from a national carrier, and the first unlimited 4G plan. Verizon has positioned itself as the carrier with the highest quality network. T-Mobile has positioned itself as the lowest-cost national carrier. Until recently, AT&T promoted itself as the only carrier that offered the iPhone.[56]

c. Handset Competition

65. The national carriers also compete nationally in handset procurement. The four major national carriers offer the same handsets to customers throughout the entire country.[57] When carriers have exclusive handset contracts, those contracts cover the entire country.[58] Contracts for the Apple iPhone and other handsets are negotiated to cover the entire nation, not separately for each local area. Many applications for smartphones are developed for national use.

d. Advertising Competition

66. The national carriers advertise price plans, services, and handsets largely through national media. Over **[begin confidential information]** [redacted] **[end confidential information]** of

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[56] Declaration of John Carney, Attachment F ¶ 4 ("Carney Decl.").

[57] **[begin confidential information]** [redacted] **[end confidential information]**

[58] "[H]andset manufacturers generally employ EHAs [Exclusive Handset Agreements] with providers that have larger customer bases and extensive network penetration. For instance, all nationwide providers have some EHAs, while non-nationwide service providers typically do not have EHAs." *14th CMRS Competition Report* ¶ 317.

the advertising by the national carriers has been through national outlets.[59]

e. Innovation Competition

67. Innovation competition is a key component of dynamic wireless competition and occurs primarily on a national basis.[60] R&D applies to all regions and innovations are offered on a national basis. Although national carriers roll out 4G service sequentially around the country as the network build progresses rather than at the same time everywhere, the 4G innovation is national in scope for the four national carriers and will be offered by them throughout the nation within a few years.

68. This is not to say that all competition is solely national. Carriers' incentives may differ geographically. For example, AT&T and Verizon, unlike Sprint and T-Mobile, have incentives to discourage "cord-cutting" in areas where they are the ILECs.[61] Carriers invest to expand capacity in particular areas and may have temporary promotions or geographically targeted advertising campaigns. Each carrier will have a geographic rollout plan for 4G. Nonetheless, our analysis indicates that national competition is the primary aspect of competition, so that assessing the effects of the merger on competition should not be limited to the local level.

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59 **[begin confidential information]** [redacted] **[end confidential information]**

60 *14th CMRS Competition Report*, Statement of Chairman Julius Genachowski ("Competition in the wireless voice market over the past 15 years has spurred investment, innovation, and in many cases higher quality for lower prices for American consumers.").

61 American households are increasingly cutting the cord. *See e.g.*, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Wireless Substitution: State-level Estimates From the National Health Interview Survey, January 2007 - June 2010*, (April 20, 2011), *available at*: <http://www.cdc.gov/nchs/data/nhsr/nhsr039.pdf>.

D. Applying the Hypothetical Monopolist Test for Market Definition to the National Geographic Market

69. At the national level, a straightforward application of the hypothetical monopolist test for market definition would indicate the existence of a national market. Consider a uniform (*i.e.*, across-the-board) national price increase for all-wireless service (or postpaid service) by a hypothetical monopolist that controlled the capacity and sales of all current wireless carriers. As discussed above, it seems uncontroversial that such a uniform price increase would be profitable for a wireless monopolist.

III. MARKET SHARES AND CONCENTRATION

70. Once each of the relevant markets is defined, the market definitions can be used to calculate market shares and market concentration. Market concentration then can be compared to the safe harbor and anticompetitive presumption concentration thresholds in the 2010 Merger Guidelines. After the proposed AT&T/T-Mobile merger, concentration in the all-wireless and postpaid national markets would far exceed even the relaxed threshold in the new Guidelines for mergers that are "presumed to be likely to enhance market power." The Merger Guidelines observe that this presumption may be "rebutted by persuasive evidence showing that the merger is unlikely to enhance market power."[62] However, the arguments and the evidence in AT&T's application are insufficient to rebut the presumption. The presumption is true whether the market is defined nationally **[begin NRUF/LNP confidential information]** [redacted] **[end NRUF/LNP confidential information]**.

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[62] Guidelines at 3.

