ECONOMIC ANALYSIS OF THE PROPOSED COMCAST-NBCU-GE TRANSACTION

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Contents

I. INTRODUCTION AND OVERVIEW

1. Comcast Corporation ("Comcast") and General Electric Company ("GE") propose to create a joint venture that combines the broadcast, cable programming, movie studio, theme park, and online content businesses of NBC Universal ("NBCU") with the cable programming and certain online content businesses of Comcast.[1]

2. At the request of counsel for Comcast and GE, we wrote two economic reports analyzing the likely competitive effects of the proposed transaction. In our first report, we applied to this transaction the mathematical model developed by the staff of the Federal Communications Commission ("Commission") to analyze the issue of vertical foreclosure in the News Corporation/DirecTV transaction.[2] Our central finding was that "the proposed Comcast/NBCU/GE joint venture does not pose a significant threat of foreclosure" in the form of denying NBC programming to MVPDs that compete with Comcast.[3] In our second report, we analyzed the structure of, and nature of competition in, the evolving electronic video distribution marketplace, in general, and the nascent online video sector, in particular.[4] Our central finding in that report was that "the proposed transaction does not threaten competition in the distribution

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1 *See Applications for Consent to the Transfer of Control of Licenses, General Electric Company, Transferor, to Comcast Corporation, Transferee*, Applications and Public Interest Statement, Lead Application File Nos. BTCCDT-20100128AAG (MB), SES-ASG-20100201-00148 (IB), and 0004101576 (WTB), January 28, 2010 (hereinafter, *Public Interest Statement*).

2 Mark Israel and Michael L. Katz, Application of the Commission Staff Model of Vertical Foreclosure to the Proposed Comcast-NBCU Transaction, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, February 26, 2010 (hereinafter, *Foreclosure Declaration*).

3 *Id.*, ¶ 4.

4 Mark Israel and Michael L. Katz, The Comcast/NBCU Transaction and Online Video Distribution, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, May 4, 2010 (hereinafter, *Online Distribution Declaration*).

of long-form, professional-quality video programming, notably the provision of such programming via the Internet."[5]

3. We have been asked by counsel for Comcast to review the economic arguments made in the Comments and Petitions to Deny filed in this proceeding in order to determine whether those arguments provide a basis for amending or reversing the conclusions we reached in our earlier declarations.[6] In addition, counsel has asked us to assess whether these comments and Petitions

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5 *Id.*, ¶ 3.

6 Specifically, we focus on the following reports, which we will sometimes refer to collectively as "the economic reports":

(a) a report by Professor William Rogerson on behalf of the American Cable Association that focuses on vertical and horizontal theories of pricing effects. (William P. Rogerson, "Economic Analysis of the Competitive Harms of the Proposed Comcast-NBCU Transaction," June 21, 2010, Exhibit A to Comments filed by American Cable Association; hereinafter, *Rogerson Report*);

(b) a report by Professor Leslie Marx on behalf of Bloomberg that focuses on program carriage effects with regard to business news networks. (Leslie M. Marx, "Economic Report on the Proposed Comcast-NBC Universal Transaction," June 21, 2010, Exhibit 3 to Petition to Deny, filed by Bloomberg L.P.; hereinafter, *Marx Report*) (We do not address Professor Marx's theories related to advertising, as we understand Professor Rosston is addressing those in a declaration to be filed concurrently with ours.);

(c) a declaration by Dr. Hal Singer on behalf of the Communications Workers of America that focuses on (traditional and online) vertical foreclosure theories and other online competition topics. (Declaration of Hal J. Singer, June 21, 2010, Attachment B to Petition to Deny or in the Alternative Impose Conditions, filed by Communications Workers of America; hereinafter, *Singer Declaration*);

(d) a supplement to the Petition to Deny of DISH Network L.L.C. and EchoStar Corporation that focuses on "vertical foreclosure threats posed by the proposed Comcast-NBCU transaction." (Highly Confidential Supplement to the Petition to Deny of Dish Network L.L.C. and EchoStar Corporation, Vertical Foreclosure Threats Posed by the Proposed Comcast-NBC Transaction, June 21, 2010; hereinafter, *DISH Supplemental Report*);

(e) a declaration by Mr. Vincent Kunz, Senior Marketing Manager, Reporting and Analytics, DISH Network, in which he analyzes the effect of DISH Network's retransmission dispute with Fisher Broadcasting on its penetration levels. (Declaration of Vincent Kunz, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, June 7, 2010; hereinafter, *Kunz Declaration*);

(f) a report by Professor Kevin Murphy on behalf of DirecTV that presents a bargaining-theory based estimate of departure rates following loss of broadcast networks and a vertical theory of merger pricing effects. (Kevin M. Murphy, "Economic Analysis of the Impact of the Proposed Comcast/NBCU Transaction on the Cost to MVPDs of Obtaining Access to NBCU Programming," June 21, 2010, Exhibit A to Comments of DIRECTV, INC; hereinafter, *Murphy Report*);

to Deny identify any likely sources of competitive harm other than those examined in our two previous reports.

4. Based on our review of the Comments and Petitions to Deny—as well as our review of the relevant economic literature, application of relevant economic theory, and analysis of the empirical evidence—we conclude that the proposed transaction does not pose a significant threat of foreclosure or other harm to competition or consumers. Commenters making assertions to the contrary rely on faulty and/or incomplete analyses, and they repeatedly fail to recognize the fundamental distinction between protecting competition and protecting competitors. The conditions requested by parties opposing the proposed transaction generally would serve the economic self-interest of the petitioners rather than consumers.

(g) a report by Professor Simon Wilkie on behalf of EarthLink that focuses on online competition and the proposed transaction's effect on broadband pricing. (Simon J. Wilkie, "Consumer Sovereignty, Disintermediation and the Economic Impact of the Proposed Comcast/NBCU Transaction," June 21, 2010, Appendix 2 to Petition to Condition or Deny of EarthLink, Inc.; hereinafter, *Wilkie Report*);

(h) a declaration by Dr. Mark Cooper and Mr. Adam Lynn on behalf of the Consumer Federation of America, Consumers Union, Free Press, and Media Access Project that focuses primarily on online video competition, but also makes assertions regarding vertical foreclosure, horizontal pricing theories, and program carriage. (Declaration of Dr. Mark Cooper and Adam Lynn, June 21, 2010, Appendix A to Joint Petition to Deny of Consumer Federation of America, Consumers Union, Free Press, and Media Access Project; hereinafter, *Cooper and Lynn Declaration*); and

(i) a declaration by Dr. Mark Cooper that combines four separate papers on various online topics, historical patterns of vertical integration, and historical cable industry practices; (Declaration of Dr. Mark Cooper, June 21, 2010; hereinafter, *Cooper Declaration*).

5. The remainder of this declaration explains these findings in greater depth and provides details of the facts and analysis that led us to reach them. Briefly, our specific findings are the following:[7]

- *The proposed transaction is fundamentally a mechanism to promote increased vertical coordination.* Section II places the analysis in context by reviewing the vertical nature of the proposed transaction. Vertical mergers and similar transactions are widely recognized as: (a) potentially creating significant efficiency benefits that will accrue to consumers, and (b) generally posing relatively little threat of competitive harm.

- *None of the analyses and claims made in the opposing filings undermines our earlier conclusion that the post-transaction NBCU would not withhold programming from other MVPDs as an anticompetitive foreclosure strategy intended to benefit Comcast's cable operations.* Section III discusses the available evidence on whether Comcast would be able profitably to induce NBCU to withhold its programming from other MVPDs as a foreclosure strategy. Of particular note, this discussion demonstrates that no compelling arguments have been advanced to counter the conclusions that: (a) using NBC as part of a foreclosure strategy would be costly to NBCU; (b) GE has a strong incentive to use the fiduciary duty provisions of the joint venture agreement to protect the NBCU networks from such harm; and (c) the benefit of any such foreclosure to Comcast's cable operations would be small because relatively few subscribers would switch to Comcast if

[7] We address only what we consider to be the most significant economic claims or arguments made by various commenters in opposition to the proposed transaction. We do not attempt to identify or assess every argument made in opposition. As we illustrate below through examples, several of the reports are filled with a disturbing number of unsubstantiated allegations, incorrect assertions, and citations to sources that do not support the positions for which they are cited. In addition, several of the reports are filled with laundry lists of complaints against Comcast that have nothing to do with the proposed transaction. Time and space constraints make it impossible to address all of the incorrect, unsubstantiated, and/or irrelevant complaints in these reports.

those subscribers' MVPDs were to cease carrying NBCU programming.[8] Indeed, the results from applying the Commission staff vertical foreclosure model have been strengthened by a recent market development and by the analysis of data that have become available since we first applied the Commission staff model.

- *Although several commenters assert that the proposed transaction would lead to higher prices due to vertical pricing effects, the analyses underlying these assertions are severely flawed and run counter to existing evidence.* Section IV discusses the available evidence on the likely effect on equilibrium affiliate fees of the vertical integration of NBCU's networks with Comcast's cable systems. As that discussion demonstrates:

  — *Claims that the proposed transaction would lead to higher affiliate fees for NBCU networks are unfounded.* The theoretical bargaining models presented by Professors Murphy and Rogerson are inappropriate for analyzing pricing in this industry and, in any event, fail to yield precise, reliable predictions. The analyses presented by Professors Murphy and Rogerson are also incomplete and fail to account for the pricing effects of the proposed transaction due to efficiencies. The price increases predicted by Professor Murphy's and Professor Rogerson's models would be swamped by the price effects of transaction-related efficiencies. Empirical studies of previous instances of vertical integration between an MVPD and one or more

[8] The *Murphy Report* and *Kunz Declaration* present estimates of the rates at which subscribers would leave their current MVPDs. It is important to observe, however, that the critical empirical variable is the rate at which consumers would switch to Comcast, not the rate at which they would leave their current MVPDs. The former is far lower than the latter. Moreover, for reasons discussed below, the departure rates estimated by Professor Murphy and Mr. Kunz are likely overstated by a substantial amount. In the Appendix, we discuss the body of available evidence on the extent to which subscribers would leave their current MVPDs and switch to Comcast in response to the loss of NBCU networks.

networks support the conclusion that vertical integration of MVPDs and programming networks does not lead to higher affiliate fees.

— *Professor Wilkie's claim that the proposed transaction would lead to higher prices for Comcast's broadband Internet access service is based on false assertions regarding economic theory and misleading anecdotal evidence.* A simple numerical example refutes Professor Wilkie's theoretical claims, and the use of corrected data refutes his empirical claims.

- *Claims that the proposed transaction would lead to adverse horizontal pricing effects are unfounded.* Section V turns to horizontal issues and discusses the available evidence on whether the horizontal combination of Comcast's and NBCU's networks would lead to higher affiliate fees for these networks. This discussion first demonstrates that the use of a bargaining model to evaluate the transaction's horizontal pricing effects cannot undo fundamental economic logic: mergers create adverse horizontal pricing effects only if the merging products (here, networks) are close substitutes. None of the economic reports present *any* evidence to suggest that Comcast's and NBCU's networks are close substitutes, and substantial empirical evidence indicates that they are not. Hence, claims of horizontal harms to competition are unfounded. An analysis of historical integration events involving networks similar to those at issue in the present case reinforces this conclusion by finding an absence of horizontal pricing effects.

- *Contrary to some commenters' claims, there is no sound basis for concluding that the proposed transaction would lead Comcast Cable to engage in anticompetitive foreclosure by denying carriage to networks competing with NBCU networks.* Section VI discusses

program carriage issues, specifically, the available evidence on whether, post-transaction, Comcast would have an incentive to limit carriage of non-NBCU content in general or non-NBCU business news content in particular. It shows that:

— *The claim that an integrated MVPD would anticompetitively attempt to disadvantage unintegrated networks does not stand up to scrutiny.* Economic analysis and an examination of the facts reveal that the market conditions that would be necessary for foreclosure to be a profitable strategy are not present.

— *Analysis of the empirical evidence showing that Comcast is actually* ***more*** *likely than other MVPDs to carry unintegrated networks operating in the same general programming categories as Comcast's own networks.* This finding is the opposite of what one would expect if Comcast were engaged in foreclosure to competitively advantage its own networks. In addition, application of an empirical test pioneered by Professor Austan Goolsbee indicates that Comcast's carriage decisions are not driven by foreclosure motives.

— *Professor Marx asserts that Comcast would have anticompetitive incentives to foreclose Bloomberg TV, but once the incorrect parameter values on which she relies are corrected, her foreclosure model supports the opposite conclusion.* She offers a fundamentally flawed analysis of relevant markets, but in any event, her own model, using the correct data, supports the conclusion that Comcast would not engage in foreclosure of Bloomberg TV.

- *The proposed transaction does not threaten competition in the distribution of long-form, professional-quality video programming via the Internet.* Section VII examines

comments and claims regarding the extent to which online and traditional television viewing are complements or substitutes and whether Comcast would be able profitably to induce NBCU to withhold content from a viable online distributor.

— *Most important, no commenter has provided any analysis that weakens the conclusion that, even if an online distributor were to emerge as a direct competitor for traditional MVPD services, Comcast would not find it profitable to engage in anticompetitive foreclosure by inducing NBCU to withhold programming from the distributor in order to benefit Comcast's cable operations.* Specifically, no commenter has provided evidence that counters the fundamental logic that—because the cost to NBCU of withholding content from an online MVPD is expected to be at least as large as the cost of withholding content from a traditional MVPD and because available evidence indicates that withholding NBCU content would result in limited departures from an online distributor, with Comcast capturing (perhaps substantially) less than 25 percent of those subscribers who do depart—online foreclosure is highly unlikely to be profitable.

— *The finding that online foreclosure is implausible is reinforced by a review of newly available evidence, which supports the finding that online video is currently a complement for traditional TV viewing.* The analysis described in the previous bullet point assumes for the sake of argument that an online MVPD emerges as a direct competitor of traditional MVPDs and offers a substitute service. However, the analysis in our *Online Distribution Declaration*, examination of newly available evidence, and our review of the economic reports filed in opposition to the proposed transaction support the finding that online video is currently a complement for

traditional TV viewing. Fundamental economic logic is clear that this complementary relationship creates incentives for Comcast to encourage the development of online video rather than stifle it.

— *None of the economic reports provides any evidence to contradict the fact that online video distribution is—and always will be—a complement for Comcast's provision of broadband Internet access.* Here too, fundamental economic logic is clear that this relationship generates incentives for Comcast to promote online video distribution.

- *Far from being an example of a competitive harm, Fancast Xfinity TV (sometimes referred to by the generic name, TV Everywhere) is a pro-consumer innovation.* As we briefly discuss in Section VIII, Fancast Xfinity TV is an innovative extension of traditional MVPD services that allows consumers to view the content covered by their Comcast cable subscriptions online and/or on mobile devices in addition to on television. The evidence indicates that, contrary to the unsupported assertions of some critics, Fancast Xfinity TV is neither an attempt to deny other distributors online access to content, nor part of an anticompetitive market-division scheme, nor an instance of anticompetitive tying or predation.

II. PERSPECTIVE ON THE STRUCTURE OF THE PROPOSED JOINT VENTURE

6. Before turning to the detailed analysis that supports our findings, it is worthwhile to consider the implications of the vertical structure of this transaction. As many commenters have noted, although the proposed transaction has some horizontal components (*e.g.*, bringing together Comcast and NBCU cable networks in the joint venture), it is primarily a vertical transaction, combining NBCU's content with Comcast's distribution services. While allowing

that vertical transactions should be closely examined, the current head of the Department of Justice's Antitrust Division has recognized that:[9]

> Such [vertical] mergers can achieve procompetitive efficiency benefits. Vertical integration can lower transaction costs, lead to synergistic improvements in design, production and distribution of the final output product and thus enhance competition. Consequently, most vertical arrangements raise few competitive concerns.

7. Dr. Cooper and Mr. Lynn claim that "there is a growing belief" that more scrutiny should be given to anticompetitive effects of vertical integration.[10] This claim does not accurately depict the state of economic knowledge. Instead, recent surveys of the economic literature in this area conclude that the vast majority of vertical transactions are pro-competitive. For example, in a survey that includes studies of vertical integration in the cable industry, Professors Lafontaine and Slade conclude:[11]

> As to what the data reveal in relation to public policy, we did not have a particular conclusion in mind when we began to collect the evidence, and we have tried to be fair in presenting the empirical regularities. We are therefore somewhat surprised at what the weight of the evidence is telling us. It says that, under most circumstances, profit–maximizing vertical–integration decisions are efficient, not just from the firms' but also from the consumers' points of view. Although there are isolated studies that contradict this claim, the vast majority support it. Moreover, even in industries that are highly concentrated so that horizontal considerations assume substantial importance, the net effect of vertical integration appears to be positive in many instances. We therefore conclude that, faced with a vertical arrangement, the burden of evidence should be placed on competition authorities to demonstrate that that arrangement is harmful before the practice is attacked.

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9 Christine A. Varney, "Vertical Merger Enforcement Challenges at the FTC," Remarks to the PLI 36th Annual Antitrust Institute, San Francisco, California, July, 17 1995, *available at* http://www.ftc.gov/speeches/varney/varta.shtm, *site visited* July 12, 2010.

10 *Cooper and Lynn Declaration* at 9.

11 Francine Lafontaine and Margaret Slade (2007), "Vertical Integration and Firm Boundaries: The Evidence," *Journal of Economic Literature*, **45**(3):629-85 at 680. For a similar conclusion, *see* Church (2008) who finds that the evidence "strongly supports, on both theoretical and empirical grounds, a presumption that vertical mergers are welfare enhancing and good for consumers." (Jeffrey Church (2008), "Vertical Mergers," *Issues in Competition Law and Policy*, *vol. 2*, 1455-1502 at 1455.)

8. Consistent with this general finding, the previous economics literature has generally concluded that vertical integration, on the whole, is pro-competitive and welfare enhancing. For example, Professor Chipty (2001) concluded that:[12]

> Estimates suggest that consumers are better off in integrated markets than in unintegrated markets, although the differences are not statistically significant. These findings suggest that consumers in unintegrated markets are certainly no better off than consumers in integrated markets, despite the tendency of integrated operators to exclude certain program services. Moreover, the efficiency effects may indeed dominate the strategic effects, and thus, the net impact of vertical integration between programming and distribution may be to improve consumer welfare.

9. The economic literature on vertical integration establishes that the theorized pro-competitive and anticompetitive effects of vertical integration are born of the same source: the fact that the merging parties will internalize one another's profits in their decision making.[13] In particular, the anticompetitive theories are based on the idea that, because the merger partners internalize one another's profits, they may want to harm one another's competitors. However, internalization of one another's profits can also have pro-competitive effects, such as the elimination of double marginalization and the reduction of transaction costs.[14] The literature concludes that, in the vast majority of cases, the pro-competitive effects of internalization dominate and thus vertical integration enhances welfare.

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12 Tasneem Chipty (2001), "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry," *American Economic Review*, **91**(3):428-453 at 430.

13 *See,* for example, Jeffrey Church (2008), "Vertical Mergers," *Issues in Competition Law and Policy, vol. 2*, 1455-1502 at 1462.

14 Ironically, Dr. Cooper and Mr. Lynn note that "broadcasters and cable operators argue about the price, channel location and carriage of content" and claim that the loss of this "natural rivalry between two of the most important players in the multi-channel video space" is a competitive harm from the merger. (*Cooper and Lynn Declaration* at 13.) Dr. Cooper and Mr. Lynn seem to believe that all forms of rivalry, whether within one market or across different stages of the vertical chain, are equivalent. To the contrary, unlike competition among horizontal competitors within a single market, the rivalry between firms at different stages of the vertical chain can create transactions costs, hold-up problems, and negotiation breakdowns which tend to increase end-user prices and reduce output, and which can be efficiently lessened or eliminated by vertical integration.

10. Given the importance of internalization in understanding the effects of vertical integration, it is critical to recall that the proposed Comcast-NBCU-GE transaction was designed in ways that have clear implications for how profits are internalized. From an economic perspective, there are two central features:

- As long as GE has an ownership interest in NBCU, the joint venture's officers and directors owe fiduciary duties to the joint venture and GE. Consequently, NBCU cannot take actions that harm NBCU to the benefit of Comcast. That is, NBCU cannot internalize the effects of its actions on Comcast's profits.
- In contrast, Comcast is free to internalize the effect of its actions on its (initially 51 percent) share of NBCU profits.

As we emphasize below, the evidence indicates that the transaction will be pro-competitive even if Comcast obtains full ownership of NBCU. However, it is worth observing that, as long as GE maintains an ownership interest in NBCU, GE's ability to enforce the fiduciary duties provides even more assurance that the pro-competitive effects of the transaction will dominate any anticompetitive effects. For example, although fiduciary duties would prevent NBCU from withholding access to—or raising the prices of—NBCU programming in order to benefit Comcast, Comcast would have the right (and economic incentive) to internalize the double marginalization savings that arise from its partial ownership of NBCU. In closing, it is also worth observing that this last point illustrates the fact that there is no conflict between the realization of efficiencies and the argument that fiduciary responsibilities further limit the possibility of anticompetitive harms.[15, 16]

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[15] For this reason, Professor Rogerson is mistaken when he asserts

III. USE OF NBCU PROGRAMMING TO FORECLOSE NON-COMCAST MVPDS

11. In our *Foreclosure Declaration,* we applied to this transaction the mathematical model developed by Commission staff to analyze the issue of vertical foreclosure in the News Corporation/DirecTV transaction. Our central finding was that the proposed transaction does not pose a threat that NBCU programming would be used to engage in anticompetitive foreclosure.

12. In the present section, we review our earlier analysis in the light of market developments that have occurred since our earlier report, new empirical evidence on consumer switching rates provided by commenters, and claims made in the submissions of Dr. Singer and DISH Network. As we will now demonstrate, this review strengthens our original conclusion that the proposed Comcast-NBCU-GE joint venture does not pose a significant threat of foreclosure.

13. The remainder of this section proceeds as follows:

- A recent marketplace development and newly available data imply that the *critical* departure rates to be used in the Commission staff foreclosure model are higher than we originally estimated. Combined with our earlier empirical analyses of the likely *actual* departure rates, the updating of the critical departure rates reinforces our earlier conclusion that Comcast would be very unlikely to have economic incentives to engage in foreclosure.

> [T]he type of close coordination that would be required to achieve any of the claimed efficiencies that a transaction would produce is exactly the same type of coordination that would be required for the firms to successfully engage in the anticompetitive actions that would produce vertical harms.

(*Rogerson Report* at 19 and 20.)

16 It is also worth noting that *horizontal* efficiencies, such as those that would arise if the transaction facilitated the sharing of talent between broadcast stations and RSNs in one community, or other cross-network coordination, also raise no conflict, as these efficiencies will be realized entirely within the joint venture with no need for Comcast's involvement.

- Mr. Kunz of DISH Network has provided his own estimates of actual departure rates. As we show, the updated critical departure rates {{

}}, which again indicates that foreclosure would be unprofitable.

- We next show that the criticisms of our vertical foreclosure analysis offered by DISH Network and Dr. Singer are unfounded and do not undermine the fundamental finding that foreclosure is unlikely.

- Looking beyond the formal model of foreclosure, we note that the structure of the proposed joint venture and the risk of damage to the NBC broadcast network reinforce the conclusion that it is unlikely that Comcast would be able profitably to induce NBCU to deny retransmission consent for NBC stations' signals in order to foreclose other MVPDs.

- Some commenters have asserted that Comcast's strategies involving Comcast SportsNet Philadelphia imply that, post-transaction, Comcast would be able profitably to induce NBCU to withhold NBC from other MVPDs. We show that these claims are meritless.

- We conclude this section by addressing Dr. Singer's claim that NBCU would move sports programming from NBC to Versus in order to foreclose other MVPDs. We demonstrate that that this claim is totally unfounded and contrary to marketplace realities.

A. Recent marketplace developments and newly available data have increased the critical departure rates in the staff foreclosure model.

14. The conclusion that the proposed transaction would not pose a significant threat of foreclosure is based in part on application of the Commission staff's foreclosure model. That model compares projected *actual departure rates* (*i.e.*, the rates at which consumers would leave their current MVPDs if those MVPDs lost carriage of NBCU programming) with estimated *critical departure rates* (*i.e.*, the lowest departure rate at which foreclosure would be profitable). In our *Foreclosure Declaration,* we estimated critical departure rates under a variety of assumptions for several different scenarios (temporary or permanent foreclosure, foreclosure with all NBC owned-and-operated ("O&O") stations or just in particular Designated Market Areas ("DMAs"), foreclosure with or without affiliate stations).[17] As we now discuss, a recent marketplace development and newly available data imply that the critical departure rates are higher than those estimated in our earlier declaration. Hence, this recent development and newly available data reinforce the conclusion that foreclosure is unlikely to be profitable.

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17 *See Foreclosure Declaration,* Tables 2-4 and surrounding discussion.

18 Henry Ahn, Executive Vice President TV Networks Distribution (NBC Universal Networks Distribution), July 13, 2010, interview.

}}[19] To the extent that DBS providers are close substitutes for one another, foreclosure of a single DBS provider may be expected to induce consumers to switch between DBS providers rather than to Comcast. Hence, {{

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reduces the profitability of temporary foreclosure and increases the critical departure rate.

16. Second, our earlier analysis assumed that, among those consumers departing from another MVPD, the diversion rate to Comcast would be proportional to its market share in the DMA in question. However, as detailed in the Appendix of the present declaration, empirical evidence submitted on behalf of DISH Network, when combined with the empirical work in our *Foreclosure Declaration*, indicates that diversion to Comcast following the DBS events available for study was very small. Taken literally, the estimates imply that the diversion rate to Comcast was approximately zero, in which case foreclosure could not possibly be profitable. However, to be conservative, our updated analysis below allows for a diversion rate from DBS providers to Comcast equal to 1/3 of what would be implied by proportional diversion based on market shares.

17. Lastly, we note that the only retransmission-consent event of any length about which anyone has presented empirical evidence on departure rates is the six-month Fisher dispute with DISH Network. Hence, rather than present critical values for one-month and permanent foreclosure, we compute critical departure rates for temporary foreclosure versus DISH Network

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lasting six months. One could experiment with an infinite variety of different foreclosure strategies, but in all other cases, there will be no actual departure rate to compare against derived critical values. Moreover, for foreclosure versus MVPDs other than DISH Network, we have not observed events from which to compute the appropriate diversion rate to Comcast. Hence, it seems most natural to use six-month foreclosure versus DISH Network as the available test case.

18. To compute the critical departure rate for a six-month event, we apply the same methodology as in the temporary foreclosure analysis from our *Foreclosure Declaration*, except that we assume that the same number of DISH Network subscribers will depart the MVPD in each of the six months and we compute the cumulative six-month departure percentage required to make it profitable to withhold NBC for the six months.[20]

19. The second and third columns of Table III.1 present the estimated critical departure rates for six-month foreclosure versus DISH Network both for foreclosure of all NBC O&O stations and on a DMA-by-DMA basis for each DMA in which there is both an NBC O&O station and a Comcast cable system. Aside from the changes described above, the table uses the same low- and high-end assumptions as in our *Foreclosure Declaration* to generate a range of possible critical departure rates. For comparison, the fourth and fifth columns of the table present the corresponding critical departure rates using the methodology from our *Foreclosure*

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[20] In so doing, we assume no subscribers are under long-term contracts, meaning that anyone who wants to leave can do so within six months. We use the same post-foreclosure churn rates as in our *Foreclosure Declaration*, simply starting the churn as of month seven. We also have computed updated one-month critical values and compared these to 1/6 of Mr. Kunz's estimated departure rate from the six-month Fisher dispute. In addition, we have allowed the number of departures to be somewhat larger in the early months of the dispute than in later months, with 6/21 of the departures occurring in the first month, 5/21 in the second month, and so on through 1/21 in the sixth month. Neither of these variations changes the substantive conclusions presented in this section. (All calculations are included with our backup materials.)

Declaration.[21] The figures from the updated analysis are much higher than those from our earlier analysis, which examined simultaneous temporary foreclosure of both DBS providers and assumed diversion to Comcast proportional to MVPD market shares.

Table III.1: Updated Critical Departure Rates

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B. The {{

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20. As in our earlier analysis, the next step after computing critical departure rates is to compare them to empirical estimates of actual departure rates. In our previous declaration, we inferred the actual departure rates from the (tiny) observed gains in Comcast's share by assuming diversion ratios proportional to market shares. Now, due to Mr. Kunz's study, we have {{

}} that can be compared to

[21] *Foreclosure Declaration,* Table 3. In our *Foreclosure Declaration* we did not present 6-month foreclosure numbers and we did include long-term subscriber contracts. Here, to match the assumptions made in calculating columns 2 and 3, we adjust the numbers computed in our *Foreclosure Declaration* by computing 6-month foreclosure critical departure values and assuming no subscribers are under long-term contracts (assuming a constant number of switchers in each month of the 6-month foreclosure period). This means that the results in columns 4 and 5 differ from the results in columns 2 and 3 only because: (i) we assume NBC is withheld from both DBS providers simultaneously, and (ii) we assume proportional diversion to Comcast.

the critical departure rates.[22] As seen in Table III.1, using the updated critical values based on developments since our *Foreclosure Declaration*, {{ }} is below even the *low-end* of critical departure ranges for all O&Os combined *and for each individual DMA*, indicating that foreclosure would not be profitable.[23]

C. DISH Network's and Dr. Singer's criticisms of our vertical foreclosure analysis do not alter the fundamental conclusion that foreclosure is unlikely.

21. As demonstrated in Parts A and B, above, if one accepts our *Foreclosure Declaration*'s application of the Commission staff's model for the analysis of vertical foreclosure incentives, then the evidence introduced since that report only serves to strengthen our conclusion that the proposed Comcast-NBCU-GE transaction would be highly unlikely to lead to vertical foreclosure based on withholding retransmission rights for NBC broadcast station signals. Dr. Singer and DISH Network do not accept our application of the Commission staff model, however, and they criticize several assumptions used in our *Foreclosure Declaration*. As we will now discuss, these criticisms are poorly founded, and none of them undermines or reverses the conclusion that vertical foreclosure is highly unlikely.

