by connecting viewers with advertisers—an effect that advertisers value and are willing to pay for.

80. The overall effect of pricing within the two-sided market created by NFL Network is that all parties win. Consumers' subscriber fees are heavily subsidized by advertising revenues. Advertisers have nationwide reach, which creates great value for them, and NFL Network makes a profit on the content that it provides to the market. Significant consumer harm is created, however, if NFL Network is relegated to an MVPD's premium tier: Advertisers will be unwilling to pay advertising fees consistent with a reach of NFL Network to all subscribers in that MVPD's service territory. Without those advertising fees, the NFL will be unable to subsidize the price of NFL Network, and the subscription price of NFL Network to consumers will increase.

d. The Option Value of Watching NFL Network for Comcast's Non-Premium Subscribers Has Been Destroyed

81. By moving NFL Network from the D2 tier to the premium sports tier, and by foreclosing NFL Network altogether from the Expanded Basic tier, Comcast has destroyed the option value of watching NFL Network. This option value is best described as the value to a viewer of having content available in the event that no superior content exists at that particular time. Viewers who have access to NFL Network only as premium content for which an additional payment is required may, due to lack of full information, decide to pass on that content when they would have developed a demand for it were it offered on a broadly penetrated tier.

82. Not all television viewers have set viewing patterns or preferences. A certain percent of viewer hours are spent watching content that is selected by "channel surfing"—that is, briefly scanning content to determine the best available option at that particular time. For this

reason, it is valuable for viewers to have a bundle of channels available to them, even if they have not regularly viewed some of those channels in the past. Content on NFL Network lends itself to this type of viewing. For example, a portion of NFL Network's content is comprised of NFL games replayed from prior seasons or prior weeks within the current season. Although a viewer is unlikely to value watching that content as much as he would value watching a live NFL game, if he is a football fan, his value for watching replayed NFL games is likely significant and relatively constant over time.

83. A second instance in which NFL Network content has a significant option value to viewers is during unique viewing events or after a significant NFL game, such as a playoff game or the Super Bowl. For example, the NFL Draft, which is televised as a two-day event every year, receives very high ratings, particularly for the early rounds. Currently, only ESPN and NFL Network provide live, full-day coverage of the NFL Draft. As a result, certain viewers may get their first taste of NFL Network by watching coverage of a specific event, such as the NFL Draft. Upon viewing the coverage of this event, the viewer may update his expectations of NFL Network in general, and begin to watch it more frequently. Put simply, viewers who have access to NFL Network only as premium content for which an additional payment is required may, due to lack of full information, decide to pass on that content when they may have developed a demand for it were it offered on a broadly penetrated tier.

2. Harm to Advertisers

84. A second group of consumers that are adversely affected by Comcast's discriminatory conduct are advertisers.

a. Higher Prices to Advertise on Comcast-Affiliated Sports Networks

85. By relegating NFL Network to a premium tier, Comcast has depressed advertisers' demand for commercials on NFL Network, thereby undermining price competition

for advertisers. Advertisers seek the largest footprint possible for their advertisements, and any diminution in a programmer's footprint will reduce the value of an advertisement on that network. Golf Channel is presently available to 73 million households and Versus is presently available to 66 million households.[82] As a result of Comcast's discriminatory conduct, NFL Network reaches only 36 million households and its ability to close the gap has been substantially diminished.[83] Through its discriminatory conduct, Comcast has therefore created an artificial advantage for its own national sports networks in the sale of advertisements to national advertisers. It follows that NFL Network cannot constrain Versus's and the Golf Channel's advertising rates as effectively as it could when NFL Network was carried on Comcast's D2 tier. Accordingly, Versus's and Golf Channel's advertising rates should increase as of result of Comcast's discriminatory conduct.

b. Higher Quality-Adjusted Prices to Advertise on NFL Network

86. Not only does Comcast's conduct harm advertising customers of Versus and the Golf Channel, it also harms advertising customers of NFL Network. As explained above, Comcast's conduct has raised NFL Network's costs by increasing its selling costs and decreasing its scale. Economic theory dictates that higher variable costs translate into higher prices in the short run. Indeed, in a perfectly competitive industry, marginal cost increases are passed on dollar-for-dollar to consumers. Even if NFL Network defies economic theory and holds its advertising rates steady, the fact that its footprint has contracted significantly implies that, on a quality-adjusted basis, advertisers are paying higher rates to advertise on NFL Network.

82. *Comcast 2008 10-K, supra*, at 7.

83. *Hawkins Declaration, supra*, ¶ 2 ("According to the League's most recent statistics, the NFL Network is currently delivered to approximately 36 million homes nationwide.").

H. Response to Comcast's Criticisms Relating to Proof of Discrimination and Proof that the Rival Was Impaired

87. In this section, I briefly address the efforts of Comcast's experts, Mr. Jonathan Orszag[84] and Mr. Larry Gerbrandt,[85] to dismiss or justify the evidence of Comcast's discrimination and resulting injury set forth above.

1. The Role of Carriage Decisions of Out-of-Region Cable Operators

88. The fact that NFL Network has achieved significant market penetration among non-Comcast MVPDs severely undermines Comcast's claims that NFL Network is overpriced. NFL Network has achieved significant penetration among the largest non-Comcast MVPDs. Indeed, on a subscriber-weighted basis, over half (54 percent) of *non-Comcast* MVPD operators among the remaining top ten MVPDs carry NFL Network on a subscriber-weighted basis. And when the penetration level on each MVPD is considered, NFL Network is viewed by over 42 percent of non-Comcast subscribers among the remaining top ten MVPDs.[86] Although Verizon was not among the top ten MVPDs in 2006 (the latest year of available FCC share data), given the rate at which it is acquiring video subscribers to its FiOS offering,[87] and given the fact that Verizon carries NFL Network on its expanded digital tier, NFL Network's penetration among non-Comcast subscribers is probably even higher than the above data indicate.