A. Market Participants and Market Shares

71. Market definition analysis in the Merger Guidelines is based on demand-side substitution. However, the Merger Guidelines explain that other firms may participate in the market as rapid entrants. Market shares are calculated for all current producers of products in the relevant market. For firms that participate as rapid entrants, the Guidelines explain that the Agencies will also calculate market shares for these other participants "if this can be done to reliably reflect their competitive significance."[63]

B. National Market Concentration

72. The Merger Guidelines make the general point that the higher are the post-merger HHI and the increase in the HHI, the greater are the potential competitive concerns that are raised by a merger. The Guidelines create several regions of relative concern. For a merger that leads to a post-merger HHI above 2500 in a relevant market and an HHI increase of more than 200, the Agencies conclude that the merger is "presumed to be likely to enhance market power" in that relevant market. For a merger that leads to a post-merger HHI below 1500 in a relevant market, the Agencies conclude that the merger is unlikely to have adverse competitive effects in that market. For a merger that leads to an HHI in the 1500-2500 range in a relevant market and an HHI increase of more than 100 points, the Agencies conclude that the merger would "potentially raise significant competitive concerns and often warrant scrutiny."[64]

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63 *Id.* at 16.

64 *Id.* at 19.

1. All-Wireless Market

73. Table 2 provides HHIs for an all-wireless market based on the number of subscribers.[65] The left panel of Table 2 attributes subscribers to the facilities-based carrier(s) that supply resellers with minutes on a wholesale basis. This follows the Commission's usual methodology, which attributes the subscribers of resellers to the facilities-based carriers whose services that they resell. The Commission has said that "only facilities-based competition can fully unleash competing providers' abilities and incentives to innovate, both technologically and in service development, packaging, and pricing."[66] The right panel of Table 2 attributes the subscribers of resellers to the resellers, treating them as fully independent competitors.[67] Both post-merger HHIs are in the highly concentrated region of the Guidelines.

74. The post-merger HHI when the resellers' subscribers are fully attributed to the facilities-based wholesale service providers is 3198 and the increase in the HHI is 696. When the resellers' subscribers are instead fully attributed to the resellers, the post-merger HHI is 2649

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[65] The subscriber shares in Table 2 exclude connected devices and therefore differ slightly from the shares reported in paragraphs 13 and 44. The subscriber counts for the four national carriers are as follows: 86.2 million for AT&T, 31.8 million for T-Mobile, 94.1 million for Verizon, and 48.1 million for Sprint.

[66] *Promotion of Competitive Networks in Local Telecommunications Markets*, Notice of Proposed Rulemaking and Notice of Inquiry in WT Docket No. 99-217 and Third Further Notice of Proposed Rulemaking in CC Docket No. 96-98, 14 FCC Rcd 12673, ¶ 4 (1999).

[67] **[begin highly confidential information]** [redacted] **[end highly confidential information]**

and the increase in the HHI is 549. In either case, the level and increase in concentration that would result from the merger would be presumed to enhance market power.[68]

75. The Guidelines explain that market shares and concentration are generally measured on the basis of revenues. Revenues are particularly relevant when the products are differentiated, as they are in this market. Table 3 calculates HHIs using revenue shares, using the same two methods for attributing revenue. In the left panel, revenues are fully attributed to the facilities-based carriers. Under this method, the revenue-based HHI for an all-wireless market is 3356 and the increase in the HHI is 741. In the right panel, where the resellers' subscribers instead are fully attributed to the resellers, the revenue-based HHI is 3279 and the increase in the HHI is 727. Using either approach, the merger would be presumed to enhance market power.

2. Postpaid and Prepaid Wireless Shares

76. Postpaid service likely is a relevant market. As presented in Table 4, the subscriber-based post-merger HHI would be 3595 and the increase in the HHI would be 724, which falls into the highly concentrated region where the transaction would be presumptively anticompetitive under the Guidelines.[69]

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[68] If the subscribers were partially attributed to the resellers and partially to the facilities-based carriers, the resulting shares and HHI would be between those reported here.

[69] MetroPCS and Leap Wireless currently sell only prepaid plans. We do not view these carriers as "rapid entrants" into postpaid services. However, even if they were considered participants, our results would be unlikely to change substantially because they would be unlikely to gain substantial postpaid shares.