22. DISH Network makes the following criticisms of our analysis:

- DISH Network argues that, as long as GE owned 49 percent of NBCU, foreclosure is especially likely because Comcast would use its 51-percent ownership to order NBCU to

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[22] For reasons we discuss in Part C of the Appendix, this estimate may substantially overstate the actual departure rate that a vertically integrated Comcast could expect were it to withhold NBC from other MVPDs.

[23] Professor Murphy includes alternative estimates of the actual departure rate. Although neither of these estimates is valid for the reasons laid out in the Appendix, we note that both estimates are also below the critical departure rates in Table III.1. In particular, based on a theoretical bargaining model, Professor Murphy infers a departure rate from *permanent* foreclosure of {{ }} percent. (*Murphy Report,* ¶ 39.) He also infers a departure rate of {{ }} percent from a previous study of the provision of local-into-local broadcast service by DBS providers. (*Murphy Report,* ¶ 46.)

take actions that harm NBCU but benefit Comcast's non-NBCU operations and would force GE to bear 49 percent of the costs while Comcast enjoyed 100 percent of the benefits.[24, 25] DISH Network argues that the fiduciary-duty terms of the joint venture agreement are "inadequate" to prevent anticompetitive behavior, but DISH Network offers no meaningful analysis of GE's incentive and ability to protect its financial interests. As we discussed in our *Foreclosure Declaration* and summarize in Part D, below, there are strong reasons to believe that these joint-venture-agreement protections would be effective despite DISH Network's unsupported claim to the contrary.[26]

- DISH Network criticizes our finding that fiduciary obligations will limit the possibility of foreclosure as long as GE maintains an ownership stake in NBCU. Specifically, DISH Network asserts foreclosure may be used to achieve higher affiliation fees in future negotiations and that, consequently,[27]

> [i]f the benefit of eventual higher fees exceeds the temporary [sic] foregone fees, the minority shareholder might support the strategy enthusiastically in the first place, mooting the effect of fiduciary duty for yet one more reason.

Regardless of whether foreclosure could, in fact, have such effects on future prices, this argument is irrelevant to a proper assessment of the likely competitive effects of the proposed transaction. If the benefit of eventually higher fees indeed exceeded the

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24 *DISH Supplemental Report* at 4 and 5.

25 In terms of the parameters of the Commission staff model, DISH Network is arguing that s = 1/.51 =1.96. DISH Network's claim runs counter to those of Professors Murphy and Rogerson, who argue that the appropriate value for *s* is 1 even when GE retains a significant ownership interest in NBCU. (*Murphy Report,* ¶ 76, *Rogerson Report* at 19 and 20.) As we discuss in Part D, below, there would be significant obstacles to reaching the type of side agreement between Comcast and GE that would lead to a value of *s* = 1 being appropriate. In any event, we took *s* = 1 as our base case and demonstrated that foreclosure would very likely be unprofitable.

26 *Foreclosure Declaration,* ¶ 45.

27 *DISH Supplemental Report* at 6.

temporarily foregone fees, such that the minority shareholder (GE) would support the strategy enthusiastically, then NBCU would enthusiastically engage in foreclosure regardless of its relationship with Comcast. One cannot reasonably assert that the proposed transaction creates foreclosure incentives when those alleged incentives exist independently of the transaction.

- DISH Network contends that our assumption that future retransmission consent fees will be between {{ }} per-subscriber, per-month is "seriously flawed."[28] However, we chose this range based on an interview with an NBCU executive responsible for negotiating retransmission consent with MVPDs and noted that {{ }} from a third-party, industry source (SNL Kagan).[29] Moreover, our approach has been validated by the fact that {{

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- DISH Network contends that our application of the Commission staff model ignores the fact that {{

}}[31] This contention is false. In fact, *all* of

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28 *DISH Supplemental Report* at 7.

29 *Foreclosure Declaration,* ¶¶ 66-67.

30 Jodi Brenner, Senior Vice President, Business & Legal Affairs, NBC Universal, July 16, 2010, interview. On this point, Dr. Singer argues that, because one of us has argued that the Commission should review the current system of retransmission consent, we are wrong to use projected (or actual) retransmission consent fees in our model. (*Singer Declaration,* ¶ 192.) It should go without saying that commentary on potential Commission policy changes has no bearing on the appropriate figure to use for actual trends in retransmission fees.

31 *DISH Supplemental Report* at 8.

the DBS foreclosure calculations reported in our *Foreclosure Declaration* were based on the assumption that {{

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- DISH Network claims that we were aggressive in assuming that telco video providers' penetration levels in all DMAs in which they are currently present would grow to the current maximum level across such DMAs ([[ ]]).[32] This criticism ignores the logic of sensitivity analysis and the use of a range of parameter values to test the robustness of an analytical conclusion. This assumption regarding telco video penetration was presented as a high-end estimate (yielding the top of our range of critical departure values) to account for the projected growth of telcos.[33] Even under this "aggressive" scenario, we conservatively assumed that telco video providers would enter no DMAs in which they do not already provide MVPD service.

- In our analysis, we observed that MVPDs could offer subscribers longer-term contracts as a means of protection against potential foreclosure, and we used this fact in calibrating the high-end of our reported range of critical departure rates. DISH Network criticized this argument on the grounds that DISH Network can offer contracts only as customers "knock on its door."[34] However, DISH Network provided no explanation of why it could

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32 *DISH Supplemental Report* at 8.

33 *Foreclosure Declaration*, Figure 1.

34 *DISH Supplemental Report* at 9.

not offer subscribers inducements to extend the terms of their existing contracts. In addition, even if this criticism were valid, it would not change the overall conclusion of our analysis, which demonstrated that foreclosure is unprofitable even when we assumed that MVPDs would *not* increase the proportion of customers under long-term contracts.

23. Dr. Singer also offers several misplaced and/or incorrect criticisms of our framework, which similarly fail to undermine the conclusion that foreclosure is very unlikely to be profitable:

- Dr. Singer argues that our analysis assumes too high a value for the fraction of subscribers who would stay with their current MVPDs but obtain access to NBC content through alternative means (*e.g.,* over the air or online) if their MVPDs were foreclosed.[35] Far from undermining our earlier conclusion that foreclosure is very unlikely, Dr. Singer's claim supports it. In particular, if Dr. Singer's claim were correct, then foreclosure would be even more *unprofitable* than our earlier analysis indicates. This is so because the fewer the number of people who would obtain NBC content through some alternative means, the greater the loss of advertising revenues suffered by NBCU under a foreclosure strategy.[36]

- Dr. Singer asserts that consumers leaving a foreclosed MVPD would be especially likely to switch to Comcast rather than to another MVPD carrying NBCU programming. Specifically, he argues that the percentage diversion to Comcast would be greater than

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35 *Singer Declaration*, ¶ 188. Formally, he criticizes our range of values for the parameter *a*.

36 This relationship holds both in our implementation of the Commission staff foreclosure model and in Dr. Singer's version. (*Id.*, ¶ 187.)

Comcast's proportional share of the relevant market.[37] As discussed at length in the Appendix, Dr. Singer's assertion is contradicted by the data, which show that diversion to Comcast is substantially *less* than proportional. This relationship may hold, in part, for the reasons articulated by Dr. Singer himself: consumers leaving one DBS provider may be particularly likely to switch to the other DBS provider rather than to a cable provider.[38] Dr. Singer ignores the data and his own argument, and he claims that diversion to Comcast may be higher than proportional for customers who are "seeking out Comcast-affiliated content."[39] {{

}}

- Dr. Singer contends that the DMA-specific Comcast Cable market shares we used to compute diversion rates are too low.[40] In so doing, he misuses data and makes basic computing errors. Nevertheless, out of an abundance of caution, we have also run sensitivity analyses (described below) to show that our conclusions hold even if the true Comcast shares are substantially higher than those reported in the Media Business Corporation ("Media Biz") data, on which we rely to compute MVPD market shares.

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37 *Singer Declaration*, ¶¶ 189-191.

38 *Singer Declaration*, ¶ 197.

As explained in the Appendix, there is no direct evidence on diversion from telco MVPDs, but the evidence from the Fisher dispute clearly demonstrates, first, that one cannot simply assume that diversion will be proportional and, second, that the diversion rate from other MVPDs to cable providers may be well less than proportional.

39 *Id.*, ¶ 189.

40 *Singer Declaration*, ¶ 190.

— Dr. Singer cites Television Bureau of Advertising ("TVB") data that report the percentage of households in a DMA to which Comcast Spotlight sells advertising.[41] In many DMAs, however, Comcast Spotlight sells advertising on behalf of multiple MVPDs including Time Warner Cable, Cox, DirecTV, DISH Network, and Verizon.[42] Dr. Singer ignores the obvious fact that Spotlight shares computed from this data source are higher than Comcast Cable's shares of MVPD subscribers.[43]

— Dr. Singer cites SNL Kagan data, which are based on data from Media Biz.[44] As described in the backup materials with our *Foreclosure Declaration,* Media Biz is the data source on which we relied to calculate market shares, so we agree with the use of this source to compute market share. However, in using this source, Dr. Singer mistakenly omitted the subscribers accounted for by the "other cable" group. As a result, his computed Comcast share was too large—it was computed as Comcast subscribers over a denominator that included only the subscribers accounted for by

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41 *Ibid.*

42 Danielle Seth, Senior Manager of Media Research at Comcast Spotlight, July 15, 2010, interview. *See also*, Comcast Press Release, "Comcast Spotlight to Represent Verizon FiOS TV for Local Advertising Sales in Select Markets," June 24, 2009, *available at* http://www.comcastspotlight.com/article/comcast-spotlight-represent-verizon-fios-tv-local-advertising-sales-select-markets, *site visited* July 15, 2010.

43 In 2009, Comcast Spotlight represented approximately 30 million subscribers nationwide, substantially higher than Comcast's less than 24 million video subscribers. (Comcast Press Release, "Comcast Spotlight to Represent Verizon FiOS TV for Local Advertising Sales in Select Markets," June 24, 2009, *available at* http://www.comcastspotlight.com/article/comcast-spotlight-represent-verizon-fios-tv-local-advertising-sales-select-markets, *site visited* July 15, 2010.)

44 *Singer Declaration*, ¶ 190.

the top-ten (nationwide) cable MVPDs, the telco providers, and the DBS providers, but not the other cable providers.[45]

— As to Dr. Singer's calculations using Warren's *Advanced TV Factbook*, we note that the Warren data only provide subscriber counts for cable operators, meaning that these data cannot be used to compute the required shares and diversion ratios for AT&T, DISH Network, DirecTV, and Verizon. Dr. Singer used the Warren data to compute Comcast shares by combining the Comcast subscriber count in the Warren data with the total number of households subscribing to wired cable (cable or telco) or alternative delivery systems (DBS) from the TVB data.[46] We note that he could not compute a share for Chicago because the Warren data were "incomplete."[47] We also note that his [[ ]] percent number for Comcast's share in San Francisco is impossible based on his own sources—the TVB data reported a total wired cable (cable plus telco) share of only [[ ]] percent in February 2010, and AT&T is present (with a share of roughly [[ ]] percent according to MediaBiz) as well as several cable operators with smaller shares.[48] For the other five DMAs in Dr. Singer's Table 6 with positive Comcast shares, the Warren data's Comcast share is

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45 We have been able to replicate Dr. Singer's calculations by repeating this error. (Calculations provided with our backup materials.) We note that Kagan has a web tool that reports subscribers just for the top ten cable providers, plus the telco and DBS providers, so Dr. Singer may have relied on this. However, the *share* (as opposed to subscriber) numbers reported by Kagan are correct and they match our calculations, which were based on a spreadsheet (submitted with the backup to our *Foreclosure Declaration*) that had an explicit column for "other cable."

46 *Singer Declaration*, Table 6.

47 *Ibid.*

48 Data are provided with our backup materials.

higher in three DMAs, while the MediaBiz data's Comcast share is higher in two DMAs, suggesting no systematic bias either way.[49]

— To demonstrate that our conclusions hold even if Comcast's shares are substantially higher than those reported by MediaBiz, we have re-run the results in Table III.1 for a scenario in which Comcast's share in each DMA is 20 percent higher than reported in MediaBiz. Our conclusion that foreclosure would be unprofitable is unaffected by this change.[50]

- Professor Singer also claims that a "reasonable proxy" for the departure rate that would be induced by loss of the NBC broadcast network is "the loss in DBS share in the Philadelphia DMA for failing to secure Comcast SportsNet Philadelphia."[51] He provides no basis for this assertion. The content on RSNs is different from the content on broadcast networks. Certainly different networks have different abilities to induce viewers to switch MVPDs, meaning that the departure rates following the loss of a particular RSN are in no way a good proxy for the departure rates from the loss of a broadcast network (or other cable networks). The analysis we presented in Parts A and B, above, relied on empirical estimates of the departure rate relevant for broadcast networks; given that we have that information, there is no reason to consider unreliable proxies based on RSNs or other networks.

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49 *Singer Declaration*, Table 6.

50 To implement this, we reduce the share of all non-Comcast MVPDs in the DMA in proportion to their market share in the MediaBiz data, so as to maintain their proportional size relative to one another. (Calculations are provided with our backup materials.) We have also confirmed that the conclusions from Table IV.1 and Table IV.2, below—demonstrating that average MVPD costs for NBCU programming will fall due to the transaction—are unaffected by this change.

51 *Singer Declaration*, ¶ 173.

- Finally, Dr. Singer argues that customers under long-term contracts potentially could depart their MVPDs before their contracts are up, in which case foreclosure might appear more profitable than if consumers were immobile.[52] As evidence for this, he points only to the fact that the early termination fee for Verizon FiOS customers is $179.[53] We note that our assumption of no departures until a subscriber's contract has expired is consistent with Commission staff's approach in News Corp./DirecTV,[54] and that $179 certainly seems high enough to act as a substantial deterrent to switching. Nevertheless, in our updated results reported in Section III.B, above, we assumed no subscriber was under a long-term contract and assumed switching was steady over the six-month foreclosure period; these changes in our assumptions do not change our conclusions.

D. The structure of the proposed joint venture and the risk of damage to NBC both make it unlikely that Comcast would be able profitably to induce NBCU to deny retransmission consent for NBC stations' signals in order to foreclose other MVPDs.

24. In our *Foreclosure Declaration,* we described two broad factors that make it unlikely that the proposed transaction would create a significant risk of foreclosure by withholding retransmission rights to NBC broadcast stations' signals.[55]

- First, such a foreclosure strategy would be very risky for the NBC network, regardless of its owner. This is particularly true given NBC's current market position as the fourth-

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52 Singer Declaration, ¶ 191.

53 *Ibid.*

54 *See* Memorandum Opinion and Order, *In the Matter of General Motors Corporation and Hughes Electronics Corporation, Transferors, and The News Corporation Limited, Transferee, For Authority to Transfer Control,* 19 FCC Rcd 473 (2004) (hereinafter, *News Corp.-Hughes Order*), Appendix D, ¶¶ 13 and 35.

55 *Foreclosure Declaration*, ¶¶ 16-18.

rated network in prime time.[56] As one NBC executive stated, "[i]t would make no business sense to risk significantly damaging the product by withholding NBC's retransmission rights."[57] A strategy of permanent foreclosure, or repeated episodes of temporary foreclosure, would risk "breaking the system" of ubiquitous distribution and relatively high viewership that distinguishes the NBC broadcast network from a highly rated cable network.[58]

- Second, as long as it has a significant stake in NBCU, GE has strong incentives to protect its ownership interest by seeing that the joint venture does not engage in costly foreclosure strategies, regardless of the benefits to Comcast Cable. In particular, it is our understanding that, under the terms of the agreement establishing the joint venture, the venture's directors and officers owe fiduciary duties to the joint venture and its members, including GE.[59] These duties would be violated if directors and officers made business decisions that intentionally sacrificed joint venture profits in order to increase Comcast's MVPD profits—as any foreclosure strategy necessarily would do. Given that GE would presumably have every incentive to enforce these fiduciary duty provisions, this substantially reduces the risk of vertical foreclosure.

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56 *See, e.g.*, "Prime-time TV Rankings; Familiar refrain: CBS wins; Surge from Grammy Awards helps the network win for the 16th time in 19 weeks," *Los Angeles Times*, February 3, 2010, *available at* http://articles.latimes.com/2010/feb/03/entertainment/la-et-tvratingstext3-2010feb03, *site visited* July 17, 2010.

57 Edward Swindler, Executive Vice President and Chief Operating Officer, Advertising Sales, NBC Universal, January 31, 2010, interview.

58 *Ibid.*

59 *See* Amended and Restated Limited Liability Company Agreement of Navy, LLC at § 6.01(a) (hereinafter, *Newco LLC Agreement*).

25. To our knowledge, no one has challenged the first point. Even if one viewed NBC as a particularly powerful NBCU asset, a strategy of foreclosure based on withholding access to NBC would risk seriously damaging the very asset in which Comcast is acquiring an interest. This factor thus makes it unlikely that Comcast would have incentives to undertake such a foreclosure strategy.

26. As to the fiduciary duty to GE, Professors Rogerson and Murphy have separately argued that, post-transaction, NBCU would treat the profits from its networks and the profit from Comcast's cable operations equivalently.[60] Professor Rogerson argues that, in order to achieve the efficiencies claimed for the transaction, NBCU must engage in "close coordination," which he claims also implies that NBCU will act to maximize combined NBCU and Comcast profits.[61] We see no basis for such a conclusion. The efficiencies that the transaction would bring about due to the reduction of double marginalization arise as long as Comcast internalizes its ownership interest in NBCU, which it is free to do under the joint venture agreement. This fact is unrelated to the fiduciary duties that the proposed joint venture's directors and officers will owe to the joint venture and GE. The proposed transaction would also be expected to generate efficiencies through reduced negotiation/transactions costs and improved coordination. Although these fiduciary duties would prevent NBCU from internalizing Comcast profits, post-transaction NBCU would know that Comcast was less likely to propose strategies that would harm NBCU when Comcast had an ownership interest in NBCU than when it did not. This fact should make it easier for Comcast to lead NBCU toward mutually beneficial, output-enhancing

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60 Using the notation from our *Foreclosure Declaration*, this is equivalent to assuming that s=1. (*Foreclosure Declaration*, ¶ 44.)

61 *Rogerson Report* at 19 and 20.

strategic initiatives, such as those described in the public interest statement and Professor Rosston's May 4, 2010 declaration.[62]

27. Professor Murphy asserts that, regardless of what the joint venture agreement says, "[i]f foreclosure is profitable and in the joint financial interest of NBCU and Comcast, then Comcast and GE have an incentive to reach an agreement whereby GE is better off than without foreclosure."[63] We begin by observing that such an agreement would have to be *separate* from the joint venture agreement, as the joint venture agreement is clear that NBCU *cannot* internalize the effects of its actions on Comcast's profits. Hence, if it were correct, Professor Murphy's logic would imply that the transaction cannot have anticompetitive effects because Comcast and GE could just as well agree today (with no transaction) to engage in foreclosure if it is in their "joint financial interest." Moreover, had Comcast and GE intended for NBCU to internalize Comcast profits, they could have structured the deal differently (*e.g.,* by having GE take more cash in return for selling 100 percent of NBCU to Comcast, giving GE an ownership interest in Comcast, or making it clear that such internalization was permissible under the agreement). The fact that two highly sophisticated firms structured the deal the way that they did suggests that the fiduciary duty terms of the contract should be taken seriously and at face value. Therefore, we

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62 *Applications for Consent to the Transfer of Control of Licenses, General Electric Company, Transferor, to Comcast Corporation, Transferee*, Applications and Public Interest Statement, Lead Application File Nos. BTCCDT-20100128AAG (MB), SES-ASG-20100201-00148 (IB), and 0004101576 (WTB), January 28, 2010 (hereinafter, *Public Interest Statement*), § IV; Gregory L. Rosston, Ph.D., An Economic Analysis of Competitive Benefits from the Comcast-NBCU Transaction, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, May 4, 2010 (hereinafter, *Initial Rosston Report*), §§ III, V.

63 *Murphy Report,* ¶ 76.

reaffirm our conclusion that, as long as GE has an ownership interest in NBCU, foreclosure by withholding NBCU networks from other MVPDs is highly unlikely.[64]

E. Comcast's strategies involving Comcast SportsNet Philadelphia do not imply that, post-transaction, Comcast would be able profitably to induce NBCU to withhold NBC from other MVPDs.

28. DISH Network argues that the fact that Comcast has never reached agreements with DirecTV or DISH Network regarding carriage of Comcast-owned SportsNet Philadelphia indicates that, post-transaction, Comcast would also seek to limit MVPDs' access to NBC.[65] No such inference can properly be drawn. For this response to our analysis to have any merit, we would have to be contending that under no circumstances could a decision to withhold a network ever be profitable—a claim that would be belied by the "Philadelphia Precedent."[66] We make no such contention. Instead, we show that, due to the specific parameters relevant to the profitability (or lack thereof) of an attempt by Comcast to induce NBCU to withhold NBC from other MVPDs, the rate of subscriber switching to Comcast that could be induced by such a strategy would be too low to offset the large losses to NBCU. Comcast's decisions with regard to Comcast SportsNet Philadelphia are irrelevant to this conclusion. For example, to the extent that the Commission Staff's analysis in the Adelphia Order is accurate, the lack of access to Comcast SportsNet Philadelphia has reduced DBS penetration by 40 percent, substantially higher than any estimate that has been presented in this proceeding for the departure rate induced by

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64 We also observe that, even if Professor Murphy's analysis were correct, it would not change our central conclusion that foreclosure is unlikely. In particular, in our baseline application of the Commission staff foreclosure model, we analyzed foreclosure incentives under the assumption that NBCU would treat the profits from its networks and the profit from Comcast's cable operations equivalently. (*Foreclosure Declaration*, ¶ 44.)

65 *DISH Supplemental Report* at 3-4.

66 *DISH Supplemental Report* at 3.

loss of a broadcast network.[67] Hence, although we have not studied the Commission's result nor any other aspects of a foreclosure model applied to Comcast SportsNet Philadelphia, it is clear that such analysis would be entirely distinct from and have no bearing on our foreclosure analysis with respect to NBC.[68]

29. It is also important to note that a decision not to license Comcast SportsNet Philadelphia to DBS providers does not necessarily represent anticompetitive foreclosure and certainly does not necessarily represent a harm from vertical integration. Indeed, another notable example of exclusive distribution by an MVPD of sports content is DirecTV's exclusive deal with NFL for "NFL Sunday Ticket," which provides the rights to out-of-market NFL games.[69] DirecTV and the NFL *are not* vertically integrated. Hence, to the extent one argues that exclusive distribution deals are anticompetitive (a claim that would have to be supported with theoretical or empirical evidence), they are not inherently harms from vertical integration. In fact, Comcast is on record as saying it that it is willing to make Comcast SportsNet Philadelphia available to all competitors "as soon as DirecTV relinquished its exclusive access to NFL Sunday Ticket,"[70] indicating that

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67 Memorandum Opinion and Order, *In the Matter of Applications for Consent to the Assignment and/or Transfer of Control of Licenses, Adelphia Communications Corporation to Time Warner Cable Inc.; Adelphia Communications Corporation to Comcast Corporation; Comcast Corporation to Time Warner, Inc.; Time Warner Inc. to Comcast Corporation*, MB Docket No. 05-192, FCC 06-105, rel. July 21, 2006 (hereinafter, *Adelphia Order*), ¶ 149. As discussed above, there is no reason to believe this provides a proxy for the departure rate due to the loss of a broadcast network, particularly given that direct estimates of the departure rate relevant to broadcast networks have been presented in this proceeding.

68 We also note that, because NBCU owns no RSNs, the proposed transaction leads to no new vertical integration of RSNs and MVPDs.

69 DirecTV, Press Release, "NFL and DIRECTV Extend NFL SUNDAY TICKET(TM) Agreement through 2014 Season," March 23, 2009, *available at* http://dtv.client.shareholder.com/releasedetail.cfm?ReleaseID=372330, *site visited* July 16, 2010.

70 John Eggerton, "Comcast Won't Challenge FCC's Closing of Terrestrial Exemption," *Broadcasting and Cable*, March 16, 2010, *available at* http://www.broadcastingcable.com/article/450368-Comcast_Won_t_Challenge_FCC_s_Closing_of_Terrestrial_Exemption.php, *site visited* July 17, 2010.

Comcast's strategy with Comcast SportsNet Philadelphia is to bargain with DirecTV in support of an outcome that would increase overall access to sports content.

F. Dr. Singer's claim that NBCU would move sports programming from NBC to Versus in order to foreclose other MVPDs is totally unfounded and contrary to marketplace realities.

30. Dr. Singer also advances the creative but entirely unsupported theory that, post-transaction, Comcast might induce NBCU to move some of NBC's national sports content to Comcast's Versus network and then to withhold Versus from other MVPDs. In particular, Dr. Singer hypothesizes that Comcast could move the "future marquee Versus programming online to escape the program access rules."[71]

31. {{

}} In particular, as illustrated in Table III.2, provided by NBCU, {{

}}[72] Given this restriction, {{

[71] *Singer Declaration*, ¶¶ 175-179.

[72] Table provided by Brett Goodman, Senior Vice President, Strategic Partnerships & Business Affairs, NBCU.

}}

Table III.2: NBCU Sports Rights

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Property	NBC Term	Broadcast Obligation?	Online Rights?	Cable Rights?

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32. The restrictions imposed by sports leagues (or other sports rights owners) illustrate a broader point: sports rights owners choose how to distribute their content in order to maximize the profits they derive from that content. If the incremental profits that a single MVPD could capture via exclusive rights to the content were large enough to offset any losses due to reduced distribution—the necessary condition for a foreclosure strategy using the sports content to be profitable—then, even if not vertically integrated, the rights owner would have an incentive to enter into an exclusive deal with a given MVPD (as is fully within its rights) for a price equal to most of the MVPD's incremental profits from the exclusive deal. Indeed, as noted above, the NFL has entered into such an arrangement with DirecTV for rights to out-of-market NFL games. Hence, the decision of whether or not to enter into an exclusive arrangement is unrelated to whether an MVPD is vertically integrated with one more networks.

IV. VERTICAL PRICING EFFECTS

33. In their respective reports, Professors Murphy and Rogerson argue that, even if the proposed transaction would not lead to vertical foreclosure, it would lead to higher equilibrium affiliate fees for NBCU networks.[73] Their arguments are based on the claim that, post-transaction, NBCU would internalize the benefits that would accrue to Comcast if NBCU failed to reach a carriage agreement with another MVPD (*i.e.*, gains arising when subscribers switched from that MVPD to Comcast). This internalization would increase NBCU's disagreement payoff (*i.e.,* the flow of profits it would earn in the absence of a carriage agreement) and thus, by the logic of a "Nash bargaining model," increase the price that MVPDs would have to pay for NBCU networks.

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[73] Dr. Singer makes a similar claim in passing. (*Singer Declaration*, ¶ 174.)

34. As an initial matter, we note that this vertical pricing theory rests critically on parameters from the vertical foreclosure model: most notably, under this theory, the transaction creates upward pricing pressure *only if* Comcast would gain subscribers when other MVPDs lost access to NBCU networks. That is, significant price effects require a significant rate of diversion from other MVPDs to Comcast. As discussed at length in the Appendix, no one has presented any evidence in this proceeding to establish that Comcast would gain significant numbers of subscribers in such a circumstance. Instead, available evidence on the retransmission dispute between DISH Network and Fisher Broadcasting indicates that, despite DISH's loss of subscribers during the dispute, Comcast experienced no detectable increase in the number of subscribers, indicating that the diversion rate to Comcast is close to zero.

35. Nevertheless, in what follows, we provide a thorough evaluation of available evidence on the possibility of vertical pricing effects. We proceed as follows. First, we provide some general background on the logic behind economic bargaining models and their use as tools to clarify certain aspects of negotiations between content owners and MVPDs. Next, we explain why, contrary to the claims of Professors Murphy and Rogerson, stylized bargaining models (although commonly used in academic settings) cannot generate reliable predictions about the pricing effects from the proposed transaction. We also explain why the specific implementation of the bargaining model used by Professors Rogerson and Murphy substantially overstates likely pricing effects from the proposed transaction, for reasons including its failure to account for transaction-specific efficiencies including the mitigation or elimination of double marginalization.

36. We then present two alternative analyses that improve upon Professor Murphy and Rogerson's approach:

- We present a version of the bargaining model that improves upon Professor Murphy's and Professor Rogerson's parameter estimates and incorporates transaction-specific efficiencies. This analysis demonstrates that, when implemented with more appropriate parameter values and an allowance for efficiencies, the bargaining model implies that the net effect of the transaction on average MVPD programming costs is almost surely *negative*;

- We present empirical results, which show no support for higher prices following previous instances of vertical integration between content owners and MVPDs. Given that the stylized bargaining model cannot incorporate many relevant complexities in negotiations between content owners and MVPDs, substantial weight should be placed on such empirical evidence.

37. To conclude the section, we turn to the model of broadband pricing presented by Professor Wilkie,[74] demonstrating basic errors in his theoretical and empirical analysis. Once these errors are corrected, Professor Wilkie's framework also points to lower MVPD prices as a result of the transaction.

A. Background on economic bargaining models.

38. The economic analysis of bargaining identifies factors that influence the outcome of negotiations. Consider a negotiation between an MVPD and a broadcast station owner regarding the former's retransmission of the latter's signal. The retransmission of the broadcaster's signal over the MVPD's system creates a valuable service to which both sides of the negotiation contribute and from which both potentially benefit (*i.e.*, there are gains from trade). The

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74 *Wilkie Report*, ¶¶ 38-41.

extended distribution of the broadcaster's programming resulting from the combination of the broadcaster's signal and the MVPD's system creates incremental profits due to additional advertising fees and subscriber fees.[75]

39. If a station owner has elected retransmission consent (rather than must-carry), then the broadcaster's signal will be combined with the MVPD's distribution system if and only if both parties voluntarily agree to that arrangement.[76] Under mainstream economic theories of bargaining, the nature of the agreement that is reached between two parties depends on how the parties would fare if they failed to reach an agreement. The reason for this is that, in determining how hard to bargain, each party takes into account the fact that strong demands might lead to a failure to reach agreement.[77]

40. More specifically, the nature of the agreement that is reached depends on the parties' "disagreement points." A party's disagreement point corresponds to the payoffs (*e.g.*, profits) that the party obtains while the parties are negotiating but have not yet reached an agreement.[78] Until a retransmission agreement is reached, neither the broadcaster nor MVPD receives the

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[75] The broadcaster can collect additional advertising revenues because its programming is viewed by a larger number of consumers. To the extent that inclusion of the network increases the attractiveness of the MVPD's channel lineup, it can collect additional subscription fees.