89. Rather than considering the carriage decisions of *all* MVPDs, including Comcast's in-region satellite (DBS) and telephone rivals, Orszag and Gerbrandt would have the

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84. Expert Report of Jonathan Orszag, Mar. 13, 2009 [hereinafter *Orszag Report*].

85. Expert Report of Larry Gerbrandt, March 13, 2009 [hereafter *Gerbrandt Report*].

86. Based on a DirecTV penetration rate of 90 percent, a Dish Network penetration rate of 81.8 percent, and a Cox penetration rate of 35.2 percent.

87. As of the end of 2008, Verizon FiOS had nearly 2 million customers, which likely puts it within the top ten MVPDs. *See* Michelle Donegan, *Verizon FiOS grows*, Jan. 27, 2009, available at http://www.unstrung.com/document.asp?doc_id=171017.

Commission consider only the carriage decisions of a handful of cable operators,[88] most of which serve less than four percent of MVPD subscribers, and which are not in-region rivals of Comcast's.[89] In particular, Orszag implies that carriage of NFL Network by DBS rivals is inapposite because "DBS providers . . . may not face the same types of capacity constraints that Comcast faces on its analog expanded basic tier."[90] When this tactic was employed by Time Warner, it was expressly rejected by the FCC's Media Bureau in *TCR Sports v. Time Warner*: "We reject TWC's assertion that MASN's carriage on a widely available tier by DirecTV and Echostar bear no significance because DBS operators possess different economic motivations from cable operators that are derived from differences in cost structure and technology."[91] Both of Comcast's experts offer Bright House as their lead example for why discrimination against NFL Network should be tolerated,[92] despite the fact that Bright House's territory does not overlap with Comcast's, Bright House serves only one NFL market nationwide (Tampa Bay), and Bright House serves only about two percent of all MVPD subscribers nationwide in 2006.[93] Moreover, Bright House appears to make carriage decisions jointly with Time Warner.[94] Indeed,

88. *Orszag Report* ¶ 4 ("Of the seven largest cable companies (other than Comcast), six – Time Warner, Charter Communications, Cablevision, Bright House, Suddenlink, and Mediacom do not carry the NFL Network at all."). Gerbrandt makes the same claim. *See Gerbrandt Report* ¶ 55 ("Six of the ten largest MVPDs in the United States either choose not to carry the NFLN or to carry it on a sports tier.).

89. Cablevision, Bright House, and Mediacom serve 3.2, 2.4, and 1.5 percent of all MVPD subscribers. *See* 13th Annual MVPD Report at Appendix B.

90. *Orszag Report* ¶ 12 n.12.

91. *Order on Review* ¶ 47.

92. *Orszag Report* ¶ 11 ("Bright House, the sixth largest cable provider in the United States, has posted to its website its own logic for not carrying the NFL Network and why it wants to carry it only on a sports tier."). *Gerbrandt Report* ¶ 56 (citing the same web posting).

93. Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming 13th Annual MVPD Report, Thirteenth Report, at Appendix B-3.

94. *Orszag Report*, at Table A (noting that "Time Warner Cable and Bright House Networks report subscriber numbers jointly to Golf Channel and Versus."). *See also* Time Warner Cable, 2008 SEC Form 10-K (filed Feb. 20, 2009), at 23 (noting that Time Warner Cable is the "Managing Partner" of the jointly controlled Bright House systems that are primarily concentrated in Florida); Bright House Network, *available at* http://en.wikipedia.org/wiki/Bright_House (explaining that Time Warner "still owns a stake in Bright House Networks" and that Time Warner is Bright House's "programming partner."). ;

as explained below, there is growing evidence that cable operators industry-wide make carriage decisions vis-à-vis independent networks jointly.

90. Comcast's narrow focus on the carriage decisions of out-of-region (and often miniscule) cable operators is a fundamental mistake, and inconsistent with economic principles and common sense, for at least three reasons. *First*, Comcast's DBS, telephone, and cable-overbuilder rivals that operate in the same areas as Comcast face the same competitive environment and the same customer preferences for NFL programming as Comcast. Thus, the carriage decisions of in-region rivals vis-à-vis the NFL Network are more relevant than the carriage decisions of out-of-region cable operators.

91. *Second*, if cable operators coordinate their carriage decisions, especially with respect to unaffiliated networks that compete with one or more cable-affiliated networks, the use of out-of-region cable operators as a benchmark for comparison is obviously inappropriate and skewed. Indeed, empirical economic research confirms that cable operators coordinate their carriage decisions with respect to relatively new networks.[95] Evidence demonstrates that, relative to a non-vertically integrated cable operator, a vertically integrated cable company was more likely to carry a relatively new network of *another* cable operator, but not a relatively new

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independent network.[96] The logic behind this "reciprocal carriage" conclusion is simple: "An MSO carries the cable networks of other MSOs, while expecting other MSOs also to carry its vertically integrated cable networks."[97] Several of the cable MSOs that do not carry NFL Network—such as Cablevision and Time Warner—are vertically integrated.[98] Comcast executives have actually admitted that the Golf Channel benefited from precisely these types of *quid pro quo* arrangements.[99] Given this potential for coordination across cable operators, there is a far better proxy for determining whether demand for NFL Network in Comcast's territories justifies the NFL Network's asking price: the carriage decisions of *in-region* DBS operators and telephone MVPD rivals—*each* of which carries the NFL Network on one of its most highly penetrated tiers at a price equal to or higher than the price that Comcast agreed to pay under its contract.[100]

92. Moreover, given the previous *coordinated* effort by Time Warner and Comcast to secure NFL programming content through their In Demand system, the carriage decisions of at

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96. Jun-Seok Kang, *Reciprocal Buying of Intermediate Goods among Vertically Integrated Firms: The Case of the Cable Television Industry*, Indiana University Working Paper (2005), *available at* http://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=IIOC2006&paper_id=513.