77. We have not yet evaluated whether prepaid service is a relevant product market or simply a market segment. Resellers sell prepaid services and subscribers to resellers might, in principle, be assigned either to facilities-based carriers or resellers. We have calculated subscriber shares both ways.[70] These shares and the associated HHIs are presented in Table 4.

a. Prepaid Wireless Subscribers (Attribution to Facilities-Based Carriers): If the subscribers of the prepaid resellers are attributed to the facilities-based carrier that provides the wholesale minutes, the post-merger HHI would be 2496 and the increase in the HHI would be 607, which falls into the upper end of the moderately highly concentrated region. The increase in the HHI is sufficiently large that the transaction likely would warrant further scrutiny under the Guidelines.

b. Prepaid Wireless Subscribers (Attribution to Resellers): If subscribers to prepaid services are attributed to resellers as independent competitors, the post-merger HHI would be 1609 and the increase in the HHI would be 135, which falls into the lower end of the moderately highly concentrated region. The increase in the HHI is sufficiently large that the transaction may warrant further scrutiny under the Guidelines, but it is not at the high end of the range.

3. Corporate and Governmental Accounts

78. We understand the carriers other than the four national carriers are not significant participants in this market. In fact, Professor Carlton reports shares for AT&T, T-Mobile,

[70] We currently lack data sufficient to calculate revenue shares for postpaid and prepaid services.

Verizon, and Sprint. Using the shares that he reports, the market for "business customers" has a post-merger HHI of **[begin highly confidential information]** [redacted] **[end highly confidential information]** and an HHI increase of **[begin highly confidential information]** [redacted] **[end highly confidential information]**. Professor Carlton does not provide sufficient information for us to verify his share data. [71]

C. Local Market Concentration

79. As discussed above, the Commission's traditional approach is to evaluate concentration at the local market level. Based on our analysis of the NRUF data, we find that the merger violates the Commission's HHI subscriber screens in local areas that comprise the **[begin NRUF/LNP confidential information]** [redacted] **[end NRUF/LNP confidential information]** of the U.S. population and subscribers.[72] The CMAs that "fail" the screen together account for **[begin NRUF/LNP confidential information]** [redacted] **[end NRUF/LNP confidential information]** of the U.S. population and the CEAs that "fail" the screen together account for **[begin NRUF/LNP confidential information]** [redacted] **[end NRUF/LNP confidential information]** of the U.S. population.

D. Spectrum-Based Market Concentration

80. We have also analyzed concentration in an all-wireless market on the basis of spectrum ownership. Concentration in spectrum ownership has significant implications for

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71 Carlton Decl. at Table 2.

72 *See* Tables 5a to 5c. The Commission screen triggers close competitive analysis when (1) the post-merger HHI would be greater than 2,800 and the change in HHI will be 100 or greater, or (2) the change in HHI would be 250 or greater, regardless of the level of the HHI. *See, e.g.*, Verizon-Atlantis Merger Order ¶ 78.

competition in the provision of wireless service for two related reasons. First, spectrum is an essential input for wireless carriers. Carriers with limited spectrum holdings have limited capacities and are, for that reason, handicapped in competing for wireless subscribers. Second, because there are significant scale economies in the provision of wireless services, a carrier with small spectrum holdings, and a commensurately small share of subscribers, can be expected to have higher costs *per subscriber* than a carrier with large spectrum holdings and a large subscriber share. This cost disadvantage reinforces the effect of the competitive disadvantage that results directly from the carrier's smaller capacity.

81. In the Commission's *14th CMRS Competition Report* on competition in the mobile wireless industry, the Commission reported the Population-Weighted Average Megahertz Holdings by Provider for each of the major wireless carriers, some smaller carriers, and a catch-all "Other" category separately for each of the following spectrum frequency bands: (1) 700 MHz; (2) Cellular; (3) SMR; (4) PCS; (5) AWS; (6) BRS; and (7) EBS.[73]

82. However, these figures likely understate the concerns about spectrum concentration. Because the Population-Weighted Average Megahertz Holdings reported by the Commission do not take into account differences in the values of spectrum in the various bands, they provide a misleading picture of the respective license holdings of each carrier and, thus, their respective capacities to serve subscribers. Indeed, the Commission itself has recognized the importance of differences in spectrum values:

> Two licensees may hold equal quantities of bandwidth but nevertheless hold very different spectrum assets . . . . Bidders in recent auctions in the United States also appear to have recognized these differences, which helps

[73] *14th CMRS Competition Report* ¶ 267, Table 26.

explain the significantly different prices per MHz-POP in the AWS-1 and 700 MHz auctions.[74]

83. The spectrum owned by AT&T and Verizon tends to be superior in a number of important respects to spectrum held by other carriers, particularly the spectrum holdings of Clearwire and LightSquared. AT&T and Professor Carlton do not take into account the differences in spectrum values and, as a result, they overstate the competitive significance of the spectrum licenses held by LightSquared and Clearwire.[75]

84. The Commission has found that EBS spectrum and portions of BRS spectrum are not suitable for mobile telephony/broadband services and are therefore not included in the Commission's spectrum screen analysis. The Commission has also found that mobile satellite service ancillary terrestrial component ("MSS ATC") spectrum, including LightSquared's spectrum in the L band, does not meet its spectrum screen criteria. To be conservative, we nonetheless have included the Clearwire and LightSquared in our analysis.