[76] If the broadcaster elects must-carry treatment, then the MVPD is forced to retransmit the broadcaster's signal whether it wants to or not. In this case, incremental profits may still be created, but each party keeps that part of the incremental profit that it receives directly from advertisers or subscribers. In other words, any incremental advertising profits earned by the broadcaster stay with the broadcaster, and any incremental subscriber or advertising profits earned by the MVPD stay with the MVPD.

[77] The consequences of disagreement matter even if the bargaining parties never actually walk away from each other because even the potential consequences of failing to reach an agreement will affect negotiating behavior. *See, e.g.*, Ken Binmore, Ariel Rubinstein, and Asher Wolinsky (1986), "The Nash Bargaining Solution in Economic Modelling," *The RAND Journal of Economics*, **17**(2): 176-188.

[78] "Disagreement points" are sometimes referred to as "threat points." This terminology can be misleading because the parties need not explicitly threaten anything. The "threat point" language is a holdover from Nash's cooperative theory of bargaining, which can be shown to correspond to the predictions of non-cooperative (or game-theoretic) models of bargaining. (*See* John Nash (1950), "The Bargaining Problem," *Econometrica*, **18**(2): 155-62; Ken Binmore, Ariel Rubinstein, and Asher Wolinsky (1986), "The Nash Bargaining Solution in Economic Modelling," *The RAND Journal of Economics*, **17**(2): 176-188.)

incremental advertising and subscription revenues that the combination of the broadcaster's signal and the MVPD's distribution system could generate.[79] The resulting profit levels constitute the two parties' disagreement points.

41. Clearly, it would be economically irrational for either party to accept an agreement that resulted in profits for that party that were lower than its disagreement point—that party would be better off without such an agreement. Thus, the negotiations will be over how the two parties divide the gains from working together. That is, under the negotiated agreement, each party will receive an amount equal to its disagreement profits plus some share of the gains from cooperation (or "gains from trade"). Under standard economic models of bargaining, of which there are many, those shares are driven by the relative bargaining abilities of the two parties, as well as their relative bargaining costs or costs of waiting.

B. Professor Murphy's and Professor Rogerson's price predictions are imprecise and substantially overstated.

42. Professors Murphy and Rogerson implement a very specific version of the bargaining framework described above (*i.e.*, the Nash bargaining model) to project the potential price effects from the transaction. This model predicts that, post-transaction, the per-subscriber price paid by MVPDs for NBCU programming will increase by one-half of the gain to Comcast if NBCU fails to reach an agreement with the MVPD. Following Professor Rogerson's notation, the gain to Comcast is equal to $d \times a \times \pi_m$, where d is the fraction of the other MVPD's subscribers who will leave if NBCU programming is withheld, α is the fraction of departing customers who will switch to Comcast, and π_m is Comcast's monthly profit per subscriber. Under their model, the

[79] There is a complication introduced by the fact that the parties reach repeated agreements over time. The disagreement point corresponds to the outcome when the previous agreement has expired and a later one has not yet been reached.

post-transaction increase in the per-subscriber price charged to non-Comcast MVPDs for NBCU programming (ΔP) is equal to:[80, 81]

$$\Delta P = \tfrac{1}{2} \times (d \times a \times \pi_m) \ . \qquad (4.1)$$

43. In this section, we describe three fundamental problems with using Equation 4.1 to derive predicted price effects from the transaction:

- First, although the bargaining framework commonly is used in academic settings to derive basic insights about various types of negotiations, it is far too stylized to capture several relevant features of negotiations between network owners and MVPDs. Using it to derive pricing predictions for the proposed transaction pushes it well beyond its breaking point.
- Second, even if one were to accept their basic bargaining framework, Professor Murphy's and Professor Rogerson's price predictions depend heavily on assumptions about parameter values for which there is little or no empirical basis. In some cases, the true parameter values (and thus pricing predictions) are simply far more uncertain than Professors Murphy and Rogerson acknowledge, while in other cases, Professor Murphy's and Professor Rogerson's assumptions overstate systematically the pricing effects from the transaction.
- Finally, Professors Murphy and Rogerson fail to account for the efficiencies from the transaction in their calculations. Their analyses are built entirely on programming

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80 *Rogerson Report* at 29, equation 3. *See also, Murphy Report,* equation 18. Note that Professor Murphy writes his calculations in terms of prices charged to subscribers, but when doing actual calculations, correctly applies the profit margin per subscriber rather than the price.

81 In this discussion, we remain agnostic about the particular NBCU content at issue. We return to this topic below.

cost increases that would arise if NBCU *internalizes* Comcast's profits, but they ignore the reductions in programming costs due to efficiencies that arise because Comcast will *internalize* its share of NBCU profits (including the elimination or mitigation of double marginalization).

1. Professor Murphy's and Professor Rogerson's pricing models are too stylized to yield accurate predictions about the outcome of negotiations between content owners and MVPDs.

44. Although the stylized bargaining model used by Professors Murphy and Rogerson provides useful insights in academic settings, it relies on strong assumptions that very likely are not satisfied in actual negotiations between content owners and MVPDs. The Nash bargaining model also fails to account for several important features of actual bargaining between MVPDs and network owners. For the reasons we will now explain, using the bargaining model to derive precise predictions about pricing effects from the proposed transaction pushes the model beyond what is can reasonably do.

45. First, the Nash bargaining solution is based on several axioms including symmetry and the independence of irrelevant alternatives.[82] Both of these axioms may fail to hold in actual negotiations. Because it is more intuitive, consider the symmetry axiom. Under the "Nash bargaining solution," because it is assumed that the solution is symmetric or that the parties have equal "bargaining ability," each party receives half the total gains from trade. However, in models that explicitly derive the bargaining solution as the equilibrium of an extensive-form game, the division of gains from trade can vary if parties have, for example, different degrees of

[82] *See,* for example, John Nash (1950), "The Bargaining Problem," *Econometrica,* **18**: 155-162.

risk aversion or different discount rates.[83] We know of no evidence that has been offered to demonstrate that NBCU and any particular MVPD are symmetric in this sense and have the same bargaining ability.

46. Second, the basic Nash bargaining model assumes the parties are simply negotiating over how to "divide a pie," with a solution represented by a single parameter for the percentage of total surplus (relative to profits if no deal is reached) captured by each party. This assumption fails to match MVPD-network bargaining in at least two important respects:

- One, it is our understanding that the bargains between MVPDs and network owners typically are over the affiliate fee per subscriber, per month, rather than a lump-sum payment. This distinction can matter because the level of the per-subscriber, per-month fee can (through its effects on MVPD subscription prices) be expected to affect the total level of surplus available to be divided between the two parties, a contradiction of the assumption of the Nash bargaining model.
- Two, even if the first problem were not significant, Professor Murphy's and Professor Rogerson's assumption that negotiations are solely over a single per-subscriber price for a single network or set of networks fails to recognize that MVPDs and networks negotiate over many dimensions, including: on which of the MVPD's tiers of service (basic, expanded basic, digital basic, *etc.*) the content owner's networks will air; commitments for a minimum number of the MVPD's subscribers to be reached by networks; "rights" agreements regarding, for example, whether content can be

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83 Ken Binmore, Ariel Rubinstein, and Asher Wolinsky (1986), "The Nash Bargaining Solution in Economic Modelling," *The RAND Journal of Economics*, **17**(2): 176-88 at 186.

included in online or video-on-demand packages, and dozens more.[84] Affiliate fees are just one of many components of the bargain that affect the division of surplus. Professor Murphy's and Professor Rogerson's models assume without foundation that any effects on bargaining from vertical integration would manifest themselves as changes in affiliate fees.

47. A third factor that undermines reliance on the Nash bargaining model as a source for precise predictions about price changes is that it is not intended to apply to settings in which there are multiple, interrelated negotiations, such as when a network owner negotiates with multiple MVPDs, an MVPD negotiates with multiple network owners, or the same network owner and MVPD negotiate with each other repeatedly over time. As one example of how such dynamic interaction changes the appropriate model, note that contracts often have most-favored nation provisions, under which the price a network owner agrees to with one MVPD may affect the prices it can charge to other MVPDs, which affects equilibrium prices in a way for which Professor Murphy's and Professor Rogerson's models do not account. In addition, when one negotiates repeatedly, performance in one negotiation may create reputation effects that affect future negotiations, another factor Professor Murphy's and Professor Rogerson's models do not capture.

48. Lastly, the Nash bargaining solution used by Professors Murphy and Rogerson is very difficult to justify in settings where the bargaining parties are not symmetrically informed about all of the relevant parameters. This is an important limitation because the parties in actual negotiations are unlikely to be symmetrically informed about such key parameters as one

[84] Interview with Matt Bond, Executive Vice President of Content Acquisition, Comcast Cable, July 19, 2010.

another's costs, revenues, and beliefs about the future. In academic research, the Nash bargaining approach may nonetheless be used as a means of generating broad, qualitative insights in situations where the degree of informational asymmetry is thought not to be too great. This is a very different exercise than attempting—as do Professors Murphy and Rogerson—to develop precise numerical predictions of price changes.[85]

2. Professors Murphy and Rogerson rely on parameter values with little or no empirical basis.

49. Even working within the stylized bargaining framework, any predictions (based on Equation 4.1) are only as good as the assumed parameters. Professors Murphy and Rogerson rely on parameters for which there is little or no empirical support, rendering their price predictions unreliable and, in all likelihood, overstated.

a) Assumption of equal split of gains from trade

50. At their cores, Professor Murphy's and Professor Rogerson's models simply cannot yield precise predictions for post-transaction price increases. Among other things, this lack of precision arises because, as noted above, the ½ term on the right hand side of Equation 4.1 is based on the *assumption* of an even split of surplus between NBCU and the negotiating MVPD. Although Professors Murphy and Rogerson note correctly that an even split of surplus is a common assumption, it is still just an assumption without empirical basis.[86] In actual bargaining situations, even assuming the rest of the model is correct, this term could be any number between

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85 We note in passing that, under any extensive-form game that justifies the Nash bargaining solution, there never are bargaining breakdowns as long as the gains from trade are positive. Hence, if the conditions of the extensive-form games justifying the Nash bargaining solution were satisfied, we would never observe retransmission disputes in which an MVPD temporarily suspended carriage of a broadcast station's signal. In practice, such bargaining breakdowns do occur, indicating that symmetric information or some other assumption underlying the Nash bargaining approach does not apply.

86 *Murphy Report*, ¶ 16; *Rogerson Report* at 21. Professor Rogerson notes that this assumption is often made "[i]n the absence of other information."

zero and one. In particular, define γ as the MVPD's bargaining power, meaning the percentage of total surplus captured by the MVPD. Then, it is straightforward to show that the implied price increase is given by a generalized version of Equation 4.1:

$$\Delta P = \gamma \times (d \times a \times \pi_m) \ . \qquad (4.2)$$

51. The implications of Equation 4.2 are clear. The Nash bargaining model could not rule out the possibility of negligible price increases even if $d \times a \times \pi_m$ were large. Intuitively, if the MVPD had little bargaining power, then NBCU would be capturing most or all of the gains from trade prior to the transaction and, thus, the transaction would have little or no effect. Professor Murphy notes that smaller MVPDs may have little bargaining power and thus "receive a smaller fraction of the surplus."[87] Under Professor Murphy's and Professor Rogerson's bargaining models, a direct implication of this limited bargaining power is that the transaction will have little or no price effect on these small MVPDs.

52. More generally, Equation 4.2 indicates that (holding all other parameters fixed) any specific price prediction that Professor Rogerson or Professor Murphy generates by assuming an equal split of surplus should be modified to say that the price change will be somewhere between zero and twice the reported figure. One might argue that, because a price prediction using γ = ½ is in the middle of this range, it serves as a natural summary of the range of possibilities. In the absence of other information such a claim might have merit. But given the uncertainty inherent in predictions drawn from the bargaining model, one should put substantially more weight on empirical evidence from previous vertical integration events. To that end, in Part D, below, we

87 *Murphy Report*, ¶ 16, n.12.

present empirical evidence that shows no support for the view that vertical integration between networks and MVPDs results in higher prices.

b) Effect of fiduciary duty on disagreement points

53. Professor Murphy's and Professor Rogerson's pricing predictions depend critically on the change in NBCU's disagreement profits resulting from NBCU's internalization of benefits that accrue to Comcast if NBCU and another MVPD fail to reach a deal. In assessing the change in NBCU's disagreement profits, however, Professors Murphy and Rogerson do not account for the fiduciary duty provisions of the joint venture agreement. As discussed above, these provisions prohibit NBCU from internalizing gains to Comcast. In the context of the bargaining model, this fiduciary duty creates an important *cost* to NBCU should no deal be reached, due to the risk that GE might sue the joint venture's directors and officers for breach of fiduciary duty. One can argue about the magnitude of this risk, but there might be a non-trivial probability that GE would see failure by NBCU to reach a timely agreement with a major MVPD as an attempt to benefit Comcast's cable operations at the expense of NBCU profits and that GE would sue to protect its interest in NBCU.[88] Assuming the directors and officers of NBCU understand the terms of its joint venture agreement and incorporate this risk into their decisions, NBCU's disagreement profits might be no higher, and could even be lower, post-transaction than they are today.[89] By including no term for the magnitude of this "disagreement cost" to NBCU, Professors Murphy

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88 For purposes of this analysis, it makes no difference whether a lawsuit would be targeted at the officers and directors of NBCU or at Comcast for attempting to induce NBCU to take actions that increase Comcast profits at the expense of NBCU profits. Either way, the party internalizing Comcast's gains would have to account for the costs and potential losses from such a suit.

89 Indeed, during negotiations with NBCU, an MVPD would have strong incentives to remind NBCU of this possible outcome should no deal be struck, in order to emphasize NBCU's gains from reaching a deal and thus (according to the bargaining model) potentially lower the equilibrium price for NBCU programming.

and Rogerson are implicitly taking the position that it is zero, and thus they may be overstating any price effects from the transaction.

54. Of course, if Comcast were to acquire 100 percent of NBCU at some future date, the fiduciary duty terms would no longer be relevant. However, if one were to rely on complete Comcast control of NBCU as a prerequisite for concern about higher MVPD prices, then any concern would be placed as many as seven years in the future.[90] Nevertheless, when we implement an improved version of the bargaining model in Section IV.C, below, we follow Professors Rogerson and Murphy's approach by modeling a situation in which Comcast has obtained 100 percent ownership of NBCU.

c) Parameters determining Comcast's gain

55. Both Professor Murphy and Professor Rogerson use assumed values for the parameters determining Comcast's gain from a breakdown in NBCU/MVPD negotiations (*i.e.*, d, α, and π_m) for which there is either limited empirical support or for which there exists empirical evidence that directly contradicts the assumed values.

56. First, both Professor Murphy and Professor Rogerson rely on the assumption that the diversion rate from other MVPDs to Comcast (α) is proportional to Comcast's market share, an assumption that is contradicted by the evidence, discussed in Section III and in the Appendix, that the true diversion rate is significantly less than proportional.

57. Second, Professor Rogerson simply assumes that the fraction of an MVPD's subscribers

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[90] The joint venture agreement specifies mechanisms by which Comcast can become sole owner of the joint venture within seven years of the date on which the transaction closes, and under some circumstances even sooner. *See, e.g.*, *Newco LLC Agreement*, § 9.02 (providing that GE has various redemption rights which, if fully exercised, would result in Comcast's owning 100 percent of the joint venture); *id.*, § 9.03 (providing that Comcast has certain purchase rights which, if fully exercised, would also result in Comcast's owning 100 percent of the joint venture).

that will depart following the loss of NBC (*d*) is equal to {{ }}, while providing no empirical basis for this value.[91] In contrast, Professor Murphy derives a value for *d* from the bargaining model itself.[92] However, as explained in the Appendix, his estimated departure rate depends *entirely* on the arbitrary assumption that content owners and MVPDs evenly split the gains from trade over which they are bargaining. Absent that assumption, Professor Murphy's model yields *no* information about the actual departure rate.

58. Seeking an empirical basis for *d*, we note that one might be tempted to rely on the empirical estimates from prior retransmission disputes or the rollout of local-into-local service to determine an appropriate value. For example, averaging the two estimates discussed in detail in the Appendix {{ }} and Professor Murphy's estimate of *d* based on a previous study of local-into-local service introductions by DBS providers ({{ }}) would yield an estimated departure rate of {{ }}. However, Part B of the Appendix explains in some detail why the {{ }} value, in particular, is a strict upper bound on the value of *d* implied by the local-into-local events, meaning that this approach would necessarily yield an overestimate of the departure rate implied by these events.

59. Professors Murphy and Rogerson both ignore the fact that their model itself indicates why previous departure rates, which are for events involving non-integrated networks, very likely overstate the departure rate that a vertically integrated Comcast could induce by withholding NBCU networks from rival MVPDs. In particular, under their model, the greater

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91 *Rogerson Report* at 31. When computing price effects on NBCU's cable networks, he also assumes that {{ }} of an MVPD's subscribers would depart following the loss of the full set of NBCU cable networks, again with no empirical basis for this assumption.

92 *Murphy Report*, ¶¶ 34-36.

the rate at which subscribers would depart an MVPD if it lost access to NBCU content, the more the MVPD will have to pay for NBCU content. Hence, by the logic of the model, an MVPD negotiating with a vertically integrated NBCU would have an incentive to reduce the extent to which it would lose subscribers, say by committing itself to reducing its subscription charges conditional on losing access to NBCU content.[93] More generally, MVPDs could take steps to protect themselves in negotiations with a vertically integrated NBCU by minimizing any gains that would accrue to Comcast if the negotiations were to break down.[94]

60. Finally, despite the fact that precise data and calculations were provided with the backup to our *Foreclosure Declaration*, Professors Murphy and Rogerson instead rely on rough approximations to π_m, Comcast's monthly profit margin per video subscriber. When correcting their calculations, below, we rely on the calculations reported in our *Foreclosure Declaration*, which account for changes in the profit margin over a subscriber's tenure with Comcast and incorporate the fact that some video subscribers also subscribe to broadband and phone services. We make this change to be accurate despite the fact that our price change predictions would be even smaller if we used Professor Murphy's or Professor Rogerson's figures for π_m, as the constant-monthly equivalent of our estimated Comcast profit margin is between {{ }} and {{ }} (depending on assumptions about the percentage of subscribers who purchase broadband or phone services), while Professor Murphy uses {{ }} and Professor Rogerson

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93 Note that, through steps such as sending a letter to its subscribers indicating that it will offer a specific price reduction should it lose access to NBCU programming, an MVPD can commit publicly to these actions, so that NBCU will correctly anticipate little gain to Comcast if negotiations break down.

94 Another example, mentioned in our *Foreclosure Declaration*, would be to provide subscribers with incentives to sign long-term contracts that would be in force at the time of the negotiations with NBCU, thus minimizing departures. (*Foreclosure Declaration*, ¶ 59.)

uses {{ }}.[95]

3. Professors Murphy and Rogerson fail to account for the proposed transaction's efficiencies.

61. A full analysis of possible pricing effects must account for the efficiencies associated with vertical integration, especially those arising from the elimination or mitigation of double marginalization. Professors Murphy and Rogerson fail to do so and, consequently, their predictions of price increases are flawed.

62. Double marginalization exists today because, although the marginal cost to NBCU when an MVPD distributes NBCU programming to an additional subscriber is typically near zero, NBCU charges Comcast (and other MVPDs) per-subscriber prices that are above zero for most of NBCU's content.[96] An economically rational MVPD that is not integrated with NBCU uses this above-zero price as the cost of NBCU programming when determining subscription prices. However, if Comcast acquires X percent of NBCU, then it will rationally view X percent of any fee paid to NBCU as an internal transfer rather than a true economic cost, meaning that its effective cost for NBCU programming will fall to $(1 - X)$ of the pre-transaction cost. Comcast currently pays NBCU approximately {{ }} per subscriber, per month for programming.[97] Hence, if Comcast acquires X percent of NBCU, Comcast's per-subscriber, per-month costs for

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[95] *Murphy Report*, ¶ 39; *Rogerson Report* at 30. (Details of our calculation of Comcast profits are provided with our backup materials.)

[96] In fact, the marginal cost to NBCU of an additional MVPD subscriber may well be negative due to any incremental advertising revenue that NBCU gains from the subscriber. We discuss this more fully in Section IV.E below, when discussing Professor Wilkie's broadband pricing model. Here, we simply note that using a marginal cost of zero for NBCU likely yields a conservative estimate of NBCU's current markup over cost and thus a conservative estimate of the double marginalization savings from the transaction.

[97] {{

}}

NBCU programming will fall to $(1-X)$ times {{ }}. In the case in which Comcast obtains 100 percent of NBCU (the situation modeled by Professors Murphy and Rogerson), Comcast's per-subscriber, per-month costs for NBCU programming falls by {{ }}.[98]

63. These double-marginalization savings will create economic incentives for Comcast to charge lower subscription fees than it otherwise would, and these savings must not be ignored when evaluating the transaction's effect on MVPD programming costs and, ultimately, consumer welfare. Indeed, such savings are particularly important given that double marginalization will be reduced as soon as the deal is closed (due to Comcast's 51 percent ownership share in NBCU), while any potential cost increase for other MVPDs {{

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C. A version of Professor Murphy's and Professor Rogerson's pricing models that uses more appropriate parameter values and properly incorporates efficiencies implies that the transaction will reduce average programming prices.

64. In this part, we demonstrate that, if one uses more appropriate parameter values and incorporates efficiencies into the analysis, then Professor Murphy's and Professor Rogerson's pricing models imply that the transaction will lead to lower average MVPD marginal costs for NBCU programming. These lower marginal costs would very likely benefit consumers.

[98] Note that the double marginalization savings are not based on any change in the price that NBCU will charge Comcast for programming due to the transaction. Rather, they arise because the portion of the payment to NBCU that Comcast owns, due to its ownership interest in NBCU, is not an economic cost.

1. Calculation of net programming price change to non-Comcast MVPDs using reasonable parameter values.

65. Our calculations start from Equation 4.1 (repeated here), Professor Murphy's and Professor Rogerson's basic equation for the change in the price of NBCU programming to MVPDs:[99]

$$\Delta P = \tfrac{1}{2}(d \times a \times \pi_m) \ , \qquad (4.1)$$

where ΔP is the predicted change in price, d is the fraction of a non-Comcast MVPD's subscribers who would leave it if NBCU programming were withheld, α is the fraction of departing customers who would switch to Comcast, and π_m is Comcast's monthly profit per subscriber.

66. In what follows, we implement Equation 4.1 using reasonable estimates of α and π_m, together with assumptions for d that are toward the high end of those that have been presented in this proceeding. This is a conservative approach in that higher values of d lead to larger predicted price increases. Using these parameter values, we compute the predicted change in the price of NBCU programming for each of the MVPDs with which Comcast has substantial overlap (*i.e.,* AT&T, DirecTV, DISH Network, and Verizon).[100, 101] We show that the predicted price increases are small enough that the net effect of these price changes and Comcast's double-marginalization savings is to lower average MVPD marginal costs for NBCU programming.

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99 As noted above, throughout this section we follow Professors Rogerson and Murphy by applying the calculations to a time when Comcast has obtained complete ownership of NBCU.

100 We do not include overbuilders. As noted by Professor Rogerson, their collective market share is approximately zero, so including them would yield almost no changes in the calculations shown below. (*Rogerson Report* at 39.)

101 As noted above, the contract with each of these MVPDs comes up for renewal at a different time, so we model the pricing negotiations with each MVPD separately, assuming contracts with all other MVPDs are in place at the time of the negotiation.

a) Computation of diversion ratio (α)

67. The empirical evidence, detailed in the Appendix, indicates that diversion to Comcast is quite low. However, as in Section III above, rather than use the near-zero diversion rate implied by the empirical results, we conservatively assume that diversion from a DBS provider to Comcast is equal to 1/3 of the value that would be implied by proportional diversion based on market shares. Lacking any empirical evidence on diversion from telco video providers to Comcast, we assume this diversion ratio is proportional to Comcast's market share.

68. Aside from these modifications, we compute diversion ratios (on a DMA-by-DMA basis) following the methodology in our *Foreclosure Declaration*.[102] As in that declaration, we compute a range of possible diversion ratios to account for uncertainty regarding the growth of telco MVPD service. For the low-end diversion ratios, we rely on fourth-quarter 2009 MVPD shares in each DMA. For the high-end diversion ratios, we assume that in each DMA that currently has a telco MVPD, the telco MVPD reaches the maximum share that any telco MVPD has achieved in a DMA to date, which is **[[ ]]** percent (with no modification for DMAs that do not currently have a telco MVPD).[103] In contrast, Professors Murphy and Rogerson both rely on an assumption of proportional diversion to Comcast based on current market shares, which ignores both the evidence for limited diversion to Comcast from the Fisher dispute (described in detail in the Appendix) and the projected growth in telco provider shares (illustrated in Figure 1 of our *Foreclosure Declaration*).[104]

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102 *Foreclosure Declaration,* ¶ 55.

103 The fourth quarter 2009 Media Biz data report several DMAs with a telco video presence of less than one household. For the purposes of this analysis, we assume that telco video providers are not present in these DMAs.

104 *Rogerson Report* at 35; *Murphy Report*, ¶ 51.

b) Computation of Comcast's monthly profit per subscriber (π_m)

69. Following the methodology in our *Foreclosure Declaration*, we compute π_m as monthly revenue per Comcast video subscriber minus average variable cost per video subscriber for each of **[[ ]]** Comcast "regions," as reported in Comcast's internal 2009 P&L statements.[105] As in our *Foreclosure Declaration*, we incorporate the fact that margins are higher for consumers who purchase not just Comcast's video services but also Comcast's broadband and/or phone services using low- and high-end assumptions described in ¶ 36 of our *Foreclosure Declaration* for the percentage of subscribers who purchase the additional services.

c) Assumptions on departure rate (d)

70. To evaluate d, it first is necessary to consider the effect of long-term subscriber contracts, as we did in our *Foreclosure Declaration*.[106] In particular, following the Commission staff's assumption (used to analyze the News Corp./DirecTV transaction) that subscribers will not break long-term contracts by terminating them prematurely,[107] subscribers under contract with other MVPDs can switch to Comcast only after their contracts end. To incorporate this effect, we define d, the actual departure in a given month as:

$$d = \delta \times c, \tag{4.3}$$

where δ is the fraction of subscribers who would like to switch (absent any contractual restriction) and c is the fraction who are free of a contract as of the month in question and thus can switch. Consider the values for c and δ, in turn.

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105 *Foreclosure Declaration*, ¶ 35.

106 *Foreclosure Declaration*, ¶ 56.

107 *News Corp.-Hughes Order*, Appendix D, ¶¶ 13 and 35.

71. As in our *Foreclosure Declaration*, for the first month after withholding, we assume c is equal to the fraction of subscribers not under contract plus 1/12 of those under contract.[108] After the first month, we increase c by a number equal to 1/12 of those under contract in each month until c equals one.[109] Following our *Foreclosure Declaration*, we include low- and high-end values for the fraction of subscribers under contract. {{

}} the percentage of subscribers under contract at each rival MVPD remains at its current (estimated) level: [[ ]] percent for DBS subscribers, [[ ]] percent for Verizon subscribers, and [[ ]] percent for AT&T subscribers.[110] On the high end, to allow for the possibility that rival MVPDs can increase their use of long-term subscriber contracts as a means to protect themselves in negotiations, we assume all rival MVPDs reach the Verizon rate of [[ ]] percent of subscribers being under long-term contracts.[111]

72. Now, consider the value of δ, the fraction of an MVPD's subscribers who will (ultimately) leave their MVPD due to its loss of NBCU programming. Despite substantial reasons (described in detail in the Appendix) to believe they are overstated, we conservatively rely on the average of {{

}} and Professor Murphy's estimate based on the local-into-local events ({{

}}), which yields an average of {{ }}. However, these figures apply only to loss of the NBC broadcasting signals. Lacking a better estimate, we assume that loss of NBCU's

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108 *Foreclosure Declaration*, ¶ 57.

109 Note that c grows over time, as the d term in equation 4.3 includes those who have already departed in previous months.

110 *Foreclosure Declaration*, ¶56.

111 We note that AT&T recently started offering contracts to some new U-Verse subscribers. (Comcast Corporation, "Active Offers: AT&T Mass Media," February 5, 2010.)

cable networks would have half the effect of loss of NBC, or {{ }}. Hence, we assume the departure rate due to the loss of all NBCU networks equals {{ }}. Note that Professor Murphy used a value of {{ }} for loss of NBC alone (he does not measure price effects of withholding any NBCU content other than NBC).[112] Professor Rogerson used {{ }} as the departure rate following the loss of NBC and {{ }} for the loss of all NBCU content.[113] Relative to these estimates, our approach is more likely to find harm.

d) Computation of national ΔP

73. It is our understanding that, as a general matter, {{

}}, we compute a single nationwide value of ΔP, based on the combined departure rate from loss of NBC and the NBCU cable networks, assumed to equal {{ }}.

74. Even though we compute a single nationwide value for ΔP, we build up that national figure from the underlying DMA-specific data. Specifically, for each major MVPD that overlaps with Comcast's footprint (*i.e.,* AT&T, DirecTV, DISH Network, and Verizon), we compute the value of $d \times a \times \pi_m$ on a DMA-by-DMA basis for each month following the potential loss of the NBCU networks. For each of these MVPDs, we then compute the net present value of the infinite series of these $d \times a \times \pi_m$ terms for each DMA and convert this net present value into a constant monthly equivalent (*i.e.,* the constant monthly value that would yield the same net

112 *Murphy Report*, ¶ 52.