97. *Id.* at 17.

98. *See, e.g.*, FCC, Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, MB Dkt. No. 06-189, Thirteenth Annual Report, rel. Jan. 16, 2009, at Tables C-1 (national networks) and C-3 (regional networks).

99.

100. Initial Declaration of Hal Singer, tbl. 2.

least Time Warner vis-à-vis NFL Network should be further discounted. In 2002, Comcast and Time Warner *jointly* bid for non-exclusive rights to the NFL's Sunday Ticket.[101] For all these reasons, to the extent that the carriage decisions of other MVPDs could properly be considered in the Commission's discrimination analysis, the carriage decisions of Comcast's in-region MVPD rivals deserve the most consideration.

93. *Third*, Comcast's territory covers far more NFL markets than do the other cable companies that Comcast points to. Bright House, Charter, and Cablevision—which are held out by Comcast as competitive benchmarks—serve almost no markets with NFL teams, and Time Warner serves far fewer than Comcast. In contrast, Comcast serves two thirds of the markets with NFL teams. Table 8 shows the results.

101. Joe Flint & Stefan Fatsis, *DirecTV, NFL Hook Up on New Pact – Deal Effectively Shuts Out Cable-Television Operators From Multigame Packages*, WALL ST. J., Dec. 12, 2002, at B8.

TABLE 8: NFL MARKETS SERVED BY CABLE MSOS THAT DO NOT CARRY NFL NETWORK

Market (DMA)	*Comcast*	*Time Warner*	*Bright House*	*Charter*	*Cablevision*
Atlanta	Yes	No	No	No	No
Baltimore	Yes	No	No	No	No
Boston	Yes	No	No	No	No
Buffalo	No	Yes	No	No	No
Charlotte	No	Yes	No	No	No
Chicago	Yes	No	No	No	No
Cincinnati	No	Yes	No	No	No
Cleveland-Akron	No	Yes	No	No	No
Dallas-Ft. Worth	No	Yes	No	Yes	No
Denver	Yes	No	No	No	No
Detroit	Yes	No	No	No	No
Houston	Yes	No	No	No	No
Indianapolis	Yes	No	No	No	No
Jacksonville	Yes	No	No	No	No
Kansas City	No	Yes	No	No	No
Miami-Ft. Lauderdale	Yes	No	No	No	No
Milwaukee	No	Yes	No	No	No
Minneapolis-St. Paul	Yes	No	No	Yes	No
Nashville	Yes	No	No	No	No
New Orleans	No	No	No	No	No
New York	Yes	Yes	No	No	Yes
Philadelphia	Yes	No	No	No	No
Phoenix	No	No	No	No	No
Pittsburgh	Yes	No	No	No	No
San Diego	No	Yes	No	No	No
San Francisco-Oakland-San Jose	Yes	No	No	No	No
Seattle-Tacoma	Yes	No	No	No	No
St. Louis	No	No	No	Yes	No
Tampa-St. Petersburg	Yes	No	Yes	No	No
Washington, D.C.	Yes	No	No	No	No
Total NFL Markets Served	**19**	**9**	**1**	**3**	**1.**

Sources: *See* Comcast Corp, 2008 SEC Form 10-K (filed Feb. 20, 2009), at 23; Time Warner Location Index, *available at* http://www.timewarnercable.com/Corporate/about/careers/locations/default.html; Bright House Tampa Bay, *available at* http://tampabay.mybrighthouse.com/default.aspx; Charter Communications, *available at* http://www.charter.com/Visitors/AboutCharter.aspx?NonProductItem=22; Cablevision, *available at* http://www.cablevision.com/cc/index.jsp.

Note: Although there are 32 NFL teams, there are only 30 NFL markets, as San Francisco/Oakland and New York each have two teams. It is also worth noting that some NFL markets are served by multiple cable operators, which means that the sum across all MSOs exceeds 30.

As Table 8 shows, Comcast serves 19 of 30 NFL markets. In contrast, Time Warner serves less than one third; Charter serves 3 out of 30 potential NFL markets; Bright House and Cablevision each serves one. It is therefore inappropriate to use these small cable operators as a basis for comparison.

2. The Role of a Network's "Value Proposition"

94. To justify Comcast's discrimination, Orszag offers a "value proposition" test, in which unaffiliated programmers must demonstrate that their "value proposition" meets or exceeds the value proposition of Comcast's affiliated network.[102] Orszag is also willing to overlook discrimination so long as the unaffiliated programming is not identical to the affiliated programming,[103] or so long as the discrimination is perpetrated against a new network.[104] Orszag's novel approach to assessing discrimination by a vertically integrated cable operator has no connection to the Commission's discrimination framework, to economic theory, or to common sense.