85. To account for differences in spectrum quality, we have calculated spectrum holdings on the basis of the values carried on each carrier's balance sheet as submitted in its annual filings to the Securities and Exchange Commission.[76] As can be seen in Table 6, using

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[74] *Id.* ¶ 268.

[75] Application at 92-94; Carlton Decl. ¶¶116-120.

[76] Although book values are imperfect proxies for market values, they show clearly that the spectrum holdings of Clearwire and LightSquared are dramatically overstated by the MHz-Pop measure. In their 2010 Annual Reports, several carriers make statements about the relationship between the book value and market value for spectrum. AT&T says that the fair market value of its spectrum licenses "exceeded the book value by more than 25%." *See A Network of Possibilities*, AT&T Inc. 2010 Annual Report at 46, *available at*: <http://www.att.com/Common/about_us/annual_report/pdfs/ATT2010_Full.pdf> (last visited May 26, 2011) Sprint says that fair market value is "more than 20% above" book value. *See* Sprint Nextel Corporation,

this measure, AT&T and Verizon today together account for 66% of the value of all spectrum holdings by wireless carriers.[77] With the addition of T-Mobile, AT&T and Verizon would account for 74% of the value of all spectrum held by wireless carriers. In contrast, the combined holdings of Clearwire and LightSquared account for just 4%.

86. The shares based on book values reflect the differential performance characteristics of various spectrum blocks. First, users in some spectrum bands may cause interference with the operations of other users. To limit or prevent interference, therefore, users may have to engage in protective measures, for example, by leaving some portions of the band unused, limiting power output, or restricting the directions in which signals radiate. Each of

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Annual Report (Form 10-K) at 41 (Feb. 24, 2011) ("A decline in the estimated fair value of FCC licenses of approximately 20% also would not result in an impairment of the carrying [book] value.") ("Sprint 2010 10-K"). Verizon says that fair market value "significantly exceeded" book value. *See* Verizon Communications 2010 Annual Report at 34 ("The fair value of Domestic Wireless [spectrum license holdings] significantly exceeded its carrying [book] value."), *available at*: <http://www22.verizon.com/investor/investor-consump/groups/public/documents/investorrelation/2010_annualreport_quicklinks.pdf>. Leap says that fair market value is "39% above" book value. Leap 2010 10-K at 109 ("The aggregate fair value of the Company's and Savary Island's individual wireless licenses was $2,734.7 million, which when compared to their respective aggregate carrying [book] value of $1,920.0 million, yielded significant excess value."). *See also* MetroPCS 2010 10-K at F-11 ("No impairment [on spectrum license holdings] was recognized as the fair value of the indefinite-lived intangible assets exceeded their carrying value as of September 30, 2010."); Clearwire Corporation, Annual Report (Form 10-K) at 54 (Feb. 22, 2011) ("If the projected buildout to the target population coverage was delayed by one year and the buildout rate of preceding periods were to decline by 5%, the fair values of the [spectrum] licenses, while less than currently projected, would still be higher than their book values."). LightSquared and T-Mobile make no statement. Even if the ratio of market value to book value of Clearwire and LightSquared were dramatically underestimated *relative to that of the larger carriers*, Clearwire and LightSquared are sufficiently small that the conclusions about the greater accuracy of book value rather than the MHz-Pop measure would not be altered.