113 *Rogerson Report* at 31.

present value).[114] We combine the disaggregated DMA figures into a single national figure by computing the weighted average of these DMA-by-DMA monthly equivalents, using the current number of subscribers in each DMA for the MVPD in question as weights. Denoting this single national figure as *ComGain*, we compute the model's implied change in the price charged to each MVPD for NBCU programming as:

$$\Delta P = \tfrac{1}{2} \times ComGain. \qquad (4.4)$$

2. *The net effect of the transaction is to lower average MVPD marginal costs for NBCU programming.*

75. Our final task is to incorporate the reduction in Comcast's per-subscriber, per-month costs for NBCU programming ({{ }}) to determine the overall effect on MVPDs' cost for NBCU programming. In theory, one could use these cost changes as inputs into a model of competition between MVPDs in order to compute the average change in subscription prices charged by MVPDs (or perhaps the overall change in output by MVPDs). However, such a computation would rest heavily on assumptions about the appropriate model of competition between MVPDs, the shape of the demand curve for MVPD services, and other factors. This would be a highly speculative exercise. Instead of making detailed predictions, we rely on the observation that, if the weighted average cost of programming across MVPDs (weighting by the relative size of each MVPD) decreases, then one generally would expect this change to be good for consumer welfare. Hence, we focus attention on the weighted average of the changes in programming cost for Comcast and the four other MVPDs in this model, using as weights each of these MVPD's share of subscribers to any of the five.

114 Computations are based on a ten percent annual discount rate.

76. Before computing the weighted average, we must address the timing of the programming cost changes affecting the different MVPDs. Comcast's cost reduction due to the elimination of double marginalization would take effect as soon as the transaction closed.[115] {{

}}[116]

77. Table IV.1 presents the range of results from this calculation, corresponding to our low- and high-end parameter values. The row corresponding to each MVPD shows the implied per-subscriber, per-month programming cost change for that MVPD, {{

}}. The bottom row gives the figure of primary interest: the subscriber-weighted average of the per-subscriber, per-month programming cost changes for the five affected MVPDs. The conclusion is clear: even though we assume an overly high departure rate of {{ }}, the net effect of the transaction is a reduction in the average MVPD cost for NBCU programming of at least {{ }} per subscriber, per month. To put this figure in perspective, note that it is more than {{ }} figure for Comcast's per-subscriber, per-month costs for NBCU's programming.[117]

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115 Recall that we are assuming that Comcast has 100-percent control of NBCU throughout all calculations.

116 The appropriate discount rate for this figure is the discount rate used by MVPD consumers. We assume a discount rate of five percent but note that our conclusions hold even if we use smaller discount rates, such as three percent.

117 Recall that the MVPD weights are defined as each MVPD's nationwide share of all subscribers to any of these five MVPDs.

Table IV.1: National Weighted Average MVPD Programming Cost Change

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78. Although a calculation based on a single, nationwide price most accurately reflects current negotiation practices, we also examine an alternative scenario (considered by Professors Murphy and Rogerson) {{

}}. To solve for the DMA-specific changes in retransmission consent fees, we continue to assume that loss of the NBC broadcast signal ultimately would result in a departure rate of {{ }}, and we base diversion rates (α) and Comcast profits (π_m) on DMA-specific share and profit data following the process described above. Each DMA is also affected by the *nationwide* change in the price of NBCU's national cable networks, which is computed following the national methodology described above, assuming that, for national cable networks, {{ }}. Each DMA also benefits from Comcast's elimination of double marginalization.

79. Table IV.2 presents subscriber-weighted average cost changes for NBCU programming for each of the seven DMAs that have an NBCU O&O broadcast station and a Comcast cable

system.[118] Again, the results are clear. Even using the high-end parameter values, the effect of eliminating double marginalization swamps any price increases in each DMA, leading to a reduction in the average per-subscriber, per-month cost of NBCU programming of between {{ }} across DMAs and scenarios.

{{

}}

D. Evidence from previous instances of vertical integration between MVPDs and cable networks.

80. The theoretical pricing models advanced by Professors Murphy and Rogerson cannot yield tight predictions about the likely price effects from the proposed transaction. An alternative approach is to study the pricing effects of previous instances of vertical integration between content owners and MVPDs. In this part, we examine historical events in which a programming network either became integrated with, or separated from, an MVPD, and we ask whether the transactions affected the affiliate fees charged by the networks involved in the

[118] The weights used to compute the weighted average are the MVPD shares specific to each DMA.

transactions.[119] Our analysis finds that these data provide no support for the hypothesis that vertical integration leads to higher equilibrium affiliate fees.

81. Table IV.3 provides a description of the events considered in our analysis. Because our primary interest lies in determining whether vertical integration leads to a discernible change in the incentive and the ability of an integrated firm to raise the prices of its networks, we focus solely on vertical events in which a change in ownership also implied a transfer of control rights.[120] As shown in Table IV.3, the list of events involving this type of change in control contains a variety of transactions, including both those that increased the degree of integration between networks and MVPDs and those that decreased the degree of integration.

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119 In his solely-authored declaration, Dr. Cooper offers his own study of vertical integration between broadcast networks and the programming they aired following the repeal of the Commission's Financial Syndication ("Fin-Syn") Rules. The bulk of his analysis establishes the uncontroversial point that after the Fin-Syn Rules were repealed, vertical integration between broadcast networks and program producers increased. The only question even potentially relevant to the analysis of the proposed Comcast-NBCU-GE transaction is whether such vertical integration is good or bad for economic welfare. On this point, Dr. Cooper's only "evidence" is a claim that the ratings for the top and 30th ranked television programs fell in the late 1990's after the repeal of the Fin-Syn Rules, a result that is not statistically significant in half of his specifications and which fails to control for any other factors (such as the growth of cable networks) that affected ratings in the 1990s and beyond. (*Cooper Declaration*, Exhibit III-20.) Clearly such evidence establishes nothing. In contrast, our study of the vertical integration of cable systems and networks reported below uses a set of cable networks with no change in their integration status as a control group for those that experienced a change in integration status. That analysis shows that there was no decline in ratings following vertical integration.

120 For instance, we disregard Comcast's acquisition of E! Entertainment Television and the Style Network in 2007 because Comcast already held a **[[ ]]** controlling stake in the two networks at the start of our sample period. We also do not consider the sale of Cox Communications' 25 percent stake in Discovery Communications, because the transaction involved a partial transfer of ownership but not a transfer of control rights.

Table IV.3: Vertical Integration Events

Integrated Network	Integrated MVPD	Integrated
Bravo	Cablevision	December 1980 - December 2002
QVC [a]	Comcast	February 1995 - September 2003
The Cartoon Network [a]	Time Warner Cable	October 1996 - March 2009
CNN/HLN [a]	Time Warner Cable	October 1996 - March 2009
CNN International [a]	Time Warner Cable	October 1996 - March 2009
TBS [a]	Time Warner Cable	October 1996 - March 2009
TCM [a]	Time Warner Cable	October 1996 - March 2009
TNT [a]	Time Warner Cable	October 1996 - March 2009
CNN en Espanol [a]	Time Warner Cable	March 1997 - March 2009
Boomerang [a]	Time Warner Cable	April 2000 - March 2009
Outdoor Life Network (became Versus) [a]	Comcast	October 2001 - Present
Fox Movie Channel [a]	DirecTV	January 2004 - February 2008
Fox News	DirecTV	January 2004 - February 2008
Fox Soccer Channel [a]	DirecTV	January 2004 - February 2008
Fox Sports en Espanol	DirecTV	January 2004 - February 2008
Fuel TV [a]	DirecTV	January 2004 - February 2008
National Geographic Channel	DirecTV	January 2004 - February 2008
Speed	DirecTV	January 2004 - February 2008
FX	DirecTV	January 2004 - February 2008
TruTV [a]	Time Warner Cable	May 2006 - March 2009
The Travel Channel	Cox Communications	May 2007 - December 2009
Fox Business Network [a]	DirecTV	October 2007 - February 2008
QVC [a]	DirecTV	February 2008 - Present
The Sundance Channel [a]	Cablevision	June 2008 - Present

Notes:

We analyze those events highlighted in gray

[a] Event not analyzed because of insufficient data

Sources:

"Bravo HD Launches in North Carolina and Bravo in Raleigh and Fayetteville," *Time Warner Cable In The News*, February 11, 2009; Agnes Poirier, "NBC Buys Bravo for $1.25 Billion," *ScreenDaily*, November 6, 2002; "2002 in Review; A Year of Trials, Tribulations and Mega-Mergers," *Multichannel News*, December 16, 2002; "Comcast, TCI Complete QVC Deal," *United Press International*, February 10, 1995; "Liberty Media Buys QVC from Comcast," *Redorbit News*, July 3, 2002; "Business News in Brief," *The Philadelphia Inquirer*, September 13, 2003; "Briefs," *Multichannel News*, June 25, 2001; "Form 10-K," *Comcast Corporation*, March 29, 2002; Nic Hopkins, "News Corp Buys Control of DirecTV," *The Times*, April 10, 2003; "Form 10-K," *News Corporation*, September 1, 2005; Edward Wasserman, "Deal Makes Murdoch the Mightiest Media Mogul," *The Miami Herald*, December 29, 2003; "Form 10-K," *News Corporation*, August 12, 2009; "Radiovisa and Fox Sports en Espanol Team Up to Offer New, Relevant Sports Programming to Spanish-Speaking Fans," *Business Wire*, October 7, 2004; "Network Profile: Fox Sports en Espanol," *Nielson Media Research*, 2010; Alex Weprin, "Discovery Completes Sale of Travel Channel to Cox," *Broadcasting & Cable*, May 14, 2007; Mike Farrell, "Scripps Closes Travel Channel Deal," *Multichannel News*, December 15, 2009; "Liberty Media to Acquire Largest Stake in DirecTV," *Liberty Media Press Release*, December 22, 2007; "Cablevision Buys Sundance Channel for $500M," *The Associated Press*, May 7, 2008; Brian Stelter and Mike Hale, "Cablevision Buys Sundance," *The New York Times*, June 18, 2008; Andrew Ross Sorkin, "Time Warner Cable Spinoff to Finish Next Month," *The New York Times: DealBook*, February 27, 2009; Mike Farrell, "Agencies Approve Time Warner Cable Split," *Multichannel News*, February 16, 2009; "FTC Requires Restructuring of Time Warner/Turner Deal: Settlement Resolves Charges that Deal Would Reduce Cable Industry Competition," *Time Warner Inc Press Release*, September 1996; David Bloom, "Digital L.A.; Boomerang a Throwback to Vintage Cartoons," *The Daily News of Los Angeles*, April 1, 2000; Shelley Emling, "CNN, CBS in Bitter Brawl for Latin American Market," *Palm Beach Post (Florida)*, May 31, 1997; "Time Warner Acquires Liberty Media's 50% Stake in Court TV for $735 Million," *Time Warner Inc Press Release*, May 12, 2006; Steve Donohue, "Court TV to Become truTV," *Multichannel News*, July 11, 2007.

82. To determine the effect of these vertical integration events on network pricing, we

examined annual data on affiliate fees paid by MVPDs for programming between 2000 and 2009. In looking at price changes, it is important to keep in mind that quality-adjusted prices are what matter for consumer welfare. For example, if there was a tendency for integrated network owners to make greater investments in network quality, one might see nominal prices rise even as consumers were benefiting from the availability of more attractive offerings. Hence, we also examine the effect of vertical integration on the "quantity" produced by networks, measured via Nielsen ratings. If one were to see that both prices and ratings increase post-integration, this pattern would be more consistent with an increase in demand, perhaps due to quality enhancements facilitated by the integration, than with an anticompetitive price increase.

83. We were able to conduct statistical analysis of four of the events covered by Table IV.3: Cablevision's 2002 sale of its 85-percent share in Bravo; News Corporation's 2004 acquisition of a controlling interest in DirecTV; News Corporation's 2008 divestiture of a controlling interest in DirecTV; and Cox's complete acquisition of the Travel Channel in 2007. Our affiliate fee data are annual, so we cannot include the March, 2009 Time Warner Inc. spin-off of Time Warner Cable because we do not have a full, post-event year.[121] We exclude events involving the Outdoor Life Network, QVC, and the Sundance Channel due to the lack of Nielsen ratings data.[122]

84. Table IV.4 presents descriptive statistics for the average number of subscribers, affiliate fees, and ratings for the three sets of networks affected by these events during and outside of

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121 *See* Mike Farrell, "Time Warner Split 'Legal,'" *Multichannel News*, March 12, 2009, *available at* http://www.multichannel.com/article/189874-Time_Warner_Split_Legal_.php, *site visited* July 16, 2010.

122 We have also run versions of the fee regressions in Table IV.5, below, including the networks for which we do not have ratings data (using all networks in Kagan as controls) with no change in our conclusions.

their respective periods of integration.[123] These statistics do not reveal any consistent relationship between integration status and these three variables. For example, while four of the networks have higher fees in the integrated than non-integrated period, the other three networks have lower fees during the integrated period.

[[

Table IV.4: Descriptive Statistics for Integration Events

]]

85. Because the true effect of integration on price and quantity may be difficult to disentangle from other factors that also affect price and quantity and vary (for unrelated reasons) between the periods of integration and dis-integration, we implement a more rigorous methodology to determine the true effect of integration. This "difference-in-difference regression" methodology involves a comparison of the changes in price and ratings following integration (or dis-integration) for the networks that were affected, relative to the changes, over the same time-period, for networks that were not affected by integration.[124] In this way, the networks that were not affected by integration serve as a control for other factors affecting network pricing. We also

123 For each event, we only include the networks on which we have ratings data pre- and post-integration. In particular, for the News Corp events, we include only Fox News, Fox Sports En Espanol, FX Network, National Geographic Chanel, and Speed.

124 As usual, in a difference-in-differences regression, we include network and time fixed effects. In this way, the effect of integration is measured as the difference in the change in the dependent variable from the pre-integration to integration period (or from the integration to post-integration period) between affected and unaffected networks.

allow differences in pricing trends over networks' life-cycles.[125]

86. Table IV.5 presents the results of the regression for affiliate fees, which provide no support for the hypothesis that vertical integration increases affiliate fees. Columns (1) and (2) present results with the level of fees as the dependent variable, with Column (1) measuring a single average effect across networks, and Column (2) allowing for a different effect of integration for each network.[126] Column (1) shows that, on average, the integration between cable networks and MVPDs did not have a significant effect on the affiliate fees for those networks. Column (2) shows that none of the individual networks exhibited significantly higher fees while integrated with MVPDs, with the only statistically significant integration effect being the reduction in fees for Fox News Channel.[127]

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125 This is implemented by including as a control variable a flexible spline in the age of the network, with knot points at ages 1, 2, 3, and 10. Because we do not know the date of entry prior to 1989 (meaning that, as of the start of our study period in 2000, we do not know the age of networks over 11 years old) we specify the effects for ages 11 and up as a single dummy variable.

126 Put differently, column (1) constrains the coefficient on the integration dummy to be the same across events in order to summarize the results in a single, average effect.

127 We have also run these regressions specifying the dependent variable as the annual percentage change in fees with no change in our conclusions. (Results are included with our backup materials.)

Table IV.5: Vertical Integration Event Regression Results

	(1) Fees Levels - Average Effect	(2) Fees Levels - Network-Specific	(3) Ratings Levels - Average Effect	(4) Ratings Levels - Network-Specific
Integrated	-0.0035		-0.0095	
	(0.021)		(0.014)	
Integrated (FOX NEWS)		-0.0295**		-0.0143
		(0.007)		(0.014)
Integrated (FOX SPORTS EN ESPANOL)		0.0305		-0.0348**
		(0.021)		(0.011)
Integrated (FX NETWORK)		0.0134		0.0151
		(0.009)		(0.015)
Integrated (NATIONAL GEOGRAPHIC CHANNEL)		-0.0109		0.0372**
		(0.007)		(0.011)
Integrated (SPEED)		0.0144		-0.0129
		(0.007)		(0.011)
Integrated (TRAVEL CHANNEL)		-0.0993		-0.0023
		(0.068)		(0.024)
Integrated (BRAVO)		0.0778		-0.0757*
		(0.065)		(0.030)
Constant	0.1976**	0.2033**	0.6458**	0.6449**
	(0.066)	(0.070)	(0.045)	(0.047)
Observations	603	603	603	603
R-squared	0.886	0.886	0.949	0.949

Robust standard errors in parentheses

** p<0.01, * p<0.05

87. Columns (3) and (4) of Table IV.5 are defined analogously to Columns (1) and (2), except that they use ratings rather than fees as the dependent variable. Column (4) shows a wide range of different integration effects on the ratings of different networks. Column (3) combines these into a single, bottom-line average effect, demonstrating that, on average, vertical integration had no significantly positive or negative effect on ratings.[128]

[128] Again, we have also run these regressions specifying the dependent variable as the annual percentage change in fees with no change in our conclusions. (Results are included with our backup materials.)

E. When applied correctly, Professor Wilkie's model of standalone broadband pricing demonstrates that the proposed transaction could lead to lower broadband Internet access prices.

88. We conclude our discussion of vertical pricing effects by considering Professor Wilkie's claim that the proposed transaction would create incentives for Comcast to raise its prices for standalone broadband Internet access service.[129] As we will demonstrate, Professor Wilkie's claim is based on an incomplete and misleading analysis, and a proper analysis shows that the proposed transaction could create incentives for Comcast to *lower* its prices for standalone broadband Internet access service.

89. Professor Wilkie makes the following argument for why Comcast's proposed ownership interest in NBCU programming would create incentives for Comcast to increase the retail prices of its broadband Internet access services sold on a standalone basis.[130] He considers a stylized world in which Comcast offers two services, broadband and cable, either separately or in a bundle. Professor Wilkie correctly observes that, as result of the internalization that would result from Comcast's ownership interest in NBCU, Comcast would find it more profitable to sell cable subscriptions. The effect is equivalent to a fall in Comcast's marginal cost of selling standalone cable services and the broadband/cable bundle, and it would create incentives for Comcast to increase its cable sales.[131] Professor Wilkie ignores the fact that this internalization would benefit consumers by creating incentives for Comcast to promote cable by lowering the prices charged for cable service on a standalone basis or as part of a bundled offering. Instead, he

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129 *Wilkie Report*, ¶¶ 38-41.

130 *Wilkie Report*, ¶¶ 38-41.

131 Professor Wilkie focuses on the fact that Comcast would have a claim to the incremental advertising profits earned by NBCU networks as Comcast sold more cable subscriptions and, thus, increased network viewership. (*Wilkie Report*, ¶ 39). Observe that similar effects also arise from the elimination of double marginalization discussed in Sections IV.B and IV.C, above.

incorrectly argues that Comcast would also have incentives to raise the price of standalone broadband service in order to drive consumers to its bundled offering.

90. Professor Wilkie's analysis is incorrect because it is incomplete. He fails to consider the effects of integration on the full set of prices that Comcast would find it optimal to charge. The following hypothetical example illustrates that Professor Wilkie's claim that a fall in the marginal cost of cable (due to Comcast's internalization of the benefits to NBCU of more video subscriptions) would have to lead to a rise in the price of broadband is false as a matter of economic logic. The table below provides a specific set of values for Professor Wilkie's $F(x, y)$ function, where x is a consumer's valuation of broadband and y is his or her valuation of cable.

Table IV.6: Hypothetical Example of Consumer Valuations

Number of Consumers	Value of Broadband, x	Value of Cable, y
5	6	8
50	8	6
10	6	6
200	0	10

For simplicity, assume (as does Professor Wilkie) that the marginal cost of X (broadband Internet access service) is zero before and after the proposed transaction. Suppose that, absent integration, Comcast faces a marginal cost of cable equal to 7, but that this cost would fall to 0 as a result of the of the proposed transaction.

91. Straightforward numerical calculations show that, in the absence of the transaction, the profit-maximizing prices are $p_X = 8$, $p_Y = 10$, and $p_B > 14$, and that, once the transaction is completed, the profit-maximizing prices are $p_X = 6$, $p_Y = 10$, and $p_B = 12$. In other words, as a result of the efficiencies associated with the provision of cable service the prices of both standalone broadband service and the combined broadband/cable package fall. This result directly contradicts Professor Wilkie's claim. Of course, we are not asserting that the numbers used in this simplified example are realistic. However, they are sufficient to illustrate the fact that Professor Wilkie's analysis is fatally flawed.

92. This is not the only problem with Professor Wilkie's argument regarding broadband prices. It also fails to account for the fact that the proposed transaction may increase the value that Comcast derives from the sale of broadband Internet access because the sale of broadband access to additional consumers would increase the value of both NBCU's online content and (due to the complementarities between online content and traditional television viewing discussed in Section VII) NBCU's traditional, linear television offerings. The internalization by Comcast of these benefits to NBCU provides an additional reason why the proposed transaction may lead to lower broadband Internet access prices, not higher.

93. There are also several errors inherent in Professor Wilkie's empirical analysis of the effects of vertical integration on broadband pricing. Professor Wilkie asserts that Time Warner Cable is more integrated that Comcast yet charges substantially lower broadband prices (in Los Angeles) than does Comcast (in San Jose). He then asserts that this relationship would be

"surprising" but for the certain conditions imposed on Time Warner Cable.[132] Each step in the chain of his argument is false or misleading:

- Time Warner Cable does *not* have a "higher degree of vertical integration" than Comcast. As of March 2009, Time Warner split from Time Warner Cable, eliminating virtually all of Time Warner Cable's interest in content assets.[133] Hence, of the two, Comcast is actually the more vertically integrated MVPD.

- Professor Wilkie's finding that monthly Comcast's prices are $12.96 to $13.96 higher than Time Warner Cable's price is based on comparing: (i) an introductory price offer from Time Warner Cable with a regular price offer from Comcast; and (ii) offerings that include different levels of equipment.[134] As shown in Table IV.7 below, a true, apples-to-apples comparison reveals that the prices are very similar, and that in some instances Comcast's prices are lower than Time Warner prices for comparable services.

Table IV.7: Time Warner and Comcast Standalone Broadband Prices

	Time Warner Cable (Los Angeles)			Comcast (San Jose)		
Speed	Regular Price	Regular Price incl. modem	Regular Price incl. modem and router	Regular Price	Regular Price incl. modem	Regular Price incl. modem and router
up to 1.5Mbps	$38.99	$38.99	$43.94	$38.95	$43.95	$43.95
up to 15 Mbps	$58.99	$58.99	$63.94	$57.95	$62.95	$62.95

Sources: www.timewarnerla.com/pricingguides/
www.comcast.com

132 *Wilkie Report*, ¶¶ 52-53.

133 *See* Mike Farrell, "Time Warner Split 'Legal,'" *Multichannel News*, March 12, 2009, *available at* http://www.multichannel.com/article/189874-Time_Warner_Split_Legal_.php, *site visited* July 16, 2010.

134 *Wilkie Report*, Table 3 and ¶ 51, n. 36.

- Lastly, as just discussed above, economic theory does not imply that vertical integration between an MVPD and a network owner will lead to higher standalone broadband prices.

In short, Dr. Wilkie's anecdotal evidence on broadband pricing by Time Warner Cable and Comcast is entirely incorrect and supports none of the conclusions he attempts to draw from it. If anything, this anecdotal evidence indicates that the more vertically integrated MVPD, Comcast, *does not* have higher standalone broadband pricing, further invalidating Professor Wilkie's attempt to show that vertical integration between an MVPD and a network owner will generate higher standalone broadband prices.

V. HORIZONTAL PRICING EFFECTS

94. Professor Rogerson offers a horizontal theory of pricing effects from the proposed transaction in addition to his vertical theory. He uses this horizontal theory to argue that the combination of Comcast's networks with NBCU's current networks could enable the post-transaction NBCU to obtain higher license prices from MVPDs.[135] He focuses particular attention on the price effects of combining Comcast's RSNs with NBCU's networks.[136]

95. As a threshold matter, horizontal antitrust concerns apply only to proposed transactions that combine products or services that are close substitutes for one another and thus constrain one another's prices. This fundamental, necessary condition, which lies at the heart of the approach set out in the *Horizontal Merger Guidelines,*[137] simply is not met in this transaction.

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135 *Rogerson Report* at 9-18.

136 Dr. Cooper and Mr. Lynn also identify three "categories" of programming in which they allege that Comcast and NBCU will jointly have a substantial market share: sports, news, and women's programming. (*Cooper and Lynn Declaration* at 36-45.)

137 U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, 57 Fed. Reg. 41552 §§ 2.1, 2.2 (Sept. 10, 1992), *revised*, 4 Trade Reg. Rep. (CCH) ¶ 13104 (Apr. 8, 1997), § 2.2 (hereinafter, *Horizontal Merger Guidelines*).

As we demonstrate below, there are many non-Comcast networks that are closer substitutes for each of the NBCU networks than are any of Comcast's networks, and there are many non-NBCU networks that are closer substitutes for each of Comcast's networks than are any of NBCU's networks. Comcast's RSNs, in particular, are not close substitutes for either the signals of the NBC network's broadcast stations or any of NBCU's cable networks.

96. The remainder of this section proceeds as follows. In Part A, we provide an overview of the theory of horizontal harm advanced by Professor Rogerson and explain why his theory of harm requires that Comcast's and NBCU's networks be close substitutes for one another, a supposition for which he offers no support. Then, in Part B, we examine several types of evidence, all of which indicates that Comcast's RSNs (and national cable networks) and NBCU's networks are not particularly close substitutes for one another. In addition, we show that these networks face competition from many other, similarly situated networks owned by other firms. Finally, in Part C, we analyze a series of events in which cable networks (both RSNs and national cable networks) became integrated with (or separated from) a broadcast network. This allows us to study the specific hypothesis that, by combining cable networks with a broadcast network, content owners are able to demand higher prices (and perhaps to restrict output) for the cable networks. We find no evidence in support of such a hypothesis.

A. Significant horizontal price effects arise only if Comcast's and NBCU's networks are close substitutes, and Professor Rogerson has presented no evidence that they are.

97. To support his claim that the combination of Comcast and NBCU programming assets will raise affiliate fees and harm consumers, Professor Rogerson introduces a model of bargaining that suggests a mechanism by which the combination of multiple networks under the control of a single owner can lead to an increase in the affiliate fees charged to MVPDs. The

model builds on the fundamental assumption that the marginal value to an MVPD of carrying an additional network (from the set that is being combined by the transaction) is decreasing. In other words, the model assumes that the value to an MVPD of carrying network *A* is reduced if the MVPD also carries network *B*. The model also assumes that each network will capture a (fixed) fraction of its *marginal* value to an MVPD.[138] Under these assumptions, it is straightforward to show that the sum of the equilibrium affiliate fees paid by an MVPD for two networks will be lower if two different network owners bargain separately with the MVPD than if a single network owner negotiates with the MVPD on behalf of both networks.[139]

98. Although couched in the language of the bargaining literature, Professor Rogerson's model conforms to the same fundamental principle as do all horizontal antitrust theories: namely, horizontal pricing concerns arise only if the proposed transaction consolidates close substitutes and/or leads to a significant increase in market concentration. The mere fact that network license fees are set through bilateral bargaining does not invalidate this fundamental principle. Professor

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138 We note that, with multiple bargains occurring simultaneously, assuming that each network captures a fixed fraction of its marginal value regardless of the ownership structure implicitly makes strong assumptions about the bargaining process. For example, when the networks have different owners, each owner has to form beliefs about how the negotiation with the other network is proceeding. Depending on how these beliefs are formed, this property may not hold, and Professor Rogerson's assumption will fail. (*See also,* n. 139, below.)

139 Professor Rogerson provides the following example to illustrate his model. (*Rogerson Report* at 11-13.) Suppose the value to an MVPD of carrying the first network is $1.00 and the value of carrying a second network (given carriage of the first network) is $0.50. In the case where the two networks are separately owned and bargaining is separate, each network bargains over a surplus of $0.50 or a combined surplus of $1.00. In the case where the networks are jointly owned, the network owner bargains over a surplus of $1.50. If we assume that the MVPD and network owners split the surplus evenly, then combined affiliate fees would be $0.50 in the first case and $0.75 in the second case.

To see that Professor Rogerson's model relies on unstated assumptions about the underlying bargaining process, consider the following variant of his example. Suppose that when the two networks have different owners and either of them is offered any price lower than $0.50, that network owner assumes that the MVPD is pursuing a "tough" strategy and is not going to sign an agreement with the other network. In this case, each network might hold out for $0.50, with the result that the combined affiliate fees absent integration would be $1.00, while the combined fees would be only $0.75 when the two networks have a common owner.

Rogerson's theoretical prediction of higher prices relies on the assumption that the value to an MVPD of carrying network *B* is lower if it carries network *A*, which is equivalent to an assumption that the networks in question are economic substitutes for one other. If the value of carriage of each network is, instead, *independent* of carriage of the other—a possibility that seems quite likely for the case of RSNs and broadcast networks, for example—then Professor Rogerson's approach would predict that there would be no price effects. And, if carrying network *A increases* the value of carrying network *B*—as could happen, for example, if carrying one sports network increases the chance of capturing at least some sports fans and thus increases the value from carrying additional sports networks—then the model's increasing price prediction would be reversed.

99. Professor Rogerson provides no indication of why one should expect Comcast RSNs and NBCU networks to be substitutes for one another (in terms of value to MVPDs).[140] Indeed, given that MVPDs attempt to put together portfolios containing a wide range of networks to offer to subscribers—including groups of similar networks for those interested in sports, movies, music, cartoons, *etc.*—it seems likely that different networks are largely complementary in terms of their values to MVPDs. In a recent *ex parte* communication to Commission staff, Professor Greg Crawford highlighted these potential complementarities, noting that "[w]hile channels are surely substitutes in use, they are likely complements at the time of bundle purchase."[141]

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140 The only "evidence" of any kind provided by Professor Rogerson pertains to the degree to which the four major broadcast television networks are substitutes for one another. (*Rogerson Report* at 14-17.) The present transaction does not combine the assets of two or more of the major broadcast networks' assets.