95. In the 1992 Cable Act, Congress addressed concerns about vertical integration by adopting a broad prohibition against discrimination against unaffiliated networks. The Commission adopted regulations that prohibit discrimination "in the selection, terms, or conditions for carriage."[105] The Commission promulgated rules that impose limitations on a cable operator's discretion vis-à-vis independent programmers and rival multichannel video programming distributors (MVPDs). The Commission correctly recognized that such limitations would promote competition in both upstream (content) and downstream (distribution) markets,

102. *Orszag Report* ¶ 7.
103. *Id.* ¶¶ 15-16.
104. *Id.* ¶ 40 ("Unlike Golf Channel or Versus, the NFL Network has a relatively short history with Comcast and other MVPDs.").
105. 47 C.F.R. § 76.1301(c).

while preserving any benefits of vertical integration relating to economies of scope (relative to the alternative policy of banning vertical integration). In particular, the Commission selected a burden-shifting framework to determine whether a vertically integrated cable operator has withheld affiliated programming from competitors ("program access").[106] When designing analogous rules for dealing with denials of carriage to independent programmers ("program carriage"), the Commission noted the complementary ends served by program carriage and access provisions.[107]

96. Set against that regulatory background, Orszag's alternative standard for justifying discrimination by a vertically integrated cable operator is unduly narrow. He would replace the Commission's two-factor test for discrimination (similarly situated programming and disparate treatment) with a multi-point check list that any independent network claiming discrimination would have to satisfy (but which he has not applied):

> As noted above, [1] price is an important element of the value proposition offered by a network such as the NFL Network. But there are other important components of an MVPD's assessment of any cable network. These factors include [2] the protection against future price increases; [3] presence of other programming alternatives; [4] whether competing MVPDs are carrying the network; [5] the opportunity costs of carriage (e.g., any bandwidth constraints); [6] the presence of a most favored nation (MFN) clause; [7] advertising availabilities offered by the programmer; [8] required levels of advertising by the MVPD; [9] the term of the contract; [10] the video-on-demand provisions; [9] the Internet streaming provisions; [11] the price escalators in the contract; [12] exclusivity of content; and [13] the flexibility offered to the MVPD in terms of the MVPD's tiering decisions.[108]

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106. *See* Report and Order, Implementation of Sections 12 and 19 of the Cable Television Consumer and Protection Act of 1992, 13 FCC Rcd 15822, ¶ 56 (1998) ("Once a *prima facie* complaint has been determined, the burden of proof is on the defendant to establish that it did not violate the program access provisions of the Communications Act.").

107. *See* Second Order, Implementation of Sections 12 and 19 of the Cable Television Consumer and Protection Act of 1992, 9 FCC Rcd 2642, ¶ 15 (1993) (noting that the FCC's approach to programming carriage complaints "complies with the express congressional intent of the program access and carriage agreement provisions of the 1992 Cable Act").

108. *Orszag Report* ¶ 25. Orszag actually suggests that networks must be identical under far more than thirteen criteria. *See, e.g., id.* ¶¶ 14-16 (not disputing that NFL Network, Versus, and the Golf Channel "all predominantly carry sports-related programming," but pointing to differences in amount of live programming and to possibility that networks might not "employ *identical* business strategies, have the *same* economics of carriage, or target similar viewers or demographic groups") (emphasis added); *id.* ¶ 18 (stating that factors relevant to carriage

97. Orszag's novel "value-proposition" standard also lacks any basis in the economics literature. Setting aside Comcast's special obligation as a vertically integrated carrier in light of the Commission's non-discrimination provisions, a profit-maximization assumption does not mean that *every* national sports network carried by Comcast on its extended basic tier must offer the same or better value proposition as Versus and the Golf Channel. If carriage of an independent national sports network would generate net benefits for Comcast's downstream division smaller than those generated by the Golf Channel, but larger than ten other networks carried on Comcast's extended basic tier, why should Comcast refuse to carry it?

98. All of this misses the larger point: the statutory scheme is designed to ensure a vertically integrated cable operator with market power cannot simply balance its private gains and losses when considering whether to carry an independent network that competes with an affiliated network. Such balancing of *private* benefits and costs—especially when the profits of the upstream content division are considered—would often favor denial of carriage, even when social welfare would be improved by carriage. For that precise reason, Congress drafted protections (and the FCC promulgated rules) against the very type of discriminatory conduct vis-à-vis independent networks in which Comcast engaged here. By advocating an alternative discrimination standard that turns entirely on Comcast's *private* costs and benefits, Orszag ignores the premise for section 616 in the first instance and the need for the regulatory protections that Congress has imposed.

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include "programming content, intensity of viewer interest . . . , other difficult-to-quantify characteristics, such as the quality of production, and other terms of carriage").

3. The "All-NFL-Fans-Have-Switched-to-DBS" Hypothesis

99. Comcast's experts offer a flawed hypothesis, based on what economists call "self-selection," as to why "many if not most of" Comcast subscribers do not value the NFL Network.[109] Comcast's experts are forced to use the phrase "likely limited" and "many if not most" because they have no evidence that this hypothesis is true.[110] Indeed, at least two pieces of market evidence strongly refute their hypothesis.

100. *First*, Comcast's experts misunderstand the niche filled by Sunday Ticket, a package of out-of-market Sunday afternoon games, carried by DirecTV. Sunday Ticket appeals mostly to the "displaced NFL fan"—that is, someone who has an allegiance to one team but lives in a distant city. This limited target audience is reflected in the number of subscribers to the NFL Sunday Ticket: there are less than 2 million Sunday Ticket subscribers.[111] Comcast's "all-NFL-fans-have-switched" hypothesis assumes that this universe of less than 2 million fans are the only potential audience for the NFL Network. The notion that there are less than 2 million NFL fans in a nation of over 100 million households is incorrect. Many cable subscribers are avid football fans; many (for cost or other reasons) are just unwilling to incur the switching cost of moving to DirecTV to capture the incremental value of viewing (early-season) out-of-region games.