[77] The AT&T spectrum holdings used in the calculation account for the AT&T's agreement to purchase nearly $2 billion of spectrum from Qualcomm that was announced in December 2010.

these measures makes the spectrum less valuable than if it could be used without the interference safeguards. For example, concerns have been raised about possible interference between LightSquared's proposed service and GPS and Global Navigation Satellite System ("GNSS") receivers, maritime and aeronautical emergency communication systems, and Inmarsat receivers used by governmental agencies.[78] AT&T understates the difficulties that LightSquared and other developers of new spectrum bands face in making their spectrum holdings available for use. As a recent Congressional Research Service Report notes: "If AT&T projects a long lag before the 700 MHz spectrum will be available for use, then it would seem that an even longer lag is probable before the LightSquared spectrum is available . . . ."[79]

87. Second, users of some spectrum bands have greater degrees of incumbency, variable licensing areas, smaller or variable channelization schemes, use limitations, and other administratively imposed transaction costs than other bands do. For example, the Commission has long recognized that the spectrum bands employed by Clearwire for BRS/EBS services have lower values than other bands because, among other reasons, use of these bands requires complex and difficult negotiations with numerous other licensees. For that reason, as indicated above, the Commission declined to include all of the EBS channels and a large portion of the

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78 *See, e.g.*, Letter from Lawrence E. Strickling, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration, United States Dept. of Commerce, to Julius Genachowski, Chairman, Federal Communications Commission, SAT-MOD-20101118-00239 (Jan. 12, 2011).

79 Charles B. Goldfarb, *The Proposed AT&T/T-Mobile Merger: Would It Create a Virtuous Cycle or a Vicious Cycle?*, Congressional Research Service at 15 (May 10, 2011), *available at*: <http://ieeeusa.org/policy/eyeonwashington/2011/documents/attmerger.pdf>.

BRS channels employed by Clearwire in its spectrum screen as part of the Sprint/Clearwire transaction.[80]

E. Economic Evidence on Wireless Concentration and Prices

88. Our competitive effects analysis suggests that the proposed merger would raise unilateral, coordinated, and exclusionary effects concerns. By eliminating T-Mobile as an independent competitor and marginalizing Sprint, the wireless market would move closer to an entrenched duopoly of AT&T and Verizon.

89. A substantial body of empirical work, including estimates from the wireless industry, indicates that high concentration – particularly duopoly – is associated with higher prices.[81] These studies reinforce the concern that an AT&T/Verizon wireless services duopoly would lead to significant price increases.

90. For example, Hausman reports that "the effect of …competition on wireless rates in the U.S. has been significant. Throughout the 1984-1995 period, real, inflation-adjusted cellular rates had fallen at a rate of 4-5% per year. Between 1995 and 1999, however, real cellular rates fell at a rate of 17% per year as [the newly-entered] PCS service providers offered

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80 *Sprint Nextel Corporation and Clearwire Corporation; Applications for Consent to Transfer Control of Licenses, Leases, and Authorizations*, Memorandum Opinion and Order, 23 FCC Rcd 17570, ¶¶ 67-71 (2008).

81 *See, e.g.*, Richard Schmalensee, *Inter-Industry Studies of Structure and Performance*, HANDBOOK OF INDUSTRIAL ORGANIZATION, Vol. II, Richard Schmalensee and Robert D. Willig, eds. (1989); Timothy F. Bresnahan, *Empirical Studies of Industries with Market Power*, HANDBOOK OF INDUSTRIAL ORGANIZATION, Vol. II, op. cit.; Paul A. Pautler, *Evidence on Mergers and Acquisitions*, 48 ANTITRUST BULLETIN 119 (2003); Jonathan B. Baker, *Mavericks, Mergers, and Exclusion: Proving Coordinated Competitive Effects Under Antitrust Laws*, 77 N.Y.U. L. REV. 135, 153 (2002).

service at prices per minute in bucket plans that were more than 50% lower than existing cellular rates."[82]

91. The FCC also has recognized that duopolies cannot be expected to price competitively and that the entry of additional firms could be expected to lead to lower prices. For example, in the Commission's First Report on competition in mobile telephone service, it noted:

> The duopoly nature of cellular service made it less than fully competitive . . . . Therefore, in the early 1990s, the Commission allocated 143 Megahertz ("MHz") of spectrum, almost three times the spectrum allocation for cellular service, to create Personal Communications Services ("PCS") . . . . Already, the approach of broadband PCS appears to be influencing incumbent wireless providers to lower prices and increase features.[83]

IV. EXCLUSIONARY EFFECTS ON THE NON-ILEC CARRIERS

92. As highlighted in Section 1 of the Guidelines, mergers may have exclusionary effects on competitors. The analysis of these exclusionary effects is germane to a full evaluation