141 Gregory S. Crawford, The Empirical Measurement of Foreclosure Incentives in U.S. Pay Television Markets, November 20, 2009, attachment to Letter from Gregory S. Crawford to Marlene H. Dortch, *Ex Parte* Communication, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, April 28, 2010 (hereinafter, *Crawford Presentation*) at 66.

100. A necessary (but not sufficient) condition for networks to be substitutes in terms of value to MVPDs is that television viewers see the networks as substitutes. If subscribers who cannot access one network tend to switch toward a particular alternative network (or set of networks), then an MVPD might find that it suffices to carry only a subset of those networks, with a declining value from carrying more networks from among the set of substitutable networks.[142] In contrast, if subscribers do not see the networks as substitutes then it is difficult to see why they would be substitutes in terms of their value to MVPDs.

101. Notably, in his report, Professor Rogerson presents no evidence to suggest that any given Comcast and NBCU networks are particularly close substitutes for one another in the eyes of television viewers. In contrast, below, we present substantial evidence indicating that Comcast and NBCU networks are not particularly close substitutes for one another.

102. Professor Rogerson attempts to avoid the question of whether any particular networks at issue are close substitutes by arguing that the declining marginal value of additional networks arises because customers "are willing to pay for increases in variety at a diminishing rate."[143] However, if each additional network simply adds "variety" to the MVPD's lineup, then *all* networks are substitutes for one another. As demonstrated by the concentration statistics presented below, NBCU's and Comcast's combined networks make up only a small percentage of available networks, and there is no basis for expecting that the proposed transaction would have significant price effects of the sort predicted by Professor Rogerson. If one were to

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142 This is not a sufficient condition for the marginal value (to the MVPD) of carriage to be declining with additional networks, as MVPD subscribers may value having a set of similar networks from which to choose, meaning that the value from carrying a given network could be stable or increasing as more networks from the set of substitute (to subscribers) networks are carried. We discuss this point more in Section VI.C, below, when discussing the flaws in Professor Marx's market definition methodology.

143 *Rogerson Report* at 12.

evaluate transactions on the basis of Professor Rogerson's implicit standard, then essentially *any* transaction combining networks would be found to be anticompetitive, a standard that is inconsistent with previous decisions.[144] Instead, for a theory of competitive harm based on horizontal price effects to have merit, it must be the case that particular Comcast and NBCU networks are close substitutes for one another in the eyes of many viewers, a condition that Professor Rogerson has not established. In the remainder of this Section, we demonstrate that the Comcast and NBCU networks are not, in fact, particularly close substitutes for one another.

103. Before doing so, it is important to note one other element missing from Professor Rogerson's analysis: he does not account for the downward pricing effects due to the realization of efficiencies that would be enabled by the proposed transaction. For example Dr. Rosston concluded that "[t]he transaction will lead to synergies from the sharing of resources in sports, local news, and entertainment programming," which "would enable the combined company to reduce costs, expand output, and improve the quality of programming and promotion."[145]

B. Evidence on the substitutability of Comcast's and NBCU's networks and the competitive constraints imposed by other networks.

104. Although Professor Rogerson does not address it in his report, there exists an array of evidence that, taken as whole, demonstrates clearly that Comcast's RSNs and the NBC broadcast network are not close substitutes for one another, that Comcast's RSNs and NBCU's cable networks are not close substitutes for one another, and that Comcast's national cable networks and NBCU's cable networks are not close substitutes for one another. These conclusions are

144 In recent years, several mergers of television networks have been approved, including Capital Cities/ABC-Disney, CBS-Viacom, and NBC-Universal. (PR Newswire, "Disney Completes Acquisition of Capital Cities/ABC," February 9, 1996; PR Newswire, "Viacom Combines CBS Cable Operations with MTV Networks," May 4, 2000; James Bates and Meg James, "New Day Dawns for NBC Universal," *Los Angeles Times*, May 13, 2004.)

145 *Initial Rosston Report*, §VI.A.

consistent with previous Commission findings. For example, the Commission has previously found that RSNs, broadcast networks, and national cable networks "differ significantly in their characteristics, focus, and subject matter," and are imperfect substitutes that should be analyzed in separate "categories."[146] The Commission has also noted that the "unique nature" of regional sports programming means that there are no "adequate substitutes."[147] In contrast, with regard to national cable networks, the Commission has held that News Corporation's "*general entertainment and news cable programming networks* participate in a highly competitive segment of programming market with available reasonably close programming substitutes."[148]

105. Consistent with the Commission's findings, in this part we present evidence that Comcast's and NBCU's networks are not especially close substitutes for one another and that they face substantial competition from other, more closely situated networks. Before turning to the detailed evidence on substitution, we begin by establishing that the overall market concentration of broadcast and cable networks, or cable networks alone, is quite low and that the merger will not lead to a significant increase in concentration.

1. The transaction will not lead to significant increases in the concentration of network ownership.

106. Comcast owns several national and regional cable networks (the latter of which focus primarily on sports programming). Comcast's national cable networks include five wholly-owned national programming networks and six national networks in which Comcast has an

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146 *See News Corp.-Hughes Order*, ¶¶ 59-60; *Adelphia Order*, ¶¶ 66-67. The Commission considered the categories for the purposes of analyzing vertical issues. We also note that in contrast to Professor Rogerson, Dr. Singer considers regional sports programming and local broadcast programming to be distinct relevant markets. (*Singer Declaration*, ¶¶ 43-46).

147 *News Corp.-Hughes Order*, ¶ 133.

148 *News Corp.-Hughes Order*, ¶ 129 [emphasis added].

attributable but non-controlling interest. NBCU owns two broadcast television networks and twelve national cable networks. Table V.1 lists the parties' cable networks along with Comcast or NBCU's percentage ownership interest in each network.

Table V.1: Comcast and NBCU Network Ownership Shares

Comcast National Cable Networks	
Network	**Ownership Share**
E!	100%
G4	100%
Golf Channel	100%
Style	100%
Versus	100%
PBS KIDS Sprout	40%
TV One	33.5%
NHL Network	15.6%
Current Media	10%
MLB Network	8.3%
Retirement Living Television	7.7%
FEARnet [a]	33.3%
Comcast Regional Cable Networks	
Network	**Ownership Share**
Comcast SportsNet California	100%
Comcast SportsNet Mid-Atlantic	100%
Comcast SportsNet New England	100%
Comcast SportsNet Northwest	100%
Comcast SportsNet (Philadelphia)	100%
Comcast Sports Southwest	100%
Cable Sports Southeast	81%
Comcast SportsNet Bay Area	67%
Comcast SportsNet Chicago	30%
SportsNet New York	8.2%
The Mtn. - MountainWest Sports Network	50%
The Comcast Network	100%
New England Cable News	100%
Comcast Entertainment Television	100%
Comcast Hometown Television	100%
C2	100%
CN100	100%
Comcast Television Network	100%
Pittsburgh Cable News	30%

NBCU National Cable Networks	
Network	**Ownership Share**
Bravo	100%
CNBC	100%
CNBC World	100%
MSNBC	100%
mun2	100%
Oxygen Media	100%
Sleuth	100%
Syfy	100%
Universal HD	100%
USA Network	100%
Chiller	80%
The Weather Channel	25%
A&E Television Networks	15.8%
Universal Sports	8.33%
ShopNBC	Minority, non-controlling

Note:

[a] FEARnet is set to launch linear programming on October 1, 2010.

Sources:

Applications for Consent to the Transfer of Control of Licenses, General Electric Company, Transferor, to Comcast Corporation, Transferee, Applications and Public Interest Statement, Lead Application File Nos. BTCCDT-20100128AAG (MB), SES-ASG-20100201-00148 (IB), and 0004101576 (WTB) (filed Jan. 28, 2010) at 19-21 and 30-31.

Attachment 7-1: 7(a)-(d), Non-Broadcast Programming Networks, 7Ex_nbcu0000001-06

FEARnet, "FEARnet Set to Launch Linear Channel Oct. 1st, 2010," June 21, 2010, *available at* http://www.fearnet.com/news/b19400_fearnet_set_launch_linear_channel_oct.html, *site visited* July 18, 2010.

107. NBCU also has 26 O&O broadcast stations. Table V.2 lists NBCU's broadcast assets, including NBC and Telemundo O&Os, along with the DMA's rank based on 2009-2010 television households.

Table V.2: NBCU Owned and Operated Stations

NBC O&O Stations		
City	**DMA Rank**	**Call Signals**
New York	1	WNBC
Los Angeles	2	KNBC
Chicago	3	WMAQ
Philadelphia	4	WCAU
Dallas-Ft. Worth	5	KXAS
San Francisco	6	KNTV
Washington, D.C.	9	WRC
Miami-Ft. Lauderdale	17	WTVJ
San Diego	28	KNSD
Hartford-New Haven	30	WVIT
Telemundo O&O Stations		
City	**DMA Rank**	**Call Signals**
New York	1	WNJU
Los Angeles	2	KVEA
Los Angeles	2	KWHY
Chicago	3	WSNS
Dallas-Ft. Worth	5	KXTX
San Francisco	6	KSTS
Boston (Manchester)	7	WNEU
Houston	10	KTMD
Phoenix (Prescott)	12	KTAZ
Denver	16	KDEN
Denver	16	KMAS
Miami-Ft. Lauderdale	17	WSCV
San Antonio	37	KVDA
Las Vegas	42	KBLR
Fresno	55	KNSO
Tucson	66	KHRR
Puerto Rico	N/A	WKAQ

Sources:

Applications for Consent to the Transfer of Control of Licenses, General Electric Company, Transferor, to Comcast Corporation, Transferee, Applications and Public Interest Statement, Lead Application File Nos. BTCCDT-20100128AAG (MB), SES-ASG-20100201-00148 (IB), and 0004101576 (WTB) (filed Jan. 28, 2010) at 29-

NBC Universal, "Company Overview," *available at* http://www.nbcuni.com/About_NBC_Universal/Company_Overview/overview02.shtml, *site visited* June 24, 2010.

108. Together, Comcast's and NBCU's networks account for a small share of total television viewing.[149] Table V.3 presents the viewer share of Comcast's cable and NBCU's broadcast and cable networks among all broadcast and cable television networks, as well as the share of Comcast's and NBCU's cable networks among all cable networks. NBCU's broadcast and cable television networks account for [[ ]] percent of national broadcast and basic cable (excluding premium channels such as HBO) television viewing, while Comcast's cable networks account for [[ ]] percent.[150] Similarly, NBCU's cable networks account for [[ ]] percent of basic cable television viewing, while Comcast's cable networks account for just [[ ]] percent.

109. In addition to examining market shares, economists often use summary concentration indexes. One of the most widely used is the Herfindahl-Hirschman Index (HHI). Based on these data, the pre-merger HHI amongst basic cable and national broadcast networks combined is 749, with the transaction leading to a delta of 39.[151] Similarly, the pre-merger HHI among basic cable networks is 948, with a delta of 47. These HHIs and deltas are well within the safe harbor laid

149 *See also*, *Public Interest Statement* at 90-92.

150 If one includes local broadcast affiliate programming, then NBCU's share of broadcast and basic cable viewing would be [[ ]] percent. If one includes premium networks, then NBCU's share of broadcast and cable is [[ ]] percent and Comcast's share is [[ ]] percent. NBCU's share of cable only is [[ ]] percent and Comcast's share is [[ ]] percent. (These calculations are included in our backup.)

Due to data constraints, the Comcast share number excludes Comcast RSNs. However, nationally, all RSNs (including both Comcast and non-Comcast RSNs) account for just [[ ]] of total impressions, thus it is likely that the RSN share of viewing would be very modest. (National Nielsen total day ratings, P18+, Live + same day DVR impressions, 4/26/2010 – 5/26/2010.)

151 For this calculation, viewership is fully attributed to the majority owner of each network as reported by SNL Kagan's Economics of Basic Cable Networks, 2009 Edition, with a few exceptions: The Weather Channel is attributed to NBCU; CW broadcast network is attributed to Time Warner, Inc., although it is 50 percent owned by CBS; and the following networks are attributed to "A&E Networks:" A&E, Biography Channel, History, History International, Lifetime Television, and Lifetime Movie Network. For networks without a known majority owner, viewership is fully attributed to one unique owner per network.

out in the *Horizontal Merger Guidelines*.[152] Thus, as an initial matter, the transaction involves a relatively small share of television viewing and will not substantially increase the concentration of broadcast and cable networks combined, or cable networks on their own.

Table V.3: Comcast and NBCU Share of Viewers

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2. Comcast's RSNs and NBCU's networks are not especially close substitutes for one another.

110. In this part, we present evidence that the Comcast's RSNs and NBCU's networks are not particularly close substitutes for one another. We proceed in two steps:

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152 *Horizontal Merger Guidelines*, § 1.51. The agencies consider any market with an HHI of less than 1000 to be unconcentrated. They also note that any transaction in a market with an HHI between 1000 and 1800 (a "moderately concentrated" market) that results in a delta of less than 100 is unlikely to result in anticompetitive consequences. We also note that the proposed update to the *Horizontal Merger Guidelines* would raise the threshold for unconcentrated markets to 1500 and the range for moderately concentrated markets to 1500 to 2500. (U.S. Department of Justice and Federal Trade Commission, *Draft Revised Horizontal Merger Guidelines*, *available at* http://www.ftc.gov/os/2010/04/100420hmg.pdf, *site visited* July 18, 2010, at 19.)

- We first consider Comcast's RSNs relative to the NBC broadcast network, as Professor Rogerson lists this as his primary area of concern.[153] We examine the six DMAs that have both a Comcast RSN and an NBCO O&O station, and we show that the RSNs attract viewers with notably different demographic profiles than the NBC broadcast stations, which is not surprising given the sharp differences between the content aired on a broadcast network relative to RSNs.

- We then turn to Comcast's RSNs relative to NBCU's cable networks, as Professor Rogerson also raises this overlap as a potential concern.[154] Again, we show that, consistent with the clear differences in content, the Comcast RSN's attract a very different mix of viewers than the NBCU cable networks.

a) Available evidence indicates that Comcast's RSNs and NBC O&O stations are not close substitutes.

111. Before turning to the data, we note that a basic review of the content carried suggests that Comcast's RSNs and NBC broadcast stations are not likely to be close substitutes. RSNs focus on providing local and regional sports content, with a particular emphasis on live performances by local sports teams. NBC broadcast stations, on the other hand, provides a range of programming including news, entertainment, and national sports content. NBC owns extremely limited broadcast rights to local sporting events (*e.g.,* an NBC O&O station owns rights to pre-season New York Giants football games).[155]

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153 *Rogerson Report* at 17-18.

154 *Rogerson Report* at 18.

155 Interview with Brett Goodman, Senior Vice President, Strategic Partnerships & Business Affairs, NBC Universal Sports & Olympics, July 16, 2010.

112. For our data analysis, we focus on the six DMAs in which Comcast owns an RSN and NBCU also owns and operates an NBC broadcast station: Chicago, Hartford, Miami, Philadelphia, San Francisco, and Washington, DC.[156] Within these DMAs, Comcast RSNs and NBCU networks vary substantially in the profile of viewers that each network attracts. For example, Comcast RSNs tend to attract a younger ([[ ]]) and more male ([[ ]]) audience relative to the NBC broadcast network.[157]

113. Figure V.1 illustrates the viewer profiles graphically, depicting the Nielsen shares of each network (represented by the size of the dots), as well as each network's gender skew and age skew.[158] A review of the figure shows clearly that: (i) the demographic profiles of the NBC broadcast network and the Comcast RSNs look nothing like each other, as demonstrated by how far apart their respective dots are in the picture, and (ii) many networks have viewer profiles more similar to the Comcast RSNs and the NBC broadcast network than their profiles are to one another.

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156 Professor Rogerson has identified these six DMAs as being particularly at risk of horizontal harm arising from the transaction. (*Rogerson Report* at 18.)

157 Data are based on DMA-level counts of total day impressions by age group and gender for the 2009 Nielsen sweeps months (March, May, July, and November) in the six Comcast-RSN/NBC-O&O overlap DMAs listed above. Data are from Nielsen Live+7 surveys, counting live broadcast plus 7 days of DVR impressions. (These calculations are included in our backup.)

158 Figure V.1 is based on DMA-level counts of total day impressions by age group-gender for the 2009 Nielsen Sweeps months (March, May, July, November) in the six DMAs listed above. Data are from Nielsen Live+7 surveys, counting live broadcast plus 7 days of DVR impressions. The figure includes all networks tracked by Nielsen in the six overlap DMAs.

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Figure V.1: Age, Gender and Ratings by Network in Comcast RSN and NBC O&O Overlap DMAs

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b) Available evidence indicates that Comcast's RSNs and NBCU's cable networks are not close substitutes for one another

114. As with Comcast's RSNs and NBC, we begin by noting that Comcast's RSNs and NBCU's cable networks feature notably different content. Unlike the sports content on the RSNs, NBCU's cable networks focus primarily on general and business news (*e.g.,* MSNBC and CNBC) or entertainment (*e.g.,* Bravo, USA, SyFy, Oxygen). Indeed, none of NBCU's cable networks own rights to any local sporting events or, indeed, focus on local sports at all.

115. Figure V.2 charts the demographic profiles of all RSNs (both Comcast and non-Comcast) relative to NBCU's cable networks. For this figure, we rely on national Nielsen data, which aggregate Comcast and non-Comcast RSNs into a single category. As with Figure V.1, the takeaway is clear: the RSNs are not close substitutes for any of NBCU's cable networks. For example, many networks not owned by NBCU, including the History Channel, the Discovery Channel, the National Geographic Channel, AMC, and the Speed channel, among others, have age and gender profiles more similar to the aggregate RSN category than do any of the NBCU cable networks.

II

II

3. Comcast's and NBCU's national cable networks are not especially close substitutes for one another.

116. Although Professor Rogerson focused exclusively on the potential harm from combining Comcast RSNs with NBCU O&O broadcast stations and national cable networks, other commenters have suggested the possibility of overlap between NBCU's cable networks and Comcast's national cable networks, particularly within narrowly defined programming categories, such as women's networks or sports networks.[159] Using analysis similar to that discussed above, we now show that Comcast's and NBCU's national cable networks are not particularly close substitutes for one another and that there are many other networks situated more closely to Comcast's and NBCU's cable networks than they are to one another. The fact that Comcast's and NBCU's national cable networks are not close substitutes indicates that there is no cause for competitive concern due to horizontal overlap between national cable networks involved in the transaction, a conclusion that is consistent with the Commission's previous recognition of a highly competitive "general entertainment and news cable programming networks" market segment.[160]

a) Comcast's and NBCU's national cable networks are not close substitutes in terms of their programming content

117. We begin by noting that Comcast's and NBCU's cable networks are not close substitutes in terms of their programming content. To focus the discussion, consider each of NBCU's cable networks in turn:

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159 *Cooper and Lynn Declaration* at 36-45; *Marx Report*, ¶ 79. We address Professor Marx's claims of a distinct business news market in Section VI.C.

160 *News Corp.-Hughes Order*, ¶¶ 59-60; *Adelphia Order*, ¶ 129.

- MSNBC and CNBC have no close substitutes within Comcast's portfolio of networks, as Comcast has no news networks.

- NBCU's highest-ranked cable network, the USA Network, is a general entertainment network featuring a combination of movies and drama and comedy series. There are many other general entertainment networks (*e.g.*, A&E, TNT, TBS, FX, and Lifetime). None of Comcast's entertainment networks is uniquely close to the USA Network in its programming content.

- NBCU's Oxygen and Bravo networks do include a significant amount of programming appealing to female viewers and in that way are somewhat similar to Comcast's Style and E! networks. However, there are many other networks featuring similar content Lifetime, VH1, Women's Entertainment, ABC Family, HGTV, The Food Network, and TLC, all of which tend to skew toward female viewers.

- Finally, NBCU's other English-language entertainment cable networks (*i.e.*, Chiller, Sleuth, and Syfy) emphasize particular entertainment genres—Chiller emphasizes horror and suspense entertainment; Sleuth highlights mystery series and films; and Syfy features science fiction. Comcast has no networks that serve as close substitutes for any of these NBCU networks.[161]

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161 Comcast does own a 33.3 percent interest in FEARnet. FEARnet is currently a VOD network that specializes in horror movies and shows similar to Chiller. However, it has announced plans to launch a linear network in October 2010. FEARnet, "FEARnet Set to Launch Linear Channel Oct. 1st, 2010," June 21, 2010, *available at* http://www.fearnet.com/news/b19400_fearnet_set_launch_linear_channel_oct.html, *site visited* July 18, 2010.

b) Comcast's national cable networks attract different profiles of viewers than do NBCU's networks.

118. Figure V.3 repeats the "bubble chart" from Figure V.2, except that it focuses on Comcast's national cable networks relative to NBCU's national cable networks (rather than on RSNs vs. NBCU's national cable networks). As seen in the figure, the one category of networks in which Comcast's cable networks and NBCU's cable networks appear somewhat similar is networks that skew toward women, notably NBCU's Oxygen network and Comcast's Style network and, to a lesser degree, NBCU's Bravo network and Comcast's E! network, which has a much younger age profile than the other networks.[162] However, the figure shows that several networks owned by other firms have similar age and gender profiles. For example, Lifetime (which is controlled by A&E Television Networks) has an age/gender profile that is more similar to both Oxygen and Style than Oxygen and Style are to each other. Furthermore, Lifetime has relatively high Nielsen shares (as indicated by the size of the dots) suggesting that it would be the natural second choice for viewers of Style and Oxygen. In addition, the WE network, The Food Network, and TLC have demographic profiles similar to Style, Oxygen, and Bravo. Similarly, the Disney Channel, ABC Family, Nickelodeon, and Nick-at-Night all have profiles that skew toward younger women, similar to E!.

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162 From Figure V.3 alone, one might contend that NBCU's CNBC network is somewhat similar in profile to Comcast's Golf network. However, the content on CNBC is clearly entirely different from that on Golf, making it implausible that they would be close substitutes for viewers (or MVPDs). In addition, Speed and the Military Channel are closer to CNBC than Golf and AMC, History International, and Fox News Chanel also have fairly similar demographic profiles to CNBC.

Figure V.3: Age, Gender and Ratings by Network Across all DMAs

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c) Relatively low viewer duplication rates demonstrate the lack of horizontal concerns involving Comcast's and NBCU's networks that skew toward women

119. As additional evidence that one should not be concerned about overlaps between Comcast's and NBCU's networks that skew toward women, we present a study of viewer duplication patterns. Duplication studies based on Nielsen Npower data measure the likelihood that, conditional on viewing a particular network, an individual views another network within the

same month.[163] Table V.4 reports results from a viewer duplication study, with the shaded rows displaying the probability that a viewer who watches a particular NBCU network *also* watches a given Comcast network.[164] If there were important overlaps between the NBCU networks that skew toward women (Bravo and Oxygen) and the Comcast networks that skew toward women (E! and Style), then one would expect to see large duplication between these networks, as viewers who watch one also tend to watch the others.

120. The results in Table V.4 demonstrate that the duplication between Bravo and Oxygen, on the one hand, and E! and Style on the other is not particularly high. Among those watching Bravo in a given month, [[ ]] percent also watch E! and only [[ ]] percent also watch Style. In contrast, among those watching Bravo, [[ ]] percent also watch FX, [[ ]] percent also watch TBS, and [[ ]] percent also watch TNT, none of which skew particularly toward women. Among those watching Oxygen, [[ ]] percent also watch E! and only [[ ]] percent also watch

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163 The duplication study is based on total day, P2+, live Nielsen data from April 2010. An individual counts as a viewer of a network if he or she watches at least 6 minutes during the month; and an individual's viewing must be reported in the sample for at least 75 percent of the measured days in order to be included in the report.

We caution that this type of duplication analysis runs the risk of confusing substitutes and complements. The relevant question for competition policy is what networks would an individual substitute if a network that she watches became unavailable (or more expensive)? The fact that the individual watches networks C and N does not necessarily mean that she would watch more of network N if network C became unavailable (or more expensive). An analogy helps to illustrate this point. It may well be the case that scanner data would show that individuals typically purchase both peanut butter and jelly at the same time. Yet, it does not follow that the individual would buy more jelly if peanut butter were to become unavailable. Instead, she might buy less of both and instead purchase more salami. With this caveat in mind, duplication studies can still be informative about which networks individuals tend to view.

164 We focus our attention on the top ten networks by rating (we consider the top ten networks by total impressions as reported in the data underlying Table 1 (national total day data for 2009)), the Comcast and NBCU networks tracked by Nielsen, and potential competitors to those networks. We identify potential competitors by an NBCU presentation and the National Cable and Telecommunications Association's cable network listings by genre. (*See* NBC Universal, "NBCU Cable Networks," September 29, 2009, and NCTA, "Cable Networks," *available at* http://www.ncta.com/Organizations.aspx?type=orgtyp2&contentId=2907#&&CurrentPage=1, *site visited* May 26, 2010.)

Duplication data for all of these networks are available in our backup.

Style. In contrast, among those watching Oxygen, **[[ ]]** percent also watch FX, **[[ ]]** percent also watch TNT, and **[[ ]]** percent also watch TBS. These results indicate that those viewers who watch "women's" cable networks also tend to watch a large variety of other networks (including networks that do not skew female) rather than concentrating most or all of their viewing in a more narrow, "women's" programming category.

Table V.4: Viewer Duplication Rates

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C. Evaluation of price effects from previous integration events.

121. As noted, Professor Rogerson claims that the harms from the transaction will be greatest in DMAs with a Comcast RSN and an NBC O&O.[165] In contrast to Professor Rogerson's assertion that the "best available evidence" in support of this claim comes from retransmission consent negotiations, the historical record provides several events that are directly relevant to the question of whether the combination of RSNs and broadcast television networks leads to higher fees. In particular, News Corporation, which owns the Fox broadcast network, also owns several RSNs and has acquired and divested several RSNs and O&O broadcast stations over time. We examine the extent to which, historically, joint ownership of RSNs and O&Os operating in the same DMA has led to higher affiliate fees for the RSNs. For completeness, we also undertake a broader examination of transactions involving cable networks and broadcast network owners.

1. Empirical analysis of previous integration events involving RSNs and broadcast networks reveals no evidence for anticompetitive horizontal effects.

122. To study the effect of combining an RSN with a broadcast television station, we consider a set of events in which News Corporation combined an RSN with an O&O broadcast station. These events include those in which News Corporation either: (a) acquired or divested an RSN in a DMA in which it also owned an O&O broadcast station, or (b) acquired or divested a broadcast station in a DMA where it also owned an RSN. Table V.5 presents a list of all DMAs where News Corporation has owned an RSN and an O&O station and indicates the years of joint ownership.[166]

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165 *Rogerson Report* at 17.

166 We focus on those that involve a change of control where one of the parties owns a broadcast network. A change of control occurs when the pre-transaction ownership share is less than or equal to 50 percent and the post-transaction ownership percentage is greater than 50 percent.

Table V.5: RSN Transactions

DMA	RSN	Broadcast Station	RSN/Broadcast Station Overlap
Birmingham - Tuscaloosa - Anniston [a]	Fox Sports South	WBRC-TV	1999 - 2008
Denver	Fox Sports Rocky Mountain	KDVR	1999 - 2008
Fort Collins	Fox Sports Rocky Mountain	KFCT	1999 - 2008
High Point - Greensboro - Winston-Salem [a]	Fox Sports South (Carolinas)	WGHP	1999 - 2008
Kansas City, MO	Fox Sports Midwest (later KC)	WDAF-TV	1999 - 2008
Salt Lake City	Fox Sports Utah (Rocky Mountain)	KSTU	1999 - 2008
St. Louis	Fox Sports Midwest	KTVI	1999 - 2008
Milwaukee [b]	Fox Sports Wisconsin	WITI-TV	2001 - 2008
Minneapolis - St. Paul	Fox Sports North	KMSP-TV	2001 - Present
Portland, OR [c]	Fox Sports Northwest	KPTV	2001 - 2002
Cleveland - Akron	Fox Sports Ohio	WJW-TV	2005 - 2008
Ocala - Gainesville	Fox Sports Florida	WOGX	2005 - Present
Orlando - Daytona Beach	Fox Sports Florida	WOFL	2005 - Present
Tampa - St. Petersburg	Fox Sports Florida	WTVT	2005 - Present
Atlanta	SportSouth	WAGA-TV	2006 - Present

Notes:

We analyze those events highlighted in gray

[a] Event not analyzed because Fox Sports South was integrated with a Fox O&O in Atlanta throughout the sample period

[b] Prior to 2007, Fox Sports Wisconsin was a subfeed of Fox Sports North; however, Kagan lists separate data for each throughout the sample period

[c] Event not analyzed because of insufficient data during the integration period

Sources:

Paul Farhi and Leonard Shapiro, "Media Moguls Make Major Moves; Multimillion-Dollar Deals Jiggle the Airwaves," *Palm Beach Post (Florida)*, June 24, 1997; "News Corp Completes Deal on Liberty Media," *Hobart Mercury (Australia)*, July 17, 1999; R. Thomas Umstead, "Fox Cable Buys Turner South," *Multichannel News*, February 23, 2006; Mike Reynolds, "RSN Aims to Provide an Insider's View Serving Local Clubs," *Multichannel News*, October 7, 2006; "KTVI Sold to Fox's Murdoch; Ch. 2 Among 10 Affiliates in Deal," *St. Louis Post-Dispatch*, July 18, 1996; "Moody's - Raises Ratings of New World TV, NWCG Holdings," *Asia Pulse*, February 11, 1997; "Oak Hill Capital Partners Completes Acquisition of Eight Television Stations from News Corporation," *Oak Hill News*, July 14, 2008; Tom Feran, "Fox's Parent Company Will Sell WJW," *The Plain Dealer*, Cleveland, Ohio, June 15, 2007; "Cablevision and News Corporation to Restructure Ownership of Sports and Entertainment Assets," *Cablevision Press Release*, February 22, 2005; "Unions in Detroit Set Strike Deadline of July 13," *The Associated Press*, July 10, 1995; "FCC Approves Sale of Triad's Fox 8, other TV Stations," *The Business Journal, Greensboro/Winston-Salem, NC*, June 10, 2008; "2 TV Stations Bought by Fox," *The New York Times*, July 10, 1995; "Top Stories; For the Record," *Multichannel News*, February 19, 2001; Charley Walters, "Vikings Can Afford To Get Veteran Help," *Saint Paul Pioneer Press*, August 23, 2001; "Market Profile: Minneapolis-St. Paul," *Mediaweek*, December 3, 2001; "News Corporation Reports Record Full Year Operating Income of $3.9 Billion; Growth of 9% over Fiscal 2005," *Business Wire*, August 8, 2006; "Meredith Corporation Reports Fourth Quarter and Fiscal Year 2002 Results," *PR Newswire*, August 1, 2002; "NCP - Preliminary Final Report," *AAP Company News*, September 6, 2002; "Liberty Unveils DirecTV Plans (Multichannel News)", *Executive Quote and Information Service*, May 11, 2009; William Mahoney, "'Studs' carries its weight in late-night," *Electronic Media*, August 19, 1991.