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109. *Orszag Report*, ¶¶ 28, 29.

110. Gerbrandt similarly cannot locate any evidence in support of this hypothesis. *See Gerbrandt Report* ¶ 12 ("The NFL's grant of exclusive rights for the majority of its live regular season games to DIRECTV has markedly decreased the attractiveness of Comcast and every other Multichannel Video Programming Distributor ("MVPD") to out-of-market NFL fans, and has greatly increased the likelihood that dedicated NFL fans already have abandoned Comcast for DIRECTV."). Comcast could retain another two experts to make the same claim, but without any evidence, the claim is just a hypothesis, and a bad one at that.

111. Gregg Easterbrook, *Ticket, Please!*, ESPN.com, Nov. 1, 2007, *available at* http://sports.espn.go.com/espn/page2/story?page=easterbrook/071030 (estimating 1.6 million Sunday Ticket subscribers as of November 2007).

101. *Second*, my prior analysis showed that Comcast serves 19 of 30 NFL home markets. To borrow Orszag's phraseology, it is reasonable to assume that "many if not most" of Comcast's subscribers in those markets are avid NFL fans.

102. *Third*, the "self-selection hypothesis" is undermined by Comcast's repeated attempts to acquire the Sunday Ticket and 8-game packages. If no remaining Comcast subscribers value out-of-market NFL programming, as Orszag claims, why would Comcast bid so aggressively on Sunday Ticket? In 2002, and again in 2004, Comcast unsuccessfully pursued the NFL's Sunday Ticket package of games. In its 2002 negotiations, Comcast attempted to secure the Sunday Ticket package for distribution through its In Demand pay-per-view service.[112] Comcast was unsuccessful in this bid.[113] As the 2002 contract with DirecTV came up for renegotiation in 2004, Comcast again pursued the Sunday Ticket package.[114] This second attempt was also unsuccessful. Comcast later attempted to secure the 8-game package in 2005 and 2006. These continued efforts by Comcast to secure out-of-market NFL games belie Orszag's and Gerbrandt's claim that Comcast's customers would not value a package of out-of-market games on the Expanded Basic tier.

4. The "History of Carriage" as a Defense for Discrimination

103. Many of the factors cited by Orszag in his multi-point test for discrimination are so nebulous that, if considered by the FCC, they would lead the agency to condone blatant discrimination and undermine the statutory purpose of enhancing diversity in programming.

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112. Joe Flint & Stefan Fatsis, *DirecTV, NFL Hook Up on New Pact–Deal Effectively Shuts Out Cable-Television Operators From Multigame Packages*, WALL ST. J., Dec. 12, 2002, at B8.

113. *Id.* ("In Demand was willing to cut a nonexclusive deal for the Sunday Ticket package. But the NFL passed.").

114. Diane Mermigas, *Fox, NFL Talking Sports Net; Comcast May Be Involved in Services, Which Would Directly Challenge ESPN*, TELEVISION WEEK, Feb. 23, 2004, at 1.

Consider Orszag's factor entitled "history of carriage."[115] Such a standard would allow past discriminatory conduct—conduct that limited an independent programmer's penetration—to immunize vertically integrated cable operators from claims of discrimination. By definition, *new* independent networks that seek to compete against cable-affiliated networks could not invoke Orszag's "history of carriage" factor. Setting aside this circular logic, even if Versus and the Golf Channel have "built up a loyal fan base," as Comcast's economists assert without evidence, it does not follow that Comcast subscribers would prefer either of these networks to the NFL Network, assuming that all three networks were available on Comcast's Expanded Basic tier.

5. Orszag Incorrectly Suggests That NFL Network Could Expand Output by Lowering Its Prices to Other MVPDs

104. In my expert report, I explained that Comcast's refusal to carry NFL Network on Comcast's expanded basic tier prevents NFL Network from fully exploiting economies of scale.[116] But for Comcast's conduct, I explained, NFL Network would enjoy greater penetration at lower (average) license fees.[117] Orszag misinterprets this statement to mean that NFL Network would enjoy greater penetration by lowering its license fees to other cable operators:

> And, even if the NFL Network were below its minimum viable scale (which it is not), there is no plausible claim that Comcast were to blame. First, as noted above, the NFL Network has the discretion to lower its license fee and provide more favorable carriage terms to get wider distribution from MVPDs, such as Bright House.[118]

Setting aside the fact that Bright House served less than three percent of nationwide MVPD subscribers in 2006 (and therefore could not materially increase NFL Network's market-wide penetration), the notion that NFL Network needs to lower its license fees to obtain carriage on Comcast and Bright House is misguided; it presumes that DirecTV, Dish Network, Verizon,

115. *Orszag Report*, ¶¶ 39-41.
116. *Singer Report* ¶ 41.
117. *Id.*
118. *Orszag Report* ¶ 48 (citation omitted).

AT&T and myriad other MVPDs are paying an excessive price to NFL Network for the same content. A basic tenet of economics is that, as a profit-maximizing firm, NFL Network is currently charging its profit-maximizing price to MVPDs. Comcast's experts have offered no evidence to the contrary.

105. Finally, Orszag fails to understand that, even if it wanted to lower its prices, NFL Network is constrained in its ability to engage in price discrimination due to the most-favored-nations (MFN) provisions in many of its contracts with MVPDs. Accordingly, if NFL Network were to offer Bright House a special price below the price charged to other MVPDs, NFL Network would be forced to reduce its license fees to each MVPD that secured an MFN provision in its contract with NFL Network. The resulting price would presumably be less than the profit-maximizing price currently charged by NFL Network.