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82 Jerry Hausman, *Mobile Telephone*, HANDBOOK OF TELECOMMUNICATIONS ECONOMICS, Vol. I, 580, 582, Martin Cave *et al.*, eds. (2002). Similar results are reported for other countries. *See, e.g.*, Thierry Penard, *Competition and Strategy on the Mobile Telephony Market: a Look at the GSM Business Model in France*, 45 COMMUNICATIONS AND STRATEGIES 49 (2002); Tommaso Valletti and Martin Cave, *Competition in U.K. mobile telecommunications*, 22 TELECOMMUNICATIONS POLICY 109 (1998); Mathias-W Stoetzer and Daniel Tewes, *Competition in the German cellular market?*, 20 TELECOMMUNICATIONS POLICY 303 (1996). In addition to the finding that the presence of additional competitors leads to lower prices, there is also evidence that entry affects the services that are offered and the range of price plans that are available. *See* Katja Seim and V. Brian Viard, *The Effect of Market Structure on Cellular Technology Adoption and Pricing*, 3 AMERICAN ECONOMIC JOURNAL: MICROECONOMICS 221 (2011).

83 *Implementation of Section 6002(B) of the Omnibus Report Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Memorandum Opinion and Order, 10 FCC Rcd 8844, ¶ 4 (1995).

of competitive effects. The AT&T/T-Mobile merger raises the potential for such exclusionary effects on both Sprint and the regional carriers. These effects would reinforce AT&T's unilateral incentives to raise price and would further increase the likelihood of harmful coordinated effects.

93. If the merger were to inflict higher costs on Sprint and the regional carriers, or reduce the quality of the services that they receive from AT&T and Verizon, they would face cost or demand disadvantages in competing for subscribers. Moreover, exclusionary effects in one local area can have effects throughout the nation. For example, high roaming rates in one area raise the cost of serving subscribers from other areas who roam there. In addition, if Sprint would incur higher costs, and therefore obtain a smaller market share and receive lower profits as a result of the merger, that fact would reduce its incentives and ability to bid for favorable handset contracts or finance new infrastructure investments. As a result, Sprint and the fringe carriers would have a reduced ability and incentive to competitively constrain AT&T and Verizon, which would, as a result, be able to charge higher prices than they would otherwise.[84] There also would be adverse effects on investment and innovation competition.

A. Impact on Roaming and Special Access Costs

94. Sprint and the fringe carriers are highly dependent on AT&T and Verizon for certain essential inputs, primarily access to their wireline networks for backhaul and access to their wireless networks for roaming. In the pre-merger market, all carriers are highly dependent on AT&T and Verizon for backhaul. In addition, small GSM fringe carriers currently have the benefit of competition between T-Mobile and AT&T for wholesale roaming. Sprint is also

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[84] Baker, *supra* n.81 at 137 ("Exclusionary conduct, too, may lead to changes in market structure that help create or maintain a collusive agreement.").

dependent on Verizon for roaming. Sprint has estimated that it pays approximately **[begin confidential information]** [redacted] **[end confidential information]** per CDMA postpaid subscriber per month for backhaul and roaming.[85] This represents a significant cost disadvantage, relative to AT&T and Verizon, each of which pays a large fraction of these costs to itself.[86]

95. The merger would result in this cost disadvantage becoming more pronounced. The GSM regional carriers would no longer have the benefit of wholesale roaming competition between AT&T and T-Mobile. With T-Mobile eliminated as a purchaser of backhaul from independent suppliers, that market would be likely to become less attractive to actual and potential competitive backhaul providers. As a result, Sprint and the regional fringe carriers would be left with even fewer alternatives to AT&T and Verizon. Verizon and AT&T would be likely to have an incentive to raise their roaming rates in parallel in order to support higher retail prices.[87]

1. Backhaul

96. Independent wireless carriers, including Sprint, are highly dependent on AT&T and Verizon for an important input, the facilities that they use for backhaul, which are acquired under the terms of special access tariffs. Sprint has estimated that it pays approximately **[begin confidential information]** [redacted] **[end confidential information]** per wireless subscriber per

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85 Declaration of Paul Schieber, Attachment D ¶¶ 6, 11 ("Schieber Decl.").

86 That is, these two ILECs would charge themselves marginal cost while other carriers pay prices substantially greater than marginal cost.