123. If Professor Rogerson's stated concern that the combination of RSNs and NBC O&Os is likely to lead to higher affiliate fees were valid, then one would expect to find evidence that the joint ownership of a Fox Sports Network ("FSN") and a Fox O&O station in the same DMA leads to systematically higher affiliate fees. To test this proposition, we use annual data on per-subscriber, per-month RSN fees from 2000 to 2009 and estimate a "difference-in-differences" model to examine the effect on affiliate fees of the RSN transactions, using the set of RSNs not

involved in the integration events as controls.[167] We define the dependent variable as the affiliate fee per subscriber, per month. We separately include network fixed effects (to control for unobserved differences across networks) and year fixed effects (to control for changes in affiliate fees over time). We also account for the age of the network.[168]

124. Table V.6 presents the results. The key variables of interest are the "Integrated" variables, which take a value of one for those networks that are owned by News Corporation and operate in the same DMA in which News Corporation also owns a broadcast station. Examining the coefficients on the "Integrated" variables shows no evidence that joint ownership of an O&O broadcast station and an RSN in the same DMA has a significant effect on prices.[169] In particular, as reported in Column (1), we estimate a single, common integration effect across all the events, in order to estimate the average effect of ownership by News Corporation of both an RSN and an O&O station. The results indicate that, on average, joint ownership by News Corporation had no significant effect on the level of RSN affiliate fees. Column (2) allows for separate effects for each event. Integration *lowered* the fee level by a significant amount in two of the seven events, increased the fee level by a significant amount in two events, and had no significant effect in the other three events.[170]

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167 We obtain data on RSN affiliate fees from SNL Kagan's "Average Monthly License Fee Revenue Per Sub by Regional Sports Network, 1990-2009," TV Network Summary, http://www.snl.com/interactivex/tv_networkssummary.aspx, *site visited* July 11, 2010.

We drop data for networks in the year in which they changed control.

168 We flexibly control for the age of the network by including a spline in age with knot points at 1, 2, 3, and 10 years. Because we do not know the date of entry for networks that entered prior to 1989, we specify the age 11+ spline as a dummy variable.

169 We cluster the standard errors by network. We also drop data for networks involved in a transaction in the year of the transaction.

170 We have also run regressions using the annual percentage change in fees as the dependent variable with no change in the central findings.

Table V.6: Analysis of RSN Transactions

	(1) Fees Levels - Average Effect	(2) Fees Levels - Network-Specific Effect
Integrated	-0.025	
	(0.081)	
Integrated (SportSouth, 2006-Present)		-0.263*
		(0.118)
Integrated (FSN Florida, 2005-Present)		-0.193*
		(0.090)
Integrated (FSN North, 2001-Present)		0.145
		(0.100)
Integrated (FSN Rocky Mountain, 1999-2008)		0.242**
		(0.084)
Integrated (FSN Wisconsin, 2001-2008)		0.191**
		(0.061)
Integrated (FSN Ohio, 2005-2008)		-0.012
		(0.061)
Integrated (FSN Midwest, 1999-2008)		0.082
		(0.084)
Constant	0.741**	0.747**
	(0.182)	(0.199)
Observations	322	322
R-squared	0.909	0.911

Notes:

Robust standard errors in parentheses

** p<0.01, * p<0.05

Regressions include fixed effects for year and network; and a spline in the age of the network.

125. As the table shows, there is no support for Professor Rogerson's claims that joint ownership of a broadcast station and an RSN in a DMA leads to higher affiliate fees. This direct evidence suggests that the present transaction is unlikely to lead to horizontal harms. This conclusion should not be surprising given the disparate nature of RSNs and broadcast television

networks discussed above.

2. Empirical analysis of previous integration events involving national cable networks and broadcast networks reveals no evidence for anticompetitive horizontal effects.

126. For completeness, we also study the effect of the integration of national cable networks with a broadcast network owner. The results provide insight into whether combining Comcast's cable networks with NBC is likely to give rise to any horizontal price effects.[171] Table V.7 lists transactions that have taken place since 2000 involving the acquisition or divestiture of a national cable network by a broadcast network owner.[172]

[171] Due to data limitations, we cannot study retransmission fees for the broadcast networks. However, during the times when the bulk of our events occur, cash retransmission fees were relatively unimportant, so it is natural to focus on prices paid by MVPDs for the cable networks. More generally, if the horizontal events had pricing effects, one would expect at least some of these to show up in higher prices for the cable networks, so our approach is a valid test of the horizontal pricing theories.

[172] As above, we drop the year in which the transaction takes place, unless the transaction occurs in either December or January.

Table V.7: National Cable Network Transactions

Network	Network Owner	Integrated
CMT	CBS	October 1997 - December 2005
TNN (became Spike TV)	CBS	October 1997 - December 2005
MTV	Viacom/CBS	May 2000 - December 2005
MTV Español (became MTV Tr3s) [a]	Viacom/CBS	May 2000 - December 2005
MTV2	Viacom/CBS	May 2000 - December 2005
Nick GAS [a]	Viacom/CBS	May 2000 - December 2005
Nick Too [a]	Viacom/CBS	May 2000 - December 2005
Nickelodeon	Viacom/CBS	May 2000 - December 2005
Noggin (became Nick Jr.)	Viacom/CBS	May 2000 - December 2005
TV Land	Viacom/CBS	May 2000 - December 2005
VH1	Viacom/CBS	May 2000 - December 2005
VH1 Classic [a]	Viacom/CBS	May 2000 - December 2005
VH1 Country (became CMT Pure Country) [a]	Viacom/CBS	May 2000 - December 2005
VH1 Soul [a]	Viacom/CBS	May 2000 - December 2005
VH1 Uno [a]	Viacom/CBS	May 2000 - December 2005
BET	Viacom/CBS	January 2001 - December 2005
BET Jazz (became Centric) [a]	Viacom/CBS	January 2001 - December 2005
Speedvision (Speed)	News Corp/FOX	June 2001 - Present
MTV Hits [a]	Viacom/CBS	May 2002 - December 2005
MTV Jams [a]	Viacom/CBS	May 2002 - December 2005
Nicktoons	Viacom/CBS	May 2002 - December 2005
BET Gospel [a]	Viacom/CBS	July 2002 - December 2005
BET Hip Hop [a]	Viacom/CBS	July 2002 - December 2005
Bravo	NBCU	December 2002 - Present
Comedy Central	Viacom/CBS	May 2003 - December 2005
Sci-Fi (became SyFy)	NBCU	May 2004 - Present
Trio [a]	NBCU	May 2004 - Present
USA	NBCU	May 2004 - Present
LOGO [a]	Viacom/CBS	May 2005 - December 2005
MSNBC	NBCU	December 2005 - Present
CBS College Sports Network (formerly CSTV) [a]	CBS	January 2006 - Present
Oxygen	NBCU	November 2007 - Present

Notes:

We analyze those events highlighted in gray

[a] Event not analyzed because of insufficient data

Sources:

"Westinghouse/Gaylord Transaction Closes," *PR Newswire*, October 1, 1997; "Viacom Completes Acquisition of BET," *PR Newswire*, January 23, 2001; Linda Moss, "Comcast Fishing For Outdoor Life," *Cable World*, April 23, 2001; Louis Chunovic, "Speedvision Shifts Gears," *Electronic Media*, May 28, 2001; Linda Moss, "Fox Cable Takes the Wheel At Speedvision," *Cable World*, May 28, 2001; Greg Hernandez, "Disney Completes Buy of Cable Operator Fox Family," *Daily News, Los Angeles, Calif.*, October 25, 2001; "Programming," *Cablefax*, May 2, 2002; Harry Berkowitz, "Viacom Eyeing Cablevision's AMC," *Newsday (New York)*, December 10, 2002; "2002 in Review: A Year of Trials, Tribulations and Mega-Mergers," *Multichannel News*, December 16, 2002; "Fitch Rates Viacom's $750 Million Sr. Notes `A-,'" *Business Wire*, May 9, 2003; "Viacom Completes Acquisition Of AOL Time Warner's 50% Interest in Comedy Central," *Business Wire*, May 22, 2003. "Ch-Ch-Ch-Ch-Changes: NBC Universal Sets Up Shop," *Cablefax*, May 13, 2004; Barry Janoff, "The Game: Graduating To College Sports; Nascar Fans Female Flames," *Brandweek*, November 7, 2005; John Dempsey, "Carriage deals light up Logo," *Daily Variety*, June 30, 2005; Will Levith, "Inside Media," *Mediaweek*, October 15, 2007; "Dow Jones to end international TV deal with CNBC," *AP Worldstream*, July 21, 2005; "Dow Jones Reports Fourth Quarter Results; Provides 1st Quarter Outlook," *Business Wire*, January 26, 2006; "Viacom Completes Separation Into CBS Corporation and 'New' Viacom," *PR Newswire*, January 1, 2006; "Economics of Basic Cable Networks 2009," *SNL Kagan Q3 2009*.

127. We apply the same empirical analysis just described above to transactions involving national cable networks. As discussed in Section IV.D, above, in order to evaluate both the effect on prices (affiliate fees) and quality (measured by ratings), we focus on events involving networks that are big enough to be tracked by Nielsen and, thus, for which we have ratings data.[173, 174] Table V.8 presents the results, which show no support for a claim that joint ownership of national cable networks and broadcast networks leads to higher affiliate fees. In particular, Column (1) of Table V.8 shows that, on average, the acquisition of national cable networks by broadcast network owners did not have a significant effect on affiliate fees paid for those networks. The results in Column (2) demonstrate that only one network experienced a significant increase in the level of fees, and MSNBC actually experienced a decline in fees post-integration.[175]

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173 In 2009, Nielsen provided ratings data on 80 networks.

174 As a robustness check, we evaluate all events, whether or not we have ratings data and include all networks tracked by Kagan as a control group. Our findings are unchanged. (All results are reported in our backup materials.)

175 We have also run regressions using the annual percentage change in fees as the dependent variable with no change in our conclusions.

Table V.8: Analysis of National Cable Network Transactions

	(1) Fees Levels - Average Effect	(2) Fees Levels - Network-Specific Effect	(3) Ratings Levels - Average Effect	(4) Ratings Levels - Network-Specific Effect
Integrated	0.023		0.002	
	(0.019)		(0.023)	
Integrated (CMT)		0.097		0.005
		(0.078)		(0.029)
Integrated (SPIKE TV)		0.105		-0.074*
		(0.078)		(0.029)
Integrated (MTV)		0.065		0.047
		(0.068)		(0.027)
Integrated (MTV2)		0.066		-0.043*
		(0.041)		(0.017)
Integrated (NICKELODEON/NICK AT NITE)		0.060		-0.096**
		(0.068)		(0.027)
Integrated (NICK JR.)		0.006		-0.125**
		(0.021)		(0.018)
Integrated (TV LAND)		0.027*		0.001
		(0.012)		(0.015)
Integrated (VH1)		0.093		-0.083**
		(0.068)		(0.027)
Integrated (BET)		0.059		0.030
		(0.043)		(0.021)
Integrated (SPEED)		-0.087		-0.513**
		(0.047)		(0.017)
Integrated (NICKTOONS NETWORK)		0.015		-0.055**
		(0.020)		(0.016)
Integrated (BRAVO)		-0.089		0.085*
		(0.075)		(0.033)
Integrated (COMEDY CENTRAL)		0.008		0.011
		(0.007)		(0.011)
Integrated (SYFY)		-0.069		0.003
		(0.068)		(0.028)
Integrated (USA)		-0.030		0.207**
		(0.090)		(0.034)
Integrated (MSNBC)		-0.030*		-0.007
		(0.012)		(0.015)
Integrated (OXYGEN)		-0.010		0.042
		(0.026)		(0.022)
Constant	0.216**	0.234**	0.616**	0.606**
	(0.064)	(0.084)	(0.056)	(0.061)
Observations	607	607	607	607
R-squared	0.887	0.888	0.947	0.950

Notes:

Robust standard errors in parentheses

** p<0.01, * p<0.05

Regressions include fixed effects for year and network; and a spline in the age of the network.

128. To investigate whether these transactions led to improvements in quality (perhaps due to horizontal efficiencies), we also examine the effect each transaction had on the ratings of the integrated cable network.[176] Column (3) and (4) of Table V.8 replicate the specifications of Columns (1) and (2) except that the dependent variables are now the ratings of the cable networks in question, rather than the affiliate fees. Columns (3) show no significant relationship, on average, between horizontal integration and ratings. Column (4) shows the effects for specific networks. Of note here is that four of the five networks acquired by NBC during the sample period (*i.e.*, Bravo, SyFy, USA, and Oxygen, with MSNBC the one exception) experienced increases in ratings (with the Bravo and USA effects statistically significant). This suggests that transactions involving NBC in particular have led to significant horizontal efficiencies and thus likely to consumer benefits.

VI. DENIAL OF CARRIAGE ON COMCAST CABLE SYSTEMS AS A FORECLOSURE STRATEGY

129. We turn now to a different line of argument, advanced primarily by Professor Marx on behalf of Bloomberg L.P., which contends that an ownership interest in NBCU networks would give Comcast an incentive to disadvantage networks that compete with NBCU networks.[177]

130. We address arguments regarding carriage decisions as follows:

- First, we discuss the economic logic demonstrating why the notion that an integrated MVPD would anticompetitively attempt to disadvantage unintegrated networks does not stand up to scrutiny.

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176 We use average annual total day ratings from Nielsen. We do not perform a comparable analysis on RSNs because we lack ratings data for specific RSNs.

177 *Marx Report*, ¶¶ 86-106, *Wilkie Report*, ¶ 14, *Cooper and Lynn Declaration* at 18-19.

- Second, we present empirical evidence showing that Comcast is actually *more* likely than other MVPDs to carry unintegrated networks operating in the same general programming categories as Comcast's own networks, the opposite of what one would expect if Comcast were engaged in foreclosure to competitively advantage its own networks. We also show that application of an empirical test pioneered by Professor Austan Goolsbee indicates that Comcast's carriage decisions are not driven by foreclosure motives.

- Finally, we turn to Professor Marx's specific claims regarding business news networks. We demonstrate that: her empirical analysis is based on deeply flawed econometrics, which generates instances of nonsensical results; her arguments in support of "business news cable networks" as a distinct relevant market are economically and econometrically unsound; and her theories of harm regarding carriage, tier, neighborhood, or bundling decisions are unsound.

A. Flaws in economic arguments that the transaction will lead to anticompetitive carriage decisions.

131. The most basic theory of why an integrated MVPD might have incentives to disadvantage unintegrated networks is that by driving rival networks out of business it would reduce competition facing its own networks. There is little basis for such a claim with regard to the present transaction. The logic of this argument depends on the following conditions: (a) the integrated company must be a sufficient distribution bottleneck that it can drive independent networks out of business; (b) the integrated company must not have an effective way to utilize whatever market power it possesses as a distributor to negotiate affiliate fees with the independent networks; and (c) it must be the case that disadvantaging independent networks will result in significant gains that more than offset the losses suffered by the integrated company's

MVPD operations. None of these necessary preconditions for foreclosure holds for the proposed transaction.

132. With regard to condition (a), the most important fact is that fewer than 24 percent of national MVPD subscribers are Comcast cable customers, which makes it highly unlikely that Comcast could threaten the competitive viability of a network. Indeed, after evaluating the evidence regarding potential justifications for the Commission's national cable ownership rule, the District of Columbia Circuit of the United States Court of Appeals concluded that available evidence did not support the conclusion that a cable operator could threaten competition even with a 30 percent share:[178]

> In view of the overwhelming evidence concerning ''the dynamic nature of the communications marketplace,'' and the entry of new competitors at both the programming and the distribution levels, it was arbitrary and capricious for the Commission to conclude that a cable operator serving more than 30% of the market poses a threat either to competition or to diversity in programming. Considering the marketplace as it is today and the many significant changes that have occurred since 1992, the FCC has not identified a sufficient basis for imposing upon cable operators the ''special obligations'' represented by the 30% subscriber limit.

133. Professor Marx provides no evidence to overturn the logic that an MVPD of Comcast's size cannot threaten "competition or diversity in programming." Her only claim to the contrary is based on: (a) [[

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and (b) her statement that Comcast's shares in some large DMAs exceed 60 percent.[179] Professor Marx fails to note that Comcast's share in the New York, New York DMA (the largest

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178 Comcast Corp. v. F.C.C., 579 F.3d 1 (DC Cir 2009) at 8 [internal footnotes omitted].

179 *Marx Report*, ¶ 89.

DMA and presumably an important one for business news) is only ten percent.[180] Absent systematic data analysis or documents showing that Bloomberg TV could not survive without Comcast carriage, her conclusory assertions deserve little credit.[181]

134. We also note that the Commission generally has found that, given the current market shares of MVPDs, only the loss of carriage on *multiple* MVPDs would pose a real threat to networks.[182] This finding implies that, by denying carriage to a network, Comcast would heighten that network's incentives to achieve carriage on other MVPDs, which, by fundamental economic logic, would tend to reduce the price the network would charge those other MVPDs. This would not be a good outcome for Comcast. In particular, this outcome would potentially harm Comcast *both* as an MVPD, by lowering programming prices for other MVPDs, *and* as the partial owner of NBCU's networks, by lowering the asking price of the rival network.

135. Neither of the other necessary conditions is satisfied. Consider condition (b). MVPDs and programming networks bargain over affiliate fees. Assuming *arguendo* that an MVPD had sufficient market power as a buyer that it could drive a network out of business or severely weaken it, that MVPD could instead use its hypothesized market power to negotiate favorable affiliate fees, which would benefit both the integrated firm and consumers. Hence, as long as the network created greater consumer value than did alternative networks, it would be in the interest of the MVPD to carry the network.

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180 *Marx Report*, Table 2.

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182 Comcast Corp. v. F.C.C., 579 F.3d 1 (DC Cir 2009) at 4.

136. Lastly, with respect to condition (c), we note that Bloomberg TV is the only network identified in any of the economic reports and declarations that we have reviewed as potentially satisfying this condition. We address the specific case of Bloomberg TV in Part C below, where we demonstrate that the costs of engaging in foreclosure would outweigh the benefits.

137. A variant of the foreclosure theory posits that, if an integrated MVPD could not drive a rival network out of business, then it might deny the network access to the MVPD's subscribers and thus limit the network's potential size and incentives to invest.[183] In a recent *ex parte* communication to the Commission, for instance, Professor Gregory Crawford argued that, by "[r]educing [r]ivals [r]evenue," Comcast (or another MVPD) might be able to reduce an independent network's "incentives to invest in programming," presumably in an attempt to reduce its quality and thus weaken it as a competitor.[184]

138. To demonstrate that this argument is a weak one, we begin by noting that, even if integration were to create a threat that Comcast might deny a rival network carriage, the direction of the effect on the rival's investment incentives is ambiguous.[185] Specifically, a straightforward model demonstrates that the possibility that Comcast would deny carriage could *increase* a rival network's incentives to invest in programming. Consider the example of Bloomberg TV. If the loss of Comcast carriage would be harmful to Bloomberg TV, then an increased risk that Comcast might choose not to carry Bloomberg TV could well induce Bloomberg TV to invest *more* in product quality to ensure that Comcast will carry its television network. This

183 *See Marx Report*, ¶ 86.

184 *Crawford Presentation* at 34-38.

185 We also note that a theory built on limiting carriage as a means to reduce a rival network's incentives to invest in quality runs counter to the DC Circuit Court's conclusion that "it was arbitrary and capricious for the Commission to conclude that a cable operator serving more than 30% of the market poses a threat either to competition or to diversity in programming." (Comcast Corp. v. F.C.C., 579 F.3d 1 (DC Cir 2009) at 8.)

relationship holds because, even if it were true that an integrated Comcast had anticompetitive intentions, Comcast would still carry a rival network if it were of sufficient quality and value to consumers. In the language of economics, even if the claim that Comcast would have anticompetitive incentives were correct, the proposed transaction could cause Comcast to shift from being an infra-marginal buyer for Bloomberg TV (*i.e.*, one that is relatively certain to carry Bloomberg TV) to being the marginal buyer (*i.e.,* the MVPD that is most "on the fence" about whether or not to carry Bloomberg TV), which could give Bloomberg TV incentives to invest more heavily in quality in order to influence Comcast's decision.[186]

139. In contrast to the weak basis for anticompetitive carriage foreclosure theories, there is substantial reason (discussed in Section IV above) to conclude that there are pro-competitive efficiencies associated with vertical integration, largely due to efficiencies that arise when MVPDs negotiate carriage agreements with in-house networks. Most fundamentally, as explained above, if an MVPD owns X percent of a network, then this ownership mitigates the double marginalization problem, reducing the MVPD's costs for that network to only $(1-X)$

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[186] Let $\phi_\delta(q)$ denote the probability that Comcast will choose to carry an independently owned network of quality q when Comcast's vertical integration status is δ, where δ takes the values *int* for "integrated" and *not* for "not integrated." (Alternatively, interpret $\phi_\delta(q)$ as the fraction of its systems on which Comcast will choose to carry the network.) Let p denote the per-subscriber affiliate fee paid by Comcast to the network, and let N denote the total number of Comcast subscribers. Lastly, let $O(q)$ denote the profits that a network with quality q would earn from sales to other MVPDs. The networks profits will equal $\phi_\delta(q) \times N \times p + O(q)$. The network will maximize its profits by setting quality at the level where the marginal benefits of increasing quality are just equal to the marginal costs, or $\phi_\delta'(q) \times N \times p + O'(q) = 0$. Even if one believes that $\phi_{\text{int}}(q) < \phi_{not}(q)$, it is plausible—as discussed in the text—that $\phi'_{\text{int}}(q) > \phi'_{not}(q)$ for a range of values of q. Over this range of values, Comcast's integration would increase the unintegrated network's incentives to invest in the quality of its programming. This formal model demonstrates that Professor Crawford's argument runs the risk of confusing average and marginal effects, and—absent shutdown—it is the latter that matters for investment incentives.

percent of the pre-integration level.[187] Given that all parties commenting on this proceeding seem to agree that at least some non-trivial percentage of programming cost changes will be passed through to end consumers, these lower programming costs would result in lower prices to consumers.[188]

140. In addition, although NBCU cannot internalize Comcast's profits (as long as GE retains an ownership interest in NBCU), the fact that Comcast internalizes a share of NBCU's profits should help to align incentives, making it easier for Comcast to convince NBCU to undertake mutually beneficially investments in new and improved product offerings. Consumers can be expected to benefit from these investments as well.

B. Evidence from empirical studies on integrated MVPDs' treatment of unintegrated networks.

141. The evidence on whether vertical integration leads to foreclosure is not solely theoretical. As we summarized in Section II above, empirical studies in the economics literature examining the effects of vertical integration in the cable industry generally have found that vertical integration, on the whole, is pro-competitive and welfare enhancing. There also have been several empirical studies of the effects of integration on carriage decisions. Below, we briefly review these studies to understand what light they shed on the question of whether integrated MVPDs tend to limit carriage of unintegrated networks in an anticompetitive fashion. As we

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187 In addition, to the extent that vertical integration improves Comcast's bargaining position with other programmers, the transaction could result in lower affiliate fees for third-party programming. It is important to note that any such reductions would lead to consumer benefits as a result of pass-through and would *not* constitute an instance of anti-competitive monopsony power by Comcast. For monopsony power (like monopoly power) to be a concern, it would have to be the case that Comcast would achieve the lower price by restricting its demand for programming services and lowering output. In contrast, the price reductions under the present scenario would arise due to the change in the disagreement points of various parties, with no associated reduction in output. Indeed, to the extent that Comcast's programming cost *per subscriber* fell, Comcast would have an incentive to *increase* output of its MVPD services.

188 *See*, for example, *Rogerson Report* at 4, *Cooper and Lynn Declaration* at 16.

will discuss shortly, these studies generally are incapable of distinguishing patterns of carriage driven by foreclosure motives from those driven by efficiency considerations. That said, for reasons that we discuss below, one can conclude with confidence that these studies do *not* provide strong support for foreclosure theories. In order to gain further insight into what drives carriage decisions, we conduct two empirical studies of our own:

- Our first study relies on an approach pioneered by Professor Austan Goolsbee. Using his approach, we find that Comcast's carriage decisions are not driven by foreclosure motives.

- Our second study focuses on how Comcast's carriage of a network is related to whether Comcast currently owns a network in the same programming category as the network in question. Our results show that, contrary to the predictions of foreclosure theories, Comcast is *more* likely to carry networks competing in the same categories as its own networks (*i.e.*, women's programming or sports programming) than are other MVPDs.

1. Empirical studies of carriage must be interpreted with care to understand their implications for efficiencies-based and foreclosure-based theories.

142. The central question for the analysis of competitive effects is: Do integrated MVPDs tend to limit carriage of unintegrated networks *in an anticompetitive fashion*? Although there is an extensive empirical literature examining carriage decisions, many of the existing studies do not provide a direct answer to this question. Instead, many of the existing econometric studies of carriage seek to answer the question: Is a vertically integrated MVPD more likely to carry the networks with which it is integrated than are other MVPDs? There is broad consensus in the literature that, despite extensive variation in the situations affecting different networks, the

answer to this question is generally "yes."[189] We reach a similar conclusion in our own analysis.[190] There is also a second question that has been addressed by many existing studies: Is an integrated MVPD less likely than other MVPDs to carry networks that the integrated MVPD

189 *See,* for example, Tasneem Chipty (2001), "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry," *American Economic Review*, **91**(3): 428-453; Dong Chen and David Waterman (2007), "Vertical Ownership, Program Network Carriage, and Tier Positioning in Cable Television: An Empirical Study," *Review of Industrial Organization,* **30**(3): 227-251; Austan Goolsbee (2007), "Vertical Integration and the Market for Broadcast and Cable Television Programming," FCC Media Ownership Study (hereinafter, *Goolsbee (2007)*); and *Crawford Presentation* at 43-46.

190 We examined 2010 data on carriage decisions at the headend level to assess whether Comcast is more likely to carry its own networks than other MVPDs. For this analysis, we used the national headend level channel lineup data from June 18, 2010, provided by Rovi Corporation. The data show the number position and name of every channel within each headend, for cable companies, DBS, and telco MVPD providers. Also shown are zip codes of the areas covered by each headend. We included an observation for each headend/Comcast-network combination and estimate a logit regression to explain whether the headend in question carries the Comcast network as a function of an indicator for whether the headend is part of a Comcast cable system, the total number of networks carried by the headend (as a control for channel capacity), the demographics for the headend's ZIP code(s), and a separate fixed effect for each network. All regressions are weighted by the population of the ZIP code(s) in which the headend operates; we have also run unweighted versions of all regression with no change in any of our conclusions. We clustered the standard errors in all of our analyses at the MVPD level because the lineup choices made by different headends within a given MVPD are likely to be correlated (*e.g.,* DBS providers have many "headends" in the data, generally corresponding to differences in local broadcast programming, even though their lineups of national cable networks tend not to vary by headend). (All calculations are included with our backup materials.)

does not own?[191] Some studies have found some evidence in support of this claim, but the overall evidence on this second question is mixed.[192]

143. Unfortunately, the answers to neither of the questions broadly posed by the economic literature sheds much light on the central question regarding whether there is anticompetitive harm. This is so because, even if one finds that integrated MVPDs tend to favor their own networks, this finding is consistent both with anticompetitive foreclosure and with the pro-consumer, pro-competitive realization of efficiencies.[193] Indeed, it would be somewhat surprising if an MVPD did not have a relatively high carriage rate for a network in which it found it worthwhile to make a significant investment. Consequently, researchers have found it

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191 This second question is distinct from the first one because a vertically integrated MVPD might respond to the incentives to carry more of its own networks by adding capacity instead of dropping other networks. Indeed, consistent with this interpretation we show below that vertically integrated MVPDs tend to have more channel capacity than non-integrated MVPDs.

192 *See,* for example, Tasneem Chipty (2001), "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry," *American Economic Review*, **91**(3): 428-453 and Dong Chen and David Waterman (2007), "Vertical Ownership, Program Network Carriage, and Tier Positioning in Cable Television: An Empirical Study," *Review of Industrial Organization,* **30**(3): 227-251. Each of these studies found evidence that vertically integrated MVPDs are less likely to carry at least some unintegrated networks than other MVPDs, although the carriage patterns in the Chen and Waterman study were quite mixed across genres. Notably, each of these studies relied on data from Warren Communications' *Television and Cable Factbook*, which we demonstrate below to be an unreliable source of information on carriage decisions (at least Comcast carriage decisions). More recently, Greg Crawford analyzed carriage decisions by vertically integrated MVPDs using a combination of data from Warren Communications' *Television and Cable Factbook* and data from Tribune Media Services. (*Crawford Presentation* at 43-46.) The results in his presentation show many examples in which vertically integrated MVPDs are actually more likely than other MVPDs to carry unintegrated networks in the same programming categories as the MVPD's own networks.

193 The efficiencies that arise when vertically integrated MVPDs negotiate with their in-house networks—including the elimination or mitigation of double marginalization and the reduction in transactions costs—imply that it is economically efficient and welfare enhancing for an integrated MVPD to carry its own networks. As noted above, this logic applies even though Comcast will only own 51 percent of NBCU and even though NBCU cannot internalize Comcast profits under the joint venture agreement. Fifty-one percent ownership still reduces Comcast's effective marginal cost for NBCU programming by 51 percent and negotiations between Comcast and NBCU should be eased by NBCU's knowledge that Comcast has a profit stake in the performance of the NBCU networks.

difficult to distinguish empirically between the pro-competitive and anticompetitive explanations.[194] A deeper analysis is needed.