106. In summary, there is nothing excessive about the price charged by NFL Network. Yet Comcast's expert, without analysis, claim to second-guess the market. As a result, he mistakenly characterizes this case as a pricing dispute: "This dispute is, therefore, not about the NFL's ability to compete fairly, since it can clearly do so by adjusting its price and other carriage terms."[119] Clearly, this is the wrong paradigm. The proper lens through which to view this dispute is that of a vertically integrated cable operator discriminating against an unaffiliated network to increase its market power in the supply of sports programming and to maintain its market power in distribution of video programming. Such conduct is squarely condemned under the Cable Act and the Commission's program carriage rules.

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119. *Orszag Report* at 5. *See also id.* ¶ 70 n.53 ("Since a license fee much lower than the NFL Network's current license fee would be profitable for the NFL Network, this is not antitrust foreclosure; it is a business dispute about price and other carriage terms.").

IV. The Fair Market Value of Carriage of NFL Network Programming on Comcast's Expanded Basic Tier Is Reflected in the Rates that Comcast's MVPD Rivals Have Voluntarily Agreed to Pay NFL Network

107. In this section, I analyze the carriage contracts between NFL Network and nine other MVPDs. These data provide a reasonable estimate of the fair-market value of the carriage of NFL Network programming on Comcast's Expanded Basic tier. These contracts reflect the price that a reasonable buyer and seller would agree to in the absence of anticompetitive conduct. I use a standard regression analysis to infer the price that Comcast, absent the challenged conduct, would and should pay NFL Network based on the relationship between various contract parameters (for example, an MVPD's NFL Network subscribers, the length of the contract, and the type of the MVPD service) and each MVPD's Net Effective Rate ("NER"). Using this approach, I estimate the NER that would emerge, absent Comcast's challenged conduct, in a hypothetical transaction between NFL Network and Comcast.

108. I also analyze the terms of the actual contract negotiated between Comcast and NFL Network. This contract contains information relevant to the determination of the fair-market value of carriage of NFL Network programming because it was consummated before Comcast placed NFL Network on a tier less-penetrated than the tier on which it placed Comcast-affiliated programming (Versus and the Golf Channel)—that is, before Comcast engaged in the challenged conduct. Accordingly, the negotiated price is less likely to be biased by Comcast's subsequent discriminatory conduct than a contract consummated after Comcast placed NFL Network on a less-penetrated tier than its affiliated programming. The contracted NER corroborates the range predicted by my regression analysis.

109. Absent Comcast's discriminatory conduct, Comcast would pay NFL Network an NER of per subscriber per month in 2008. The 95 percent confidence interval around this prediction is to per subscriber per month in 2008. I also calculate the

annual fair-market price that Comcast should and presumably would pay (absent the discriminatory conduct) to carry NFL Network on its Expanded Basic tier for the period 2009-2012 based on the year-over-year annual growth rate in the NER paid for NFL Network by other MVPDs during that period. If Comcast rates rise in line with the rates paid by its rival MVPDs, it would pay a price (per subscriber per month) escalating from in 2008 to in 2012. My conclusions on these points are supported by the actual contract between Comcast and NFL Network, which (without accounting for Comcast's discriminatory treatment) prescribes a NER that falls in the confidence interval of my regression analysis and thereby corroborates my econometric estimates of fair-market value.

A. Federal Authorities Have Already Defined the Proper Fair-Valuation Approach

110. Federal authorities have prescribed specific guidelines that inform the proper fair-market value of sports programming. For example, the independent arbitrator in *TCR Sports v. Time Warner* adopted my application of the *Adelphia Order* criteria to that case.[120] This method was reaffirmed by the FCC's Media Bureau in its October 2008 *Order on Review* in *TCR Sports v. Time Warner*, when it determined that "the best and most persuasive evidence of fair market value is the objective price that [sports network] programming yields in the marketplace."[121] The best price evidence is provided by "current or previous contracts between MVPDs and [sports networks] in which...[the MVPD does] not have an interest."[122] To an economist, the Media Bureau was correct to conclude that arms-length contracts between other MVPDs and a sports

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120.*See* In the Matter of TCR Sports Broadcasting Holdings, LLP, v. Time Warner Cable, Inc., Case No. 12 494 E 000326 07, Declaration of Allan T. Ingraham and Hal J. Singer, May 8, 2008.

121.*Order on Review*, *supra*, ¶46.

122.*Id.* n.178 (citing the *Adelphia Order, supra*, at Appendix B.4.c.). I cite the most important factor, Factor 1. This factor was also enumerated in the Commission's order approving News Corp.'s acquisition of DirecTV. In the Matter of General Motors Corporation and Hughes Electronics Corporation, Transferors, and The News Corporation Limited, Transferee, For Authority to Transfer Control, Memorandum Opinion and Order, MB Dkt. No. 03-124, released Jan. 14, 2004, at 82 [hereinafter *News Corp. MO&O*].

network are "the best and most persuasive evidence of fair market value."[123] Accordingly, I devote considerable attention to an analysis of the contracts between NFL Network and other multi-channel video distributors (MVPDs). The pricing data from those contracts represent the market-determined rate for NFL Network programming. To corroborate this evidence, I also consider the existing contract between Comcast and NFL Network.[124]

B. The Rates Paid by Other MVPDs for Carriage of NFL Network Programming Inform the Fair-Market Value of Carriage of NFL Network Programming on Comcast's Expanded Basic Tier