87 Guidelines at 24.

month for special access, most of it to AT&T and Verizon.[88] T-Mobile has argued that "[t]he unregulated, supra-competitive prices that T-Mobile must pay for [special access] services harm consumers as well as T-Mobile" and that "ILECs have both the ability and the incentive to discriminate against competitors in favor of their wireless affiliates."[89]

97. T-Mobile has further noted that it has "always attempted to use…the very limited number of alternative suppliers of special access that exist in a small number of urban areas"[90] Of course, that will no longer be the case if the merger of AT&T and T-Mobile is approved. By eliminating one of the two principal purchasers of special access from independent suppliers, the merger of AT&T and T-Mobile would shrink further the already highly limited market that these suppliers can serve, reducing still further competition in the supply of backhaul services. That would harm Sprint, other independent wireless carriers, and their subscribers.

98. Moreover, as discussed in more detail in Section VI, the proposed merger substantially increases the likelihood that AT&T and Verizon could coordinate to raise retail prices. Because they would be earning a higher retail margin, both would have incentives to increase the rates that they charge (or increase the provisioning difficulties) for special access to Sprint and other carriers. As their costs rise, Sprint and the regional carriers would have to raise their own retail rates, further increasing their competitive disadvantage.

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[88] Schieber Decl. ¶ 11.

[89] T-Mobile Special Access Framework Comments at 2, 5. *See generally* Comments of Sprint Nextel Corporation, WC Docket No. 05-25 (Jan. 19, 2010).

[90] T-Mobile Special Access Framework Comments at 7.

2. Roaming

99. Sprint and the regional fringe carriers also may face higher roaming fees as a result of the merger. Roaming costs can be significant. For example, Sprint has estimated that it pays average per CDMA postpaid subscriber monthly roaming costs of approximately **[begin confidential information]** [redacted] **[end confidential information]**.[91] The per-subscriber costs for other CDMA carriers are likely to be even higher in light of their more limited coverage. In fact, the fringe carriers typically do not offer roaming in their standard prepaid packages or offer roaming as an add-on or on a per minute charge basis.

100. Prior to the proposed merger, the small GSM fringe carriers have been able to benefit from actual or potential competition between T-Mobile and AT&T for wholesale roaming. If T-Mobile were eliminated as a competitor, however, AT&T would lose this constraint.[92] AT&T also would have the incentive to raise its roaming rates in order to limit the ability of other carriers to constrain the higher retail rates that it would have an incentive to charge. Moreover, because the proposed merger would substantially increase the likelihood that AT&T and Verizon could coordinate to raise prices to their retail customers, that would give Verizon an incentive to increase the roaming rates that it charges Sprint and the fringe carriers, further weakening the competitive influence of these competitors.

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[91] Schieber Decl. ¶ 6.

[92] Indeed, we have a natural experiment to test that prediction. We understand that after the 2007 merger of the only two CDMA carriers in Mexico, Sprint's roaming rates were almost immediately raised by more than **[begin confidential information]** [redacted] **[end confidential information]**, and have increased by more than **[begin confidential information]** [redacted] **[end confidential information]** in total since the merger.

101. The impact of higher roaming costs would have adverse effects on Sprint, fringe competitors, and competition, similar to the effects discussed above with respect to the cost of special access for backhaul services. If the increased roaming rates were passed on to Sprint's subscribers, or if Sprint responded by reducing service quality, subscribers would be less likely to select Sprint (and the fringe carriers) and that would increase the ability of AT&T and Verizon to raise their prices further, even while increasing their market shares. It also could increase the likelihood of post-merger retail price coordination between AT&T and Verizon, whether from parallel accommodating conduct or a common understanding of their mutual interdependence and the gains from cooperative over non-cooperative conduct. This is because the higher roaming costs would further reduce Sprint's ability and incentive to disrupt any coordination between AT&T and Verizon.

3. Inter-Carrier Compensation

102. Wireless carriers pay a regulated price for access to the switched wireline network. As wireline carriers, AT&T and Verizon pay a high percentage of these fees to themselves. In contrast, these fees represent a real cost for the non-ILEC wireless carriers. This cost contributes to the non-ILECs' cost disadvantage. Although this regulated price would not be increased as a result of the merger, these higher costs currently limit the ability of Sprint and the other non-ILEC carriers to constrain unilateral and coordinated price increases by AT&T and Verizon, both before and after the merger.