2. Application of the approach introduced by Professor Goolsbee indicates that Comcast carriage decisions have been driven by efficiency considerations, not foreclosure incentives.

144. The recent study by Professor Austan Goolsbee conducted for the Commission has proposed a promising line of inquiry.[195] Professor Goolsbee observed that, if it is anticompetitive foreclosure incentives that lead vertically integrated MVPDs to favor the networks with which they are integrated, then increased competition from other MVPDs in an area should reduce the integrated MVPDs' ability to engage in such behavior.[196] Based on this insight, Professor Goolsbee proposed that a test for the foreclosure theory is to see if the tendency to favor in-house networks declines in DMAs as competition from other MVPDs increases, where competition is measured in his study by DBS shares. Professor Goolsbee's results suggested that the tendency to carry own networks declined as DBS share increased, which tends to support the foreclosure theory. However, Professor Goolsbee relied on data from Warren Communications' *Television and Cable Factbook,* which is shown to be unreliable by a

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194 Professor Goolsbee noted:

> At the outset, though, it is vital to consider the difference between the *existence* of vertical integration in television programming and the *rationale* for it. To the extent there is an existing literature examining some of these questions, it tends to have a hard time answering the nagging question of why such vertical relationships exist.
>
> One view holds that vertical integration and foreclosing/self-promoting behavior is a strategic move on the part of powerful monopolies and is anti-competitive in nature. The other view, espoused by opponents of regulating such relationships, argues that vertical integration comes about because it is more efficient, that a combined entity is better able to create shows or networks that people will watch or to save money in producing the shows or in some other way generate a synergy.

(*Goolsbee (2007)* at 4.)

195 *Goolsbee (2007).*

196 *Goolsbee (2007)* at 26.

simple comparison with Comcast's internal carriage data.[197]

145. We update and correct Goolsbee's results and we focus our attention on the transaction-relevant question of *Comcast's* (as opposed to other MVPDs') tendency to carry its own networks. To do so, we run a logit regression using the same data and methodology as described in footnote 190. In particular, we use the headend level channel lineup data from Rovi and estimate a logit regression to explain whether each headend carries each Comcast network as a function of an indicator for whether the headend is part of a Comcast cable system, the total number of networks carried by the headend (as a control for channel capacity), the demographics for the headend's ZIP code(s), and a separate fixed effect for each network. To implement Professor Goolsbee's approach, we also add variables measuring the combined DBS + telco share in the DMA and the interaction between the combined DBS + telco share in the DMA and the indicator for whether a particular headend is part of a Comcast system.[198]

146. Results are presented in Table VI.1, below. We find that Professor Goolsbee's result is reversed: Comcast actually becomes *more* likely to carry its own networks in DMAs with high DBS + telco share, as demonstrated by the positive and significant coefficient on the interaction between the indicator for a *Comcast* headend and the *DBS_Telco_Share* variable. Indeed, the negative sign on the uninteracted *Comcast* headend indicator implies that, in areas with relatively

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197 For example, the December 2009 Warren data show that less than [[ ]] percent of Comcast subscribers are served by headends that carry Tennis Channel, the NFL Network, Oxygen, and SoapNet. According to internal Comcast data, however, more than {{ }} percent of Comcast subscribers are actually served by headends that carry each of these networks. (Calculations are included with our backup materials.)

198 Due to the growth of competition from telco providers since Professor Goolsbee's study, the relevant measure of competition is now combined DBS and telco share. Note that the Rovi data are used by Comcast in the regular course of business and Rovi has contracts with many cable operators to provide TV listings for set top box use. (Information on Rovi data is available at http://www.rovicorp.com/webdocuments/product_literature/factsheet_TVData_July09.pdf?link_id=productsProductLiterature, *site visited* July 18, 2010.)

low DBS share, Comcast is actually *less* likely to carry its own networks than are other MVPDs and that it is *only* in regions with relatively high DBS share that Comcast carries more of its own networks than do other MVPDs. Far from causing Comcast to reduce carriage of its own networks, as one would expect if such own-network carriage decisions were anticompetitive, increased competition from DBS apparently causes Comcast to carry *more* of its own networks.

Table VI.1: Logit Regression of Carriage of Comcast Networks

	Carriage of Comcast Networks
Comcast	-3.15745**
	(0.62655)
Comcast X DBS_Telco_Share	0.11240**
	(0.01334)
DBS_Telco_Share	-0.02520*
	(0.01098)
Number of networks carried	0.05233**
	(0.00709)
Percent Hispanic	0.00366
	(0.00923)
Percent Black	0.00705
	(0.00830)
Percent under 18 years	-0.00881
	(0.02276)
Percent over 65 years	-0.07148**
	(0.02772)
log (median household income)	-0.49238
	(0.39936)
Population per household	-0.50023
	(0.36056)
Percent of homes owned	0.02161*
	(0.00892)

Robust standard errors clustered by MVPD system in parentheses

** p<0.01, * p<0.05

Notes:

Head-end level data on network carriage from Rovi and zip code level demographics from US Census; The observations are at the headend-network level; The dependent variable = 1 if the system carries the Comcast network (Golf, Versus, Style, Ent, and G4) and =0 otherwise; The model is estimated with network fixed-effects, with observations weighted by by zip code population.

147. It is also important to note that, even if one controls for channel capacity as we have done in the results in Table VI.1, a finding that Comcast carries its own networks with greater

frequency than do other MVPDs *does not* imply that Comcast drops other networks to accommodate its own. Instead, Comcast (and other integrated MVPDs) could respond to the incentives to carry its in-house networks by investing in more capacity.[199] Indeed, Table VI.2 demonstrates that vertically integrated MSOs do have a tendency to invest in greater channel capacity than do other MSOs. Among the 15 largest cable operators, vertically integrated operators (including Time Warner Cable, which was vertically integrated until quite recently, meaning that most of its capacity investment decisions were made while integrated)[200] account for four of the top seven and only one of the bottom seven in terms of average system capacity.[201]

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199 Some studies (*e.g., Goolsbee,(2007)*) have attempted to control for this possibility by controlling for channel capacity. However to the extent that vertical integration increases incentives to invest in channel capacity, then "holding capacity fixed" in a regression misses this benefit of vertical integration and may lead to incorrect inferences that vertical integration is anti-competitive.

200 Time Warner and Time Warner Cable officially split in March 2009. (Mike Farrell, "Time Warner Split 'Legal,'" *Multichannel News*, March 12, 2009, *available at* http://www.multichannel.com/article/189874-Time_Warner_Split_Legal_.php, *site visited* July 16, 2010.)

201 To check that this pattern is not an artifact of poor quality Warren data, we have confirmed that a similar pattern is seen if one defines capacity based on average channel count using the Rovi data that we use in our regression analyses. We report the Warren figures because they provide a measure of capacity rather than current channel carriage.

Table VI.2: Capacity of Cable Operators

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148. The data in Table VI.2 are consistent with fundamental economic logic that indicates that, by reducing the cost of carrying a set of networks, vertical integration increases an MVPD's

incentives to invest in channel capacity. It should surprise no one that the MVPDs that invest in networks also have a tendency to invest in the capacity to carry more networks. Hence, if the transaction causes Comcast to carry more NBCU networks—an efficient, welfare enhancing outcome—this does not imply that Comcast will necessarily drop other networks, as it may choose to continue to invest in more channel capacity instead.

3. Data on Comcast carriage decisions demonstrate that Comcast is more likely to carry non-Comcast networks that operate in the same categories as Comcast networks than are other MVPDs.

149. We close this part by considering a second test of foreclosure theories. This test builds on the observation that a minimum condition necessary for a vertically integrated MVPD's carriage decisions to be anticompetitive is that the MVPD tends to carry its networks more than other MVPDs *and* that it systematically limits carriage of other networks that operate in the same programming categories as the MVPD's in-house networks. Even a finding that this condition is satisfied would not establish anticompetitive foreclosure because, even within a programming category, it can be economically efficient and welfare enhancing for an MVPD to carry its own networks rather than others. That is, demonstrating that a vertically integrated MVPD tends to limit carriage of networks that operate in the same categories as the MVPD's in-house networks is a *necessary condition* for the possibility of anticompetitive foreclosure, but *not a sufficient condition*.

150. We conducted an econometric analysis of Comcast's carriage decisions to determine if they satisfy this necessary condition, and we find that they do not. Specifically, we analyzed Comcast's carriage decisions relative to those of other MVPDs for networks in the women's and

sports categories as defined by SNL Kagan.[202, 203] Using current channel lineup data from Rovi, we find that Comcast is *more likely* than other MVPDs to carry non-Comcast networks in categories that overlap with Comcast networks. In short, Comcast's behavior is the opposite of what is required for the foreclosure theory to fit the data.

151. To analyze Comcast's carriage decisions, we first consider whether, in total, Comcast carries more or fewer women's and sports networks than other MVPDs. Table VI.3 reports results from a linear regression that estimates the total number of women's and sport networks carried by headend, as a function of an indicator for whether the headend is part of a Comcast cable system, the total number of channels carried by the headend, the demographics for the headend's ZIP code(s), and a separate fixed effect for each network.

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202 We picked these programming categories because they have been identified by opponents to the proposed transaction as being potentially problematic. (*See*, for example, *Cooper and Lynn Declaration* at 19.)

203 SNL Kagan, TV Network Profiles, *available at* http://www1.snl.com/interactivex/BriefingBook/TvNetwork/NetworkProfile.aspx, *site visited* July 11, 2010. As above, when studying carriage decisions for particular networks, we restrict attention to those that are carried by between 1 percent and 99 percent of all headends.

Table VI.3: Linear Regression of Number of Sports and Women's Networks Carried

	Number of Sports and Women's Networks Carried
Comcast	3.65804**
	(0.94539)
Number of networks carried	0.01362**
	(0.00247)
Percent Hispanic	0.00217
	(0.01118)
Percent Black	-0.01305
	(0.02139)
Percent under 18 years	0.22275**
	(0.06380)
Percent over 65 years	0.16439*
	(0.07911)
log (median household income)	4.09141*
	(2.01386)
Population per household	0.03835
	(0.02909)
Percent of homes owned	-0.01547
	(0.02144)

Robust standard errors clustered by MVPD system in parentheses

** p<0.01, * p<0.05

Notes:

Head-end level data on network carriage from Rovi and zip code level demographics from US Census; The observations are at the head-end level; The dependent variable is the sum of sports and women oriented networks (as defined by Kagan) carried by the system; The sports networks include: Tennis, ESPN Classic, Golf, Versus, Speed, ESPN2, ESPN, Black Belt, CBS TV, ESPN News, ESPN U, Fox Soccer, Fuel, Gol TV, MLB, NBA, NHL, Sportsman, and Outdoor. The women-oriented networks included We, Oxygen, Lifetime, Style, Wedding, and Life Real; The regression is weighted by zip code population.

152. The results of Table VI.3 are clear. On average, Comcast headends carry 3.7 more women's and sports networks than other MVPDs' headends, even after controlling for the total

number of channels carried by the headend. Hence, it appears that Comcast's vertical integration into women's and sports programming is associated with greater provision of such networks to subscribers, not with a restriction on the number of women's and sports networks carried as might be expected if Comcast were seeking to limit the competition faced by its own networks.

153. We next turn to Comcast's carriage of *non-Comcast* women's or sports networks. Table VI.4 reports results from a logit regression in which we estimate the likelihood that a headend carries the non-Comcast women's or sports network as a function of an indicator for whether the headend is part of a Comcast cable system, the total number of networks carried by the headend, the demographics for the headend's ZIP code(s), and a separate fixed effect for each network. The results are striking. Far from disadvantaging non-Comcast women's and sports networks, Comcast is actually significantly *more* likely to carry such networks than are other MVPDs. In short, the data contradict the foreclosure theory.

Table VI.4: Logit Regression of Carriage of Non-Comcast Sports and Women's Networks

	Carriage of non-Comcast Sports and Women's Networks
Comcast	1.08590**
	(0.27104)
Number of networks carried	0.00591**
	(0.00125)
Percent Hispanic	0.00068
	(0.00370)
Percent Black	-0.00413
	(0.00612)
Percent under 18 years	0.05050*
	(0.02371)
Percent over 65 years	0.03970*
	(0.01884)
log (median household income)	1.07706*
	(0.51326)
Population per household	0.01067
	(0.01041)
Percent of homes owned	-0.00545
	(0.00496)

Robust standard errors clustered by MVPD system in parentheses

** p<0.01, * p<0.05

Notes:

Head-end level data on network carriage from Rovi and zip code level demographics from US Census; The observations are at the head-end - network level; The dependent variable = 1 if the system carries the non-Comcast sports and women-oriented network and 0 otherwise; Only those networks are included in the analysis that have carriage rate between 1% and 99% across all MVPD systems; The sports networks included are: Tennis, ESPN Classic, Speed, ESPN, ESPN2, CBS TV, ESPN News, ESPN U, Fox Soccer, Fuel, Gol TV, MLB, NBA, NHL, Outdoor, and Sportsman; The women-oriented networks included are: We, Oxygen, Lifetime, Life Real, and Wedding; The model is estimated with network fixed effects, with observations weighted by zip code population.

C. Professor Marx's analysis of the likely effects of the proposed transaction is incorrect.

154. In her report, Professor Marx argues that: (a) there is a distinct relevant antitrust market comprising business news networks, and (b) post-transaction, Comcast would have incentives to engage in various practices (*e.g.,* denial of carriage and poor channel placement) in order to disadvantage Bloomberg TV, which competes with CNBC. In this part, we will demonstrate that:

- Professor Marx's market-definition analysis is fatally flawed and does not establish that business news networks constitute a relevant market. Her claim that Bloomberg TV and CNBC do not compete with other cable news and broadcast networks relies on fundamentally flawed attempts at analysis. Indeed, as we show, one of her principle lines of argument supports the conclusion that CNBC and Teen Nickelodeon are substitutes for one another but the Disney Channel and Nickelodeon are not. Her approach to market definition is manifestly unsound and unreliable.

- Professor Marx's conclusion that Comcast would have anticompetitive incentives to deny Bloomberg TV carriage is the result of her using incorrect values for Comcast's profit margin and CNBC revenues in her model. Using correct values for these parameters, Professor Marx's foreclosure model supports the conclusion that Comcast would *not* have economic incentives to engage in foreclosure of Bloomberg TV.

- Professor Marx's analyses in support of her claims regarding several other types of potential harms (*e.g.,* channel-neighborhood and channel-bundling effects) are similarly unsound and unreliable.

1. The reasoning and empirical analysis underlying Professor Marx's attempt to justify a "business news network market" are fatally flawed.

155. We begin our review of Professor Marx's theories of competitive harm by examining her market-definition exercise, in which she asserts that cable business news networks constitute a distinct relevant market.

156. One of her principle means of arguing for her narrow market definition is to examine the extent to which headends' carriage decisions for various networks are positively or negatively correlated. In particular, Professor Marx asserts that, because her regression analysis finds a negative relationship between carriage of Bloomberg TV on the basic or expanded-basic tier and carriage of CNBC on the basic or expanded-basic tier, the networks are substitutes for one another.[204] Similarly, Professor Marx claims that, because her regression results do not show a negative relationship between Bloomberg TV and other news networks, her results provide support for "a business news market that is distinct from the market for general news networks."[205]

157. There are two important questions for market definition: (1) are Bloomberg TV and CNBC substitutes for one another in the eyes of viewers and advertisers; and (2) are other networks also meaningful substitutes for Bloomberg TV and CNBC? Although there is little doubt that the answer to the first question is "yes," Professor Marx's methodology—which examines the carriage decisions made by MVPDs—is incapable of providing a sound answer to either question.

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204 *Marx Report*, Table 4.

205 *Ibid.*

158. MVPDs make carriage decisions to create programming lineups that appeal to their potential subscribers and advertisers. There is a complex relationship between those decisions and whether various networks are substitutes or complements from the perspective of viewers or advertisers.[206] For example, all else equal, headends in DMAs with populations of viewers who have a particularly strong taste for news are more likely to carry multiple news networks even when those networks are substitutes in the eyes of viewers. Hence, a cross-sectional regression that did not correct for the unobserved headend heterogeneity could find a positive correlation in news-network carriage. In this example, applying Professor Marx's methodology, one would incorrectly conclude that news networks were complements rather than substitutes.

159. The examples demonstrating the fundamental error of Professor Marx's methodology are not just hypothetical. The first column of numbers in Table VI.5 reports the results of a regression explaining whether CNBC is carried on the analog tier as a function of whether Teen Nickelodeon is carried on the analog tier or on the digital tier.[207] These results indicate that a headend that carries Teen Nickelodeon on the analog tier is *less likely* to carry CNBC on the analog tier. By Professor Marx's reasoning, this would imply that CNBC and Teen Nickelodeon are substitutes and belong in the same relevant market. The regression results reported in the second column of numbers in Table VI.5 demonstrate that a headend's carriage of Nickelodeon on the analog tier increases the probability that Disney is carried on the analog tier. By Professor Marx's reasoning, these two networks are complements, not competitors. The much more

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206 As noted above, in a recent *ex parte* communication to the Commission, economist Greg Crawford indicated that "[w]hile channels are surely substitutes in use, they are likely complements at the time of bundle purchase." (*Crawford Presentation* at 66.)

207 Rovi data include analog vs. digital as its basic tier distinction. Analog channels are generally defined as those from 2-99, while digital channels are generally 0, 1, and over 100. This is similar to Professor Marx's breakdown into basic and expanded basic versus digital basic. (*Marx Report*, Table 4).

reasonable conclusion is that both networks tend to be carried on analog by MVPDs seeking to attract families with young viewers. In short, Professor Marx's examination of carriage decisions is a fatally flawed and unreliable approach to identifying patterns of substitution. Similarly, positive coefficients on the relationship between carriage of news networks and carriage of Bloomberg TV reveal nothing about whether these networks are substitutes in the eyes of viewers or advertisers or whether they belong in the same antitrust market.

Table VI.5: Variations on Professor Marx's Table 4 Regressions

	Carriage of CNBC in Analog	Carriage of Disney in Analog
Teen Nick carried in analog	-1.02232*	
	(0.42104)	
Teen Nick carried in digital	0.56770**	
	(0.17459)	
Nickelodeon carried in analog		0.49573*
		(0.22198)
Nickelodeon carried in digital		-2.45213**
		(0.39797)
Number of networks carried in analog	0.00121**	0.00064**
	(0.00008)	(0.00008)
Percent Hispanic	0.00900	-0.00850
	(0.00490)	(0.00463)
Percent Black	0.01687**	-0.01506**
	(0.00417)	(0.00389)
Percent under 18 years	-0.05031**	0.07082**
	(0.01403)	(0.01285)
Percent over 65 years	0.01094	0.00255
	(0.01228)	(0.01191)
log (median household income)	1.47347**	-0.83671**
	(0.32067)	(0.27554)
Population per household	-0.01001**	0.00241
	(0.00296)	(0.00194)
Percent of homes owned	-0.01105*	0.02626**
	(0.00557)	(0.00468)

Robust standard errors clustered by MVPD system in parentheses

** p<0.01, * p<0.05

Notes:

Head-end level data on network carriage from Rovi and zip code level demographics from US Census; The observations are at the head-end level; The dependent variable in the first column regression = 1 if the system carries CNBC in analog format and 0 otherwise; The dependent variable in the second column regression = 1 if the system carries Disney in analog format and 0 otherwise; DBS and Telco MVPDs are excluded from the sample as they offer only/mostly digital service,

160. Professor Marx's application of critical loss analysis to the question of market definition is equally flawed and unreliable. She argues that a hypothetical monopolist of business news

networks would find it profitable to raise its price by {{ }}, which she asserts means that the hypothetical monopolist test commonly used in merger analysis would be passed.[208, 209] As we will now demonstrate, Professor Marx has inappropriately applied the hypothetical monopolist test, and her approach leads to nonsensical results.

161. A useful way to illustrate the fundamentally flawed nature of Professor Marx's application of the hypothetical monopolist test is to examine its implications. One is that any group of networks on which at least {{ }} of viewers spend at least one-fifth of their viewing time constitutes a separate relevant market.[210] By this standard many networks, including TNT, Fox News Channel, ESPN, The History Channel, and SyFy, would constitute individual relevant product markets.[211] Similarly, many combinations of seemingly unrelated networks, such as CNBC and Lifetime or CNBC, A&E, and BBC America, would qualify as separate relevant markets.[212] These examples and others indicate that Professor Marx's approach cannot reliably define separate relevant markets, as it draws implausible market boundaries.

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208 *Marx Report,* Table 5.

209 A standard approach to identifying the set of products in a market is to ask what would be the smallest set of products such that a hypothetical monopoly supplier of those products would increase its profits by raising price above the competitive level by a small but significant amount for a sustained period of time. *Horizontal Merger Guidelines*, § 1.1.

210 *See Marx Report*, Table 5 and ¶¶ 11-16. {{

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211 Comcast Spotlight analysis of Nielsen's National TV Toolbox data. Data used in the analysis were for Live+SD P2+ Minutes Viewed, Ad Supported Cable, Total 24 Hour Day, February 2010.

212 Comcast Spotlight analysis of Nielsen's National TV Toolbox data. Data used in the analysis were for Live+SD P2+ Minutes Viewed, Ad Supported Cable, Total 24 Hour Day, February 2010.

162. The problems with Professor Marx's approach run deeper than even the examples above illustrate. Specifically, the logic underlying her approach supports the conclusion that *all or nearly all* networks are monopolies in their own separate relevant markets and that network owners are irrationally setting their affiliate fees below the profit-maximizing levels. The core problem with Professor Marx's approach is that she fails to account for the fact that programmers and MVPDs reach agreement on affiliate fees through bargaining.

163. To see the implications of this fundamental failure, consider a single network and MVPD that, through bargaining, agree to an affiliate fee of p per subscriber, per month. Given the low marginal costs associated with program creation, the network's per-subscriber profit margin is likely to be p or larger.[213] Assuming, for example, that the parties split equally the surplus associated with carriage of that network on that MVPD, this means the MVPD gets surplus of p or more as well.[214] Hence, increasing the affiliate fee ten percent to $1.1 \times p$ would reduce the MVPD's surplus from p to $0.9 \times p$, which implies that the MVPD would find it profitable to carry the network even at that higher price. Hence, by Professor Marx's argument, this network owner would be a monopolist. That is, she would find that the network constitutes a relevant product market by itself. The result that every network (or at least every network that charges a positive affiliate fee) constitutes a monopoly product in its own relevant market is clearly a nonsensical result.

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213 Professor Marx states that the margin will be approximately p because marginal costs will be near zero. (*Marx Report*, Table 5, ¶ 3.) Incremental advertising revenues can lead to a margin larger than p.

214 As we discussed in Section IV above, the assumption of equal bargaining ability is just that, an *assumption*. We make it here to illustrate a logical point, not to develop specific predictions about price levels.

164. A proper application of the hypothetical monopolist test would examine whether a firm controlling all business news networks would profitably be able to *bargain* for affiliate fees ten percent higher than they are today. This is not what Professor Marx did.

165. As yet another flawed argument in support of her proposed business-news-network market, Professor Marx asserts that DirecTV's channel placements create neighborhoods of similar channels.[215] However, as she acknowledges and Table VI.6, below, makes clear, DirecTV's and DISH Network's placements of business news networks, in fact, support a broader news genre (with some non-news networks sprinkled in).[216]

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215 *Marx Report*, ¶¶ 60 and 94.

216 *Marx Report*, ¶ 60.

Table VI.6: DBS Provider Channel Lineups

Channel Positions of "Business" and "General" News Networks on DBS			
DISH Network		DirecTV	
Channel Number	Network Name	Channel Number	Network Name
200	CNN	350	CSPAN1
201	[No network listed]	351	CSPAN2
202	Headline News	352	[No network listed]
203	Bloomberg TV	353	Bloomberg TV
204	truTV	354	[No network listed]
205	Fox News Channel	355	CNBC
206	Fox Business Network	356	MSNBC
207	CNBC World	357	CNBC World
208	CNBC	358	Current TV
209	MSNBC	359	Fox Business Network
210	CSPAN	360	Fox News Channel
211	CSPAN2	361	[No network listed]

Note:

"General" news networks lightly shaded

"Business" news networks darkly shaded

Sources:

DISH Network, "Standard and HD Channels Guide," *available at* http://www.dishnetwork.com, *accessed* July 5, 2010.

DirecTV, "Premier package," *available at* http://www.directv.com, *accessed* July 5, 2010.

166. Lastly, Professor Marx cites to an earlier Federal Trade Commission decision. Strikingly, the decision she cites refers not to a market but a "distinct programming category," and that category is defined to include "…current national, international, sports, financial and weather news and/or information, and other similar programming," which is far broader than

"business news."[217] Notably, the majority of Commissioners took the view that "substantial evidence" supported the existence of an "all cable television market."[218]

167. In the light of the fact that Professor Marx has presented no meaningful evidence to justify a business-news-network market, it seems appropriate to use a market definition that is *at least* as broad as the "programming category" that the Federal Trade Commission defined. Doing so has significant consequences for the claims made by Professor Marx. For example, she claims that "CNBC's current market share is estimated in the 85% range."[219] However, as seen in Table VI.7, if one considers all news networks, then CNBC's share of total impressions is less than eight percent. The implications are similarly dramatic for estimates of the diversion rate from Bloomberg TV to CNBC that are based on the assumption of proportionality to market shares (*i.e., diversion = CNBC's share*/(100 – *Bloomberg TV's share*)). The estimate falls from [[ ]] using a business-news-network market definition to [[ ]] using a news-network market definition. To the extent that business news networks are closer substitutes for one another than are other news networks, the actual diversion rate may be higher than [[ ]], but it is very likely to be substantially lower than [[ ]].

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217 *See Marx Report*, ¶ 46, n. 40; Federal Trade Commission, *In the Matter of Time Warner, Inc., Turner Broadcasting System, Inc. Tele-Communications, Inc., and Liberty Media Corporation,* Docket No. C-3709, Decision and Order, at 3 and 13, *available at* http://www.ftc.gov/os/1997/02/c3709.do.pdf, *site visited* July 19, 2010.

218 Statement of Chairman Pitofsky, and Commissioners Steiger and Varney, *In the Matter of Time Warner, Inc., Turner Broadcasting System, Inc. Tele-Communications, Inc., and Liberty Media Corporation,* Docket No. C-3709, at 2.

219 *Marx Report*, ¶ 9. Her calculations rely on Bloomberg-provided data and an assumption that Fox Business Network's advertising revenue is equal to Bloomberg TV's.

Table VI.7: Share of News and Business News Networks

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*2. Using corrected parameter values, Professor Marx's foreclosure model shows that Comcast would **not** have incentives to foreclose Bloomberg TV.*

168. Professor Marx offers a vertical foreclosure model in support of her claim that Comcast would have an incentive to drop (or otherwise disadvantage) Bloomberg TV in order to increase CNBC profits.[220] However, as we will now show, her model actually supports the *opposite* conclusion once one uses correct data as inputs.

169. Professor Marx's model is based on incorrect numbers in at least two instances:

220 *Marx Report*, Table 13.

- *Comcast's Video Profit Margin:* Professor Marx uses data for the cable industry average price for expanded basic and an estimate of the cable industry average operating margin to estimate Comcast's video profit margin.[221] Her estimate is $19.51 per video subscriber per month. However, as noted in Section IV.B.2.c), above, the average Comcast variable profit per video subscriber is at least {{ }}.[222]

- *CNBC Advertising Revenue:* Professor Marx relied on Kagan's estimate that CNBC earned [[ ]] in advertising revenues in 2009. In fact, CNBC's actual 2009 advertising revenue was {{ }}.[223]

170. Table VI.8 below reports the results of using Professor Marx's model to calculate critical departure rates after correcting these parameter values.[224] As shown in the first row of the table, when Comcast owns 51 percent of NBCU—and, thus, receives 51 percent of CNBC's profits—a departure rate of 1.0 percent of Bloomberg TV viewers or more would render it unprofitable for Comcast to drop Bloomberg TV. If Comcast owned 100 percent of NBCU, then a departure rate of 1.9 percent of Bloomberg TV viewers or more would render dropping carriage unprofitable.[225]

171. Professor Marx estimates that 2.5 percent of Bloomberg TV viewers would switch away from Comcast if it were to drop Bloomberg TV.[226] This figure is greater than either of the

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221 *Marx Report*, Table 5, ¶11. She assumes a monthly price per subscriber of 49.65 and an operating margin of 39.3%, yielding a profit per subscriber per month of $19.51.

222 Professor Rogerson estimated the margin to be {{ }} per subscriber, per month, and indicated that this figure "should be increased" to account for "contributions from broadband or telephone service." (*Rogerson Report* at 30.)

223 See the spreadsheet titled "15 5 13 6 GE Spec 2(h) Network Ad Revenue (2).xls" included in our backup materials.

224 For this exercise, we used Professor Marx's backup spreadsheet titled "Calculations.xlsx."

225 These rates correspond to departure rates of Comcast viewers of only 0.02 percent and 0.04 percent, respectively.

226 *Marx Report*, Table 13, ¶ 9.

thresholds just reported. Therefore, when based on the correct inputs, Professor Marx's model finds that it would not be profitable for Comcast to drop Bloomberg TV.[227]

172. In addition to these corrections, there are several reasonable modifications to Professor Marx's model that would lead it to indicate even more strongly that Comcast would not find it profitable to drop Bloomberg TV in an attempt to advantage CNBC. For example, the model does not admit the possibility that Bloomberg TV could agree to lower its affiliate fee or to pay Comcast in order to avoid being dropped.[228] The model could also be modified to relax Professor Marx's extremely strong (implicit) assumption that 100 percent of the former Bloomberg TV viewers who remained with Comcast after it dropped Bloomberg TV would shift their viewing to CNBC. For instance, based on Professor Marx's own claims about business news market shares, allowing for diversion proportional to shares, the diversion ratio to CNBC would be [[ ]].[229] As shown in the second row of Table VI.8, by making this change to Professor Marx's model, the critical departure rates fall to 0.9 percent if Comcast owns 51 percent of NBCU and 1.8 percent if it owns 100 percent of NBCU. As shown in Table VI.7, above, within an all-news-networks market, proportional diversion from Bloomberg TV to CNBC would be less than eight percent. If one accounts for the fact that Bloomberg TV and CNBC may be closer substitutes for one another than for some other news networks by assuming

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227 *Marx Report*, Table 13, ¶ 9. Note that, in Table 11, Professor Marx also reports critical departure rates as a percentage of viewers who watch only Bloomberg TV (meaning they do not watch CNBC). However, as described in her report, the estimated actual departure rate (2.5 percent) is a percentage of *all* Bloomberg TV viewers, so reporting critical departure rates as a percentage of *Bloomberg TV-only* viewers is misleading and irrelevant.

228 Although Bloomberg presumably would rather not act in this way, such actions could be expected to generate consumer benefits in the form of lower cable subscription fees.

229 *Marx Report,* n. 2. Professor Marx indicates that CNBC's market share is 85 percent and notes that her calculations are based on an assumption of [[ ]].

a diversion ratio of 67 percent, the critical values fall to 0.6 percent if Comcast owns 51 percent of NBCU and 1.3 percent if it owns all of NBCU, as seen in the third row of Table VI.8, below.

Table VI.8: Corrected Critical Values for Professor Marx's Foreclosure Model

	Critical Departure Rate as a % of Bloomberg Viewers	
	Comcast Share of NBCU = 0.51	Comcast Share of NBCU = 1.0
Correct Comcast Margin and CNBC Ad Revenue	1.0%	1.9%
Correct Comcast Margin and CNBC Ad Revenue and diversion ratio = 0.92	0.9%	1.8%
Correct Comcast Margin and CNBC Ad Revenue and diversion ratio = 0.667	0.6%	1.3%

173. There are also other errors in Professor Marx's analysis that further bias her toward finding that foreclosure would be profitable. For example, although she correctly notes the possibility that a fraction *a* of Comcast subscribers would react to the loss of Bloomberg TV on Comcast by dropping MVPD service altogether, she does not account for the fact that this would harm CNBC. In addition, in determining the increase in CNBC's advertising rate per viewer due to increased viewership, Professor Marx relies on the methodology from our *Foreclosure Declaration* for which the relevant metric is the overall percentage change in network viewership.[230] However, she incorrectly uses the percentage change in CNBC viewership among

[230] *Foreclosure Declaration*, ¶¶ 68-72.

Comcast viewers, rather than the much lower percentage increase in CNBC viewership among all viewers.[231]

174. In summary, the conclusion is clear: Professor Marx's own model implies that it *would not* be profitable for Comcast to drop Bloomberg TV. Her analysis finds that, due to the loss of Bloomberg TV, Comcast would suffer losses from viewer departures that would overwhelm any gains to CNBC.

175. Professor Marx also presents a "longer-term" analysis that assumes that *all* Bloomberg TV viewers on *all* MVPDs would leave Bloomberg TV and switch to CNBC. Aside from the shortcomings described above, which are shared by her longer-term calculations, this version of the model suffers a fundamental logical inconsistency. In order for Comcast to drive Bloomberg TV viewers on non-Comcast systems to CNBC, it would have to be the case that Comcast had driven Bloomberg TV out of business. If this had occurred, however, then there would be no reason for any viewer to depart Comcast, as no rival MVPD could provide access to Bloomberg TV. Hence, the whole exercise of solving for critical departure rates in this case is pointless. Instead, the analysis of this "longer term case" simply boils down to one question: could Comcast profitably drive Bloomberg TV out of business by denying it carriage? As discussed in Part VI.A, above, the answer is "no."

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231 She attempts to adjust for this by multiplying the percentage change in CNBC advertising revenues by an estimate of current CNBC advertising revenue *among Comcast viewers*. However, this does not solve the problem because the percentage change in CNBC viewership affects the benefits from foreclosure in a non-linear fashion.

3. *Professor Marx's theories of harm based on post-transaction tier, neighborhood, and bundling decisions by Comcast are empirically and theoretically flawed.*

176. Professor Marx offers several other severely flawed theories of harm to Bloomberg TV from the transaction: (i) Comcast may place Bloomberg TV on a "disadvantageous tier;"[232] (ii) Comcast may place Bloomberg TV "in a less desirable channel location, far from CNBC;"[233] and (iii) "bundling of CNBC with other Comcast and NBCU cable networks" will enable Comcast to induce *other MVPDs* to disadvantage Bloomberg TV.[234, 235] We discuss each, in turn.

a) Harms related to the tier on which Bloomberg TV is carried

177. Professor Marx relies on her foreclosure model to assert that, post-transaction, Comcast would have incentives to place "Bloomberg TV on a disadvantageous tier vis-à-vis CNBC, rather than denying it carriage altogether."[236] However, for the reasons discussed in Part B of this section, application of her corrected foreclosure model in this manner implies that it would *not* be profitable for Comcast to move Bloomberg TV to a less attractive tier.

b) Harms related to Bloomberg TV's channel neighborhood

178. Professor Marx claims that, post-transaction, Comcast may have an incentive to disadvantage Bloomberg TV by placing it "in a less desirable channel location, far from CNBC."[237] As an initial matter, note that any such theory of harm is entirely speculative, as by

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232 *Marx Report*, ¶ 105.

233 *Marx Report*, ¶ 94.

234 *Marx Report*, ¶ 121.

235 Our responses to Professor Marx's discussion of potential online harms are subsumed in our analysis in Sections VII and VIII, below. In addition, we understand that Professor Rosston and Dr. Topper are addressing Professor Marx's advertising related theories in their report.

236 *Marx Report*, ¶ 105.

237 *Marx Report*, ¶ 94.

Professor Marx's own evidence, Comcast rarely places Bloomberg TV in a channel position near CNBC today: CNBC is generally inside the first 100 channel numbers (the standard cutoff for the analog tier, according to Rovi), while Bloomberg TV is generally outside the first 100 channel numbers.[238] Professor Marx speculates that, but for the transaction, Comcast would move Bloomberg TV into a genre-based channel neighborhood as Comcast makes greater use of digital transmission.[239]

179. Professor Marx's theory is based on a view that a potential business news neighborhood would be "viewer-friendly."[240] As such, by leaving Bloomberg TV out of the neighborhood, Comcast would offer viewers a less appealing package. Professor Marx provides no evidence or analysis to indicate that the gain to CNBC would offset the harm to Comcast due to what she believes would be a less viewer-friendly channel lineup. To the contrary, the evidence from the corrected version of her foreclosure model indicates that strategies that disadvantage Bloomberg TV (and thus Comcast's channel lineup) to help CNBC are unlikely to be profitable.

180. There are other serious problems with Professor Marx's neighborhood theory. In her Tables 11 and 12, she purports to show that Bloomberg TV is hurt when it is not included in a neighborhood near CNBC. To the contrary, Professor Marx's Table 11 shows only that Bloomberg TV is less frequently viewed on cable systems (which, if they carry both networks, tend not to place Bloomberg TV near CNBC) than on direct broadcast satellite systems (which tend to place CNBC and Bloomberg TV on nearby channel locations within a broad news genre). The failure to control for differences in carriages rates is a notable deficiency of her analysis. As

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238 *Marx Report*, Table 10.

239 *Marx Report*, ¶ 94.

240 *Ibid.*

seen in Table VI.9 below, cable systems carry Bloomberg TV less frequently than do satellite systems (for reasons that obviously are independent of the transaction), so it is entirely unsurprising that Bloomberg TV viewership rates are lower on cable, and this finding does not support any inference about the possible existence of neighborhood effects.

Table VI.9

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181. Professor Marx's Table 11 also shows that satellite subscribers watch less business news overall, and less CNBC in particular, than do cable subscribers. Rather than having anything to do with neighborhood effects, this result may be driven by differences in subscriber demographics, particularly to the extent that satellite systems reach a disproportionately large number of rural viewers, while Professor Marx's own evidence indicates that the largest DMAs "are particularly important for business news."[241]

182. Professor Marx's Table 12 uses a regression analysis, with fixed effects for the MVPD in question, to control for at least some of these differences. She finds that Bloomberg TV's viewership rises when Bloomberg TV is in the same neighborhood as CNBC, while CNBC's falls. However, at least two results reported in this table raise doubts about the validity of her

[241] *Marx Report*, ¶ 89.

analysis.[242] First, the coefficient on whether CNBC is available in column 4 implies that the *availability* of CNBC *reduces* the number of hours spent watching CNBC. Second, the coefficients on whether Bloomberg TV is available (in columns 3 and 4 of Professor Marx's Table 12) indicate that the availability of Bloomberg TV *increases* viewership of CNBC, which runs directly counter to Professor Marx's claims.[243]

c) Network bundling effects

183. Finally, we turn to Professor Marx's theory that, by bundling CNBC together with current Comcast networks, NBCU will have increased leverage with which to induce MVPDs to carry CNBC, which might limit carriage of Bloomberg TV.[244] This theory of harm to Bloomberg TV is seriously flawed.

184. First, under this theory, harm would arise only in situations in which both: (a) the additional "leverage" created by the Comcast networks (*e.g.,* Golf Channel, Versus, E!, and Style) would give NBCU the power to "force" MVPDs that did not previously want CNBC even though NBCU already had "leverage" from its ownership of NBC, USA, MSNBC, and other networks, and (b) carrying CNBC led the MVPD to choose to drop Bloomberg TV.

185. Professor Marx provides no reason why it would be profitable to use leverage to force MVPDs to carry CNBC rather than to charge higher affiliate fees for the networks that allegedly

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242 To date, Professor Marx has refused to provide backup materials sufficient to replicate and test her findings. We are continuing to investigate her regressions and may submit additional findings at a later date.

243 One explanation for this finding might be that the decision to subscribe to a tier that carries Bloomberg is endogenous and tends to be made by those who value business news. This possibility highlights the fact that many of the right-hand-side variables in the regressions may be correlated with unobserved factors that also affect the dependent variables, a well-known econometric problem that implies that *all* coefficients in the regression are biased. (William H. Greene, Econometric Analysis, 5th Edition, Prentice Hall: New Jersey, 2003, § 5.4.)

244 *Marx Report*, ¶¶ 121-122.

would be used for leverage. The only empirical "evidence" that Professor Marx provides in support of her claim is a set of regression results showing that, historically, networks that have had a "major multi-network owner" have tended to achieve higher subscribership levels.[245] At its core, Professor Marx's claim is that evidence that these owners increase output is somehow evidence of anticompetitive behavior. She apparently ignores the possibility that such increases in output may be due to the higher quality or lower costs that these owners may bring to the networks they own. She also ignores that this increased subscribership is inconsistent with the exercise of market power to raise the prices or restrict the output of the networks (and thus *is* consistent with our evidence, presented in Section IV and V, above, that vertical and horizontal integration have not led to higher network prices). It may be that Bloomberg TV does not want to compete with networks that are able to expand their output, but to see that as a competitive harm entirely confounds harm to competitors and harm to competition in a way that is inconsistent with fundamental competition theory and policy.

186. Lastly, it is worth noting that, if one were to treat Professor Marx's regression results as providing meaningful measures of the anticompetitive leverage held by different owners, then one would have to conclude that Cox—through its interest in the Discovery networks—has more leverage than any other content owner and that Disney and Viacom have relatively little leverage.[246]

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245 *Marx Report*, Table 12.

246 See coefficient estimates in the first column of Table 15 in the *Marx Report*. Cox has the highest value among the content owners included in the regression; Disney and Viacom are among the lowest.

D. Professor Wilkie's discussion of signal compression is misleading.

187. We close this section by addressing certain claims made by Professor Wilkie regarding broadband carriage. If we understand his report correctly, Professor Wilkie asserts that Comcast would have the incentive and ability to degrade the signals of content downloaded by subscribers to Comcast's broadband Internet access service when that content competes with NBCU content.[247] He provides no analysis of the costs and benefits to Comcast from pursuing such a strategy. Instead, he points to evidence that he claims "suggests that Comcast, indeed, has the ability to selectively degrade online video content and has done so in the past."[248] As we will now discuss, this claim is highly misleading.

188. We observe at the outset that the data to which he refers (in his Table 1) are for signals sent via Comcast's cable television service, not its broadband Internet access service.[249] Equally if not more important, his interpretation of the data appears to be based on a fundamental misunderstanding of the technology Comcast uses to transmit high-definition programming efficiently. Professor Wilkie attempts to infer that, because the average bitrate reported for Comcast is lower than that reported for FiOS—with the gap varying by network—Comcast is "selectively" degrading certain content.[250] This inference is flawed on multiple levels. First, although positively correlated with quality, bitrate is *not* a measure of quality. The goal of compression technology is to reduce the bitrate required to provide a given level of picture

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247 *Wilkie Report*, ¶¶ 26-27.

248 *Id.*, ¶ 27.

249 This table presents a comparison of average bitrates for certain HD television channels carried both by Verizon's FiOS service and Comcast, performed by a single customer located in Virginia and reported on an online forum. The source to which Professor Wilkie refers is available at http://www.avsforum.com/avs-vb/showthread.php?t=1008271, *site visited* July 15, 2010.

250 *Wilkie Report*, ¶ 27.

quality.[251] The ability to limit bitrate and still provide acceptable quality depends on the particular content airing on a particular network at particular point in time—a still image can be shown in extremely high quality at a very low bitrate; sports content with lots of action or fast camera pans requires a very high bitrate to achieve high quality.[252] Comcast employs automated systems that optimize the degree of signal compression as a function of the characteristics of the content being aired and the set of high-definition networks sharing common bandwidth on its fiber backbone at the time, continuously adjusting the compression as conditions change.[253] These systems do *not* set different quality levels for different networks based on the identity of the network owner.[254] FiOS's compression algorithms may be different from Comcast's, and the collection of content sharing common bandwidth on the FiOS system may differ from that on Comcast at any given time. Hence, no inference of selective or discriminatory "degrading" can be made based on differential bitrates across high-definition networks at a point in time.[255]

VII. USE OF NBCU PROGRAMMING TO FORECLOSE ONLINE DISTRIBUTORS

189. In our *Online Distribution Declaration,* we provided a set of evidence from which we concluded that that "the proposed transaction does not threaten competition in the distribution of long-form, professional-quality video programming, notably the provision of such programming

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251 Tony Werner, Chief Technology Officer, Comcast Cable, July 14, 2010, interview.

252 Tony Werner, Chief Technology Officer, Comcast Cable, July 14, 2010, interview.

253 Tony Werner, Chief Technology Officer, Comcast Cable, July 14, 2010, interview.

254 Tony Werner, Chief Technology Officer, Comcast Cable, July 14, 2010, interview.

255 Professor Wilkie's source also indicates that Comcast does not apply recompression to ESPN-HD or ESPN2-HD signals. (*See* http://www.avsforum.com/avs-vb/showthread.php?t=1008271, *site visited* July 15, 2010.) Comcast indicates that this is only because many sports networks currently are not distributed over the fiber backbone due to difficulties meeting local blackout requirements. As this difficulty is overcome, such content will be shifted to distribution over the fiber backbone (as is the plan for all content delivered by Comcast). (Tony Werner, Chief Technology Officer, Comcast Cable, July 14, 2010, interview.)

via the Internet."[256] Although our report covered a large number of topics related to competition in the provision of video over the Internet, two topics have garnered the most interest in the reports and declarations that we reviewed: (i) the extent to which online video is a complement or a substitute for services offered by Comcast, and (ii) whether Comcast would be able profitably to induce NBCU to withhold content from an "online MVPD" (as defined in our *Online Distribution Declaration)* should one emerge.

190. In this section, we address these topics as follows:

- First, we update and evaluate the evidence on whether online video is a complement or substitute for the traditional television services offered by Comcast and NBCU. We find that a balanced review of available evidence continues to support the conclusion that online video and traditional television are primarily complements today and will remain so for the near future. It is, of course, possible that online distributors offering services that (at least partially) substitute for traditional MVPDs will emerge in the longer term. It should be noted that this fact in no way undermines our central conclusion that Comcast would not be able profitably to induce NBCU to withhold programming from an online MVPD competitor. This is so because—for purposes of our foreclosure analysis—we assumed that an online distributor would emerge as a viable substitute for traditional MVPD services and found that foreclosure would be very unlikely to be profitable.

- Second, we reiterate that online video distribution and broadband Internet access services are—and will continue to be—complements for one another. There is no

256 *Online Distribution Declaration*, ¶ 3.

basis for reaching any other conclusion. This relationship generates economic incentives for Comcast to support the development of online video distribution.

- Lastly, we respond to criticisms of the online foreclosure analysis presented in our *Online Distribution Declaration.* We demonstrate that these criticisms do not change our initial conclusion regarding the lack of potential competitive harm.

A. Available evidence indicates that online video is currently complementary to traditional television viewing and MVPD services.

191. We begin by updating and evaluating evidence on whether online video is a complement or substitute for the traditional television services offered by Comcast and NBCU.

192. In our *Online Distribution Declaration,* we examined several types of evidence, which demonstrated that online video is currently complementary to the services offered by traditional MVPDs and broadcast and cable networks.[257] First, we considered usage patterns of online video relative to traditional television. We observed that: (i) consumers tend to watch much less online video than traditional television; (ii) online streaming of video tends to be much steadier throughout the day than traditional television viewing; (iii) online video sites offer video-on-demand as opposed to linear networks; and (iv) online viewing tends to be sporadic ("default off") while television viewing tends to be continuous ("default on").[258] Such patterns demonstrate that, households today generally use online video as a supplement to rather than a replacement for traditional television viewing.

193. Second, we presented analyses from Nielsen and Bernstein Research, which demonstrate that consumers use online video to watch missed episodes of a television series, to keep up with

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257 *Online Distribution Declaration*, ¶¶ 22-41.

258 *Online Distribution Declaration*, ¶¶ 22-28.

a television program when they are traveling, and to watch web exclusives or "behind the scenes" clips of specific television shows.[259] Reinforcing this finding, an analysis from NBCU indicates that [[

]][260]

194. Finally, we examined evidence indicating that there has been minimal cord-cutting (dropping traditional MVPD services in favor of online alternatives) and that, even as online video usage has increased dramatically over the last several years, the number of MVPD subscribers has also continued to grow.[261] These trends are consistent with the conclusion that online video viewing today is more of a complement to than a substitute for traditional television viewing.

195. Dr. Singer criticized our initial analysis of the evidence. However, these criticisms are weak and do not undermine the conclusion that online video is currently a complement for traditional television viewing:

- He claims that evidence that online video viewing is increasing at the same time as is traditional television viewing is not evidence that they are complements, because complementarity requires that the amount of traditional television viewing goes up when the *price* of online viewing falls.[262] We agree with Dr. Singer's definition of complementarity. However, he misses the basic economic point that the increased

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259 *Online Distribution Declaration*, ¶¶ 30-31.

260 *Online Distribution Declaration*, ¶ 40.

261 *Online Distribution Declaration*, ¶¶ 37-39.

262 *Singer Declaration*, ¶ 201.

consumption of online video is occurring concurrently with increases in the *quality* of broadband connections and online offerings—meaning that the *quality-adjusted* price of online video is falling at the same time that traditional television viewing is increasing, thus meeting the economic definition of complements. Hence, Dr. Singer's criticism is invalid.

- Dr. Singer also asserts—without foundation—that, absent the growth of online video, traditional television viewing would have grown even faster.[263] Although Dr. Singer speculates about hypothetical alternative trends, the simple facts are that traditional television viewing has expanded as online video usage has increased, and the most obvious explanation is that these products currently are complements.

- He notes that it is possible that online video is a substitute for traditional video for some segments of the population.[264] Although this is a possibility, what matters for Comcast's and NBCU's incentives are whether online video is a substitute or complement for traditional television *overall,* and that is the question to which our evidence speaks. Dr. Singer similarly argues that, because we acknowledged that, if some people respond to the loss of NBCU programming on their current MVPD by turning to online video, we are implicitly acknowledging that the products are substitutes.[265] This argument fails to recognize that finding that some people might switch from one product to another if the first product become unavailable is very

263 *Singer Declaration*, ¶ 202.

264 *Singer Declaration*, ¶ 203.

265 *Singer Declaration*, ¶ 204, n. 419.

different from finding that most people would switch from one product to another in response to a plausible change in the quality-adjusted price of the first product.

- Dr. Singer notes that, in itself, the fact that online video and traditional television are differentiated products does not imply that they must be complements.[266] Although a correct statement, it misses the point that the differentiation between online and traditional television lessens the degree of substitutability between them and is consistent with other evidence of complementarity.

196. Since the filing of our *Online Distribution Declaration*, new evidence has emerged, and it supports our initial conclusions. For example, Nielsen's new "Three Screen Report" for the first quarter of 2010 concludes that "[t]he amount of time spent watching television is still increasing: viewers watched two more hours of TV per month in Q1 2010 than in Q1 2009."[267] In addition, a recent posting on Nielsen's website summarized the evidence in simple terms, stating that, "for now the idea of a cord-cutting revolution appears to be purely fiction."[268]

197. The complementary nature of online video is also evidenced in the characteristics of new online services such as Hulu Plus. Hulu Plus is a subscription version of the free Hulu service that offers a larger library of broadcast network content for $9.99 per month. This new subscription service is positioned as a complement to traditional cable content: Hulu's CEO describes it as "…like what the smart-phone is to the laptop," and Quincy Smith, a former chief executive of CBS Interactive, states "I think the hope is that a ten-dollar subscription is a

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266 *Singer Declaration*, ¶ 206.

267 The Nielsen Company, "Three Screen Report," Volume 8, 1st Quarter 2010 at 2.

268 "Busting the Cord-Cutting Myth: Video in the Interactive Age," *Nielsen Wire*, June 16, 2010, *available at* http://blog.nielsen.com/nielsenwire/online_mobile/busting-the-cord-cutting-myth-video-in-the-interactive-age/, *site visited* July 8, 2010.

complement to a 50-plus dollar subscription from a cable or satellite company."[269] Richard Greenfield, an analyst reviewing Hulu Plus makes this point sharply:[270]

> While the popular press will undoubtedly focus on the risk that consumers can now pay $10 for content that use to costs [sic] multiple times more via cable and satellite, nothing could be farther from the truth. Hulu plus is a complement to traditional TV, in many ways like a DVR is complementary… Hulu is for TV fans who want anytime/anywhere access to broadcast TV content – people that heard about Glee but never watched it and do not want to wait for DVD.

198. Dr. Singer argues that the evidence indicates that online video is, or soon will be, a substitute for traditional television viewing. However, Dr. Singer's relies on poor studies, statements taken out of context, and other potentially misleading evidence. Broadly speaking, Dr. Singer points to news reports regarding online video usage trends and third-party studies on cord-cutting.[271] A review of the studies underlying these news reports, demonstrates that the evidence that Dr. Singer cites does not support the points he advances or is, at best, mixed.[272]

199. First, Dr. Singer claims that industry analysts "have noted the threat posed by online video services to traditional MVPDs."[273] As support for this claim, he cites to a report in which

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269 Brian Stelter, "Hulu Unveils Subscription Service For $9.99 a Month," *The New York Times*, June 29, 2010, *available at* http://mediadecoder.blogs.nytimes.com/2010/06/29/hulu-unveils-subscription-service-for-9-99-a-month/, *site visited* July 8, 2010.

270 Richard Greenfield, "10 Things You Need to Know About Hulu Plus," BTIG Research Blog, June 30, 2010.

271 *Singer Declaration*, ¶ 115.

272 We have been able to obtain Michael J. Olson and Andrew H. Murphy, "Internet Video: Field of Dreams or Nightmare on Elm Street?," *Piper Jaffray*, November 2009; Matthieu Coppet *et al.*, "Can Pay TV Benefit from Online Video?," *UBS*, June 22, 2009; Kristen Purcell, "The State of Online Video," *Pew Internet and American Life Project*, June 3, 2010; Parks Associates, "Online Video & Broadband Service Provider Strategies," April, 2010; Parks Associates, "TV 2.0: The Consumer Perspective," August, 2008; Vince Vittore and Dmitriy Molchanov, "Consumers Consider Axing the Coax," *Yankee Group*, April, 2010; The Conference Board, "Consumer Internet Barometer, Trends in Usage & Attitudes," Third Quarter 2009; Consumer Electronics Association, "Net-Enabled Video – Early Adopters Only?," March, 2009. We have been unable to obtain "The Battle for the North American (US/Canada) Couch Potato: New Challenges and Opportunities in the Content Market," *The Convergence Consulting Group Ltd.*, April, 2010.

273 *Singer Declaration*, ¶ 115.

analysts at Piper Jaffray state that in "3-5 years we expect internet delivery will start to rival the physical distribution models."[274] In fact, the statement in the Piper Jaffray report refers to online rental options' rivaling bricks-and-mortar movie rental stores, and it is unrelated to traditional MVPD services.[275]

200. Dr. Singer cites data from the Pew Research Center, comScore, and Parks Associates that show online viewership of television and movies is increasing and interprets this trend as evidence of substitution of online video for "cable television service."[276] However, as discussed above, this trend together with the concurrent increase in traditional television viewing is evidence that the products are complementary.

201. Dr. Singer goes on to argue that, because the "number who watched news and sports videos increased to 43 percent and 21 percent, respectively," "such activity represents a *displacement* of time that would otherwise be spent watching television" because news and sports have traditionally been offered by MVPDs.[277] Despite his assertions, he offers no evidence that displacement has actually occurred. Data from Nielsen shows that throughout the day, the total number of online streams of news and sports content viewed at work is higher than the number viewed at home, providing direct indication that much of the online viewing of news and sports occurs outside the home and thus likely supplements traditional television viewing.[278]

202. Dr. Singer then attempts to show that consumers have engaged in cord cutting by

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274 *Ibid.*

275 Michael J. Olson and Andrew H. Murphy, "Internet Video: Field of Dreams or Nightmare on Elm Street?" Piper Jaffray, November, 2009 at 5.

276 *Singer Declaration*, ¶ 115.

277 *Ibid.*

278 Nielsen, Video Census, May 2010 data.

dropping their MVPD service in favor of online video. He first cites to a *Wall Street Journal* article, summarizing a study by Parks Associates, which indicates that "some 900,000 U.S. homes did not pay for television and relied solely on Internet-based television in 2008."[279] It is very important to recognize, however, that the Parks study provides no indication of how many of these households would have subscribed to MVPD services absent the availability of an online option (which is the number of interest in examining competitive effects) and how many would not subscribe to an MVPD whether or not online video was available. In other words, the study does not indicate whether Internet-based television caused people not to subscribe to MVPDs. In this regard, it is notable that Dr. Singer does not cite to the sentence that follows shortly thereafter in the *Wall Street Journal* article, which indicates that "8 % of adults who watch video online now watch TV less often," which implies that for 92 percent of adults who watch video online, there is no reduction (or perhaps there is an increase) in traditional television viewing.[280] Lastly, we observe that 900,000 homes is less than one percent of MVPD subscribers. Indeed, a recent Parks study found that only 0.5 percent of broadband households responding to the survey did not pay for television and instead relied on online video.[281]

203. Dr. Singer also points to a recent report from analysts at the Yankee Group.[282] This study claims to find evidence that one in eight consumers will reduce or cancel MVPD services in favor of over-the-top options in the next year but also notes that "very few consumers have

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279 *Singer Declaration*, ¶ 115.

280 Christopher Lawton, "More Households Cut the Cord on Cable," *The Wall Street Journal*, May 28, 2009, *available at* http://online.wsj.com/article/SB124347195274260829.html, *site visited* July 8, 2010.

281 Jayant Dasari, "Online Video and Broadband Service Provider Strategies," Parks Associates, April 2010, *available at* http://www.parksassociates.com/research/reports/tocs/pdfs/parks-OnlineVideoServiceProviderStrategies.pdf, *site visited* July 8, 2010 at 38 and 26.

282 *Singer Declaration*, ¶ 115.

already made the jump to Internet-only video."[283] The estimate of how many consumers will scale back or cut MVPD services relies on results from the Yankee Group's *U.S. Consumer Survey, Waves 5-12*; a survey that asks consumers whether they believe the Internet provides them with enough options in order for them to consider cancelling their pay television subscriptions. No analysis or explanation is provided for how the number of consumers who would actually reduce or cut pay television services was determined based on the number of consumers who said they would *consider* such an option. The analysts state only that they assume that "a high percentage of the 7 percent that already are considering it", "half of the 13 percent who say they didn't know about coax-cutting but would consider it", and 5 percent of the "47 percent who say they haven't thought about it at all" will cut the cord in the next 12 months.[284] The inclusion of the latter two groups in this statistic is strikingly aggressive. By this methodology, if the entire sample had responded that they had not thought about cord-cutting at all, then the Yankee Group still would have concluded that 5 percent were likely to cut the cord. And, if the entire sample had said they had not even previously known cord cutting was an option but would consider it, then the Yankee Group would have concluded that fifty percent of households were likely to cut the cord.

204. Finally Dr. Singer (among others) also cites to a recent study from the Convergence Consulting Group finding that, in 2008-2009, 800,000 households canceled their pay TV subscription services and that number is expected to double by 2011.[285] Critically, it is not clear what proportion of these 800,000 households cancelled their subscriptions *because* of increased

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283 Vince Vittore and Dmitriy Molchanov, "Consumers Consider Axing the Coax," Yankee Group, April 22, 2010 at 3.

284 Vince Vittore and Dmitriy Molchanov, "Consumers Consider Axing the Coax," *Yankee Group*, April 2010 at 9.

285 *Singer Declaration*, ¶ 115; *Wilkie Report,* ¶ 8.

online options as opposed to, for example, the economic downturn during this period. Moreover, 800,000 households represent less than one percent of households who subscribe to MVPD services.

B. The complementarity between Comcast's broadband Internet access services and online video gives Comcast incentives to encourage competition and output expansion in online video.

205. Whatever one's views on the future relationship between online video and traditional television, it is clear that online video is inherently complementary to broadband Internet access services, including those