111. The *Order on Review* of the arbitrator's decision in *TCR Sports v. Time Warner* explained the importance for assessing fair-market value of the voluntary rate paid for the subject programming by other MVPDs:

> Contrary to TWC's assertions, we find that the carriage decisions of four of the largest MVPDs operating in North Carolina—that serve the overwhelming majority of non-TWC subscribers to paid television service in North Carolina—*are an appropriate reference point for assessing fair market value*. We reject TWC's assertion that MASN's carriage on a widely available tier by DirecTV and Echostar [Dish Network] bear no significance because DBS operators possess different economic motivations from cable operators that are derived from differences in cost structure and technology. MASN presented testimony that the actions of these carriers—two of TWC's most direct competitors in North Carolina—offer a more appropriate meter for gauging programming demand than those of smaller cable operators because they provide service throughout the state, rather than to scattered pockets of subscribers like the smaller cable operators that TWC cites.[125]

123.To borrow one analogy, it would be foolish to ignore the price of my neighbors' homes that sold within the last six months when valuing the price of my home—especially if my neighbors' homes are similar to or identical to my home. In the instant case, programming on the NFL Network carried by DirecTV or Dish Network is *identical* to the programming that would be carried by Comcast on Comcast's Expanded Basic tier but-for Comcast's discriminatory conduct.

124.This complementary analysis conforms to Factor 3 as noted in the *Adelphia Order*. *See Adelphia Order, supra*, Appendix B.4.c.). After Factor 1, Factor 3 provides the most direct evidence of the actual market price of NFL Network programming. I interpret the phrase "before . . . [the MVPD] acquired control of the systems swapped and acquired in the Adelphia transactions" to mean *before* the vertically integrated cable operator engaged in the challenged conduct. I understand that any offers discussed between the parties to a carriage dispute *after* the challenged conduct cannot inform fair-market valuation because such offers could be biased (typically in favor of the vertically integrated cable operator) by the challenged conduct. *See News Corp. MO&O, supra*, at 82 ("The arbitrator may not consider offers prior to the arbitration made by the MVPD and News Corp. for the programming at issue in determining the fair market value.").

125.*Order on Review, supra*, ¶47 (citations omitted) (emphasis added).

Similarly, the carriage decisions of the largest MVPDs operating in Comcast's territories throughout the United States are "an appropriate reference point for assessing fair market value" here. Consider, for example, the two MVPDs cited in *TCR Sports vs. Time Warner*: DirecTV and Dish Network. DirecTV and Dish Network agreed to pay NFL Network NERs for 2008 of approximately and per subscriber per month, respectively, to carry NFL Network on tiers reaching at least percent of their respective subscribers.

112. In addition to DirecTV and Dish Network, NFL Network has signed numerous affiliation agreements with other MVPDs. The MVPDs in the sample are

which together account for approximately

non-Comcast NFL Network subscribers in 2008.[126] In my judgment, this sample is sufficient to provide a reliable assessment of fair-market value. NFL Network's other contracts with MVPDs cover very few subscribers.[127]

113. NFL Network's affiliation agreements include several components that together form the NER paid by the MVPD to NFL Network.

126. According to internal NFL Network estimates, there were non-Comcast NFL Network subscribers on July 31, 2008. My sample includes Thus, the subscribers account for approximately

127. Specifically, I limit my analysis to MVPDs that served more than NFL Network subscribers in 2008.

128.

Table 9 lists the individual 2008 NERs to be paid under each current contract in the sample and the average rate across all contracts in the sample in 2008.

TABLE 9: CURRENT NFL CONTRACTS WITH MVPDS OTHER THAN COMCAST

MVPD	2008 Net Effective Rate ($/subscriber month)	2008 NFL Network Subscribers*
Simple Average**		

Source: NFL Network; Empiris estimate

Note: †

* Through 11/31/2008

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As Table 9 shows, the arithmetic (simple) average rate in 2008 across all MVPDs in the sample that receive the eight-game package programming is per subscriber per month. Regression analysis begins with the simple average rate ( ), and it attempts to provide a better estimate based on the characteristics of the particular out-of-sample observation (in this case, Comcast).[129] In this case, the purpose of the regression model is to make a prediction about an MVPD that is not in the sample (this is also called an "out-of-sample prediction").

129. Note that an out-of-sample regression method attempts to use information gleaned from all observations *other than the observation whose value one seeks to predict*. In the instant case, I seek to use information gleaned

114. I employ a common statistical approach used in economics to calculate the fair-market value of Comcast's carriage of NFL Network programming on Comcast's Expanded Basic tier by considering the rates and other pertinent terms agreed to in arms' length transactions between NFL Network and other MVPDs. Specifically, I use a hedonic-price model estimated with the Ordinary Least Squares (OLS) regression method.[130] Hedonic price models are commonly used to determine the relative value of several attributes that together make up an integrated good that has a single price.[131] For example, hedonic models are often used in housing economics to determine how the size of a house, the number of bedrooms, the number of bathrooms, and other factors affect the price of the house. NFL Network contracts are like a house in that several components—including the length of the contract, carriage level, and the number of subscribers reached—do not have their own prices but collectively determine the net price that the MVPD is willing to pay and the net price that NFL Network is willing to accept. The value of NFL Network programming affects the fair-market value of carriage, but because it comes in only two "flavors"—with or without the eight-game package programming—this factor can be easily controlled. Furthermore, eight of the nine MVPDs in my sample (all MVPDs except) receive the same programming (NFL Network *with* the eight-game package

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from all sample observations *other than Comcast* to predict the price that Comcast would pay for carriage of the NFL Network in a transaction absent discrimination or the threat of discrimination. Regression analysis begins with the simple average rate because that is the value one would apply to Comcast if one knew only the prices other MVPDs pay for carriage of the NFL Network. Regression analysis is an attempt to improve upon this simple method by including additional information that may be relevant.

130. Ordinary least squares is one of, if not the most, commonly used methods of statistical analysis in the field of economics. *See, e.g.*, George G. Judge et al, THE THEORY AND PRACTICE OF ECONOMETRICS 15 (Wiley and Sons 2d ed., 1985) ("Therefore, for the linear rule (2.1.4), the least squares estimator is equal to or better in terms of sampling precision than all others in its class. This is a beautiful result, which does much to explain the popularity of the least squares rule.").

131. *See, e.g.*, Sherwin Rosen, *Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition*, 82 J. POL. ECON. 34-55 (1974).

programming). I control for the quality of the programming—and its effect on the fair-market value—in my model.

115. I consider several important characteristics that vary from contract to contract. For example, I consider the length of the agreement, the number of MVPD subscribers that receive NFL Network, the carriage level, the presence of an MFN, the duration of the contract after 2009, and whether the eight-game package programming was offered at a particular time. Some of these factors, such as the number of MVPD subscribers, exhibit a non-linear relationship with the dependent variable—that is, their relationship with the price per subscriber per month is not best described by a straight line.[132] Formally, the following model gives the relationship between the price of NFL Network and the variables that explain that price:

[1] $P = f(Subscribers, ContractYear, Package, MFN, HighPenetration, Duration, Year)$

where *Subscribers* is the natural log of the number of NFL Network subscribers on a particular MVPD for a particular year, *Contract Year* is the number of years since the first paying year of the contract between the MVPD and NFL Network, *Package* is a discrete variable equal to one when the MVPD pays for and receives the eight-game package programming, *MFN* is a discrete variable equal to one if an MVPD enjoyed a Most Favored Nation clause in its carriage agreement with NFL Network, *High Penetration* is a discrete variable equal to one if an MVPD has agreed to carry NFL Network programming on a tier reaching at least 80 percent of its total cable subscribers, *Duration* is a discrete variable equal to one if an MVPD has agreed to a carriage agreement with NFL Network that extends beyond December 2009, and *Year* is a vector

132. *See, e.g.*, JEFFREY M. WOOLDRIDGE, INTRODUCTORY ECONOMETRICS: A MODERN APPROACH 41-46 (South-Western Cengage Learning 4th ed. 2009).

comprised of three discrete variables that account for each year in the sample.[133] Table 10 provides descriptive statistics of the independent variables used in the regression. The sample includes 39 contract-year observations covering nine MVPDs and four years (2005-2008).[134]

TABLE 10: DESCRIPTIVE STATISTICS OF INDEPENDENT VARIABLES

Variable	N	Mean	Standard Deviation	Min	Max

Note: See fn. 134 for a discussion of why the fixed effects (Y2005, Y2006, and Y2007) have different mean values.

Note that as an out-of-sample analysis, Table 10 does not include Comcast observations.

116. A potentially important variable is the number of subscribers for the MVPD in question. Holding all other factors constant, one may expect to observe a negative correlation between MVPD subscribership and price because revenue enhancements or cost savings enjoyed by the MVPD, the network, or both may affect the final carriage price. Furthermore, an MVPD with many subscribers will have greater bargaining power than one with few subscribers. The

133. Specifically, *Year* is comprised of indicator variables for 2005, 2006, and 2007, with an implied base year of 2008. Note that, because a few MVPDs do not have a 2005 observation and several MVPDs have two 2006 observations (pre-surcharge and post-surcharge), the number of observations in each year varies.

134.

extent to which *P* decreases for a given increase in *Subscribers*, however, should become smaller as *Subscribers* increases because the increase in the MVPD's bargaining power vis-à-vis NFL Network (and the revenue enhancements or cost savings) should not increase proportionately to an increase in subscribers. Other factors, such as Most Favored Nations (MFN) clauses, suggest that subscriber size should play a limited role in determining *P*.[135]

117. Figures 1 and 2 demonstrate how linear (Figure 1) and linear-logarithmic (Figure 2) specifications fit the subscriber data for MVPDs that receive eight-game package programming.[136] Note that the linear model would, for a sufficiently large MVPD, predict a *negative* price per subscriber per month. The linear-log model, in contrast, is asymptotic and thus would predict prices that trend toward zero—but never reach zero—for increasingly large MVPDs.[137]

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135. Note that I consider the *presence* of an MFN in a contract rather than the active use of an MFN.

136. Note that the univariate models between price and subscribership would not control for whether an MVPD takes the eight-game package programming. As noted earlier, 8 of the 9 MVPDs in my sample do take the eight-game package programming (and consequently pay a higher rate). To produce an "apples-to-apples" comparison for this narrow univariate model, I exclude the one MVPD ( ) that does not carry (or pay for) the eight-game package programming. Note, however, that is included in the multivariate regression used to generated the predicted rate because this larger model can control for differences in programming that cannot be controlled by the univariate regression.

137. The asymptotic nature of the linear-logarithmic model ensures that an increase in MVPD NFL Network subscribers will never imply a negative price. That is, the y-value of a linear-logarithmic function trends approaches zero (but never reaches zero) as the x-value increases. It instead becomes an increasingly small positive value. *See, e.g.*, JAMES H. STOCK & MARK W. WATSON, INTRODUCTION TO ECONOMETRICS 209-214 (Addison-Wesley 2003) (describing logarithmic functions and regressions).