4. Wholesale Prices to Resellers

103. Resellers are dependent on facilities-based carriers for wholesale service. This reduces their independent role as rivals, since the facilities-based carriers provide and set the

price of the underlying wholesale services. After the merger, AT&T and Verizon would provide more than 85% of this service and each would have the incentive to raise its wholesale rates.[93] When resellers' contracts expire, AT&T and Verizon would gain the ability to do so. These higher prices would reduce the ability of resellers to constrain AT&T and Verizon from raising their retail rates after the merger.[94] AT&T also may be able to exercise certain influence over TracFone, the largest reseller, because two members of the Board of Directors of American Móvil, the entity that controls TracFone, are AT&T employees.[95]

B. Impact on Handset Competition

104. The largest national carriers, AT&T and Verizon, often obtain earlier access to innovative new handsets and other consumer devices than do other carriers.[96] The prominent example is the iPhone. This earlier access may result from formal or informal exclusivity arrangements. As the FCC has noted, "handset manufacturers generally employ [exclusive handset arrangements] with providers that have larger customer bases and extensive network penetration."[97]

105. Because of their larger customer bases, all of the national carriers are able to offer more handset models than the regional fringe players. The Commission has reported that AT&T

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93 Share based on data compiled from wireless carrier annual reports, 10-Ks, and press releases.

94 The resellers may be protected in the short run if their contracts involve fixed prices for an unlimited number of voice and data minutes.

95 *America Móvil Board of Directors*, America Móvil, *available at*: <http://www.americamovil.com/amx/ en/cm/about/board.html?p=28&s=36> (last visited May 20, 2011).

96 Declaration of Fared Adib, Attachment E ¶ 11 ("Adib Decl.").

97 *14th CMRS Competition Report* ¶ 317.

and Verizon offered 25 and 17 smartphones, respectively, in December 2009.[98] Sprint offered 19 and T-Mobile offered 17 smartphones during the same period.[99] In contrast, the comparable figures for US Cellular, MetroPCS, and Leap Wireless were 11, 2, and 0.[100] The Commission also noted that "Recent analyst reports…identify access to handsets as an increasing challenge faced by mid-sized and small providers."[101]

106. AT&T's larger subscriber base also gives it an advantage in bidding for the exclusive right to distribute an innovative handset model. The per-unit cost of acquiring such exclusive rights is higher for Sprint than for AT&T because Sprint has a smaller number of customers over which to spread the total cost. This bidding disadvantage would increase if the merger were approved because it would provide AT&T with an even larger customer base. It would also reinforce AT&T's interest in denying Sprint access to the new technology in order to protect AT&T's larger subscriber base.[102] In these circumstances, other things equal, demand for Sprint's service would decline and AT&T and Verizon would be able to further raise their prices while increasing their market shares.

107. While exclusives are sometimes efficient, the increased bidding advantage for exclusives that AT&T would acquire as a result of the merger is not a cognizable efficiency benefit. These exclusives involve paying the handset manufacturer a premium for denying access to the handset to Sprint, not for making it available to AT&T's customers. Exclusives

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98 *Id.* ¶ 308, Chart 43.

99 *Id.*

100 *Id.*

101 *Id.* ¶ 299.

102 Adib Decl. ¶ 9.

may be a way for AT&T to purchase market power by limiting the access of its competitors to new handsets.

C. Impact on the Cost and Availability of New Technologies

108. Because the merger would eliminate T-Mobile as a purchaser of new technology products that compete with those of AT&T and Verizon, the procurement costs of Sprint, the smaller carriers and entrants may rise, or the availability of new technology products may decline. This effect could apply to network infrastructure equipment, innovative new handsets, and other equipment.

109. An important factor in determining the value of a particular spectrum band is the availability of network equipment to prospective users of that band. Bazelon has noted that "[a]ny new wireless technology requires network equipment and devices. Spectrum users must find suppliers for both. The compatibility of existing infrastructure, hardware and software with the radio frequencies within a band is a critical determinant of its value because research and development is costly, time consuming and risky. Often a more mature band already has equipment available to use the spectrum."[103]

110. Part of the value of a particular spectrum band depends upon extensive development, testing, and production of network equipment, chipsets, radio devices and other components designed exclusively for that particular band. Costs fall as original equipment manufacturers, chipset vendors, handset manufacturers and other parties in the global supply

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103 Coleman Bazelon, The Brattle Group, Inc., *The Economic Basis of Spectrum Value: Pairing AWS-3 with the 1755 MHz Band is More Valuable than Pairing it with Frequencies from the 1690 MHz Band*, at 7 (Apr. 11, 2011), *available at*: <http://www.brattle.com/_documents/UploadLibrary/Upload938.pdf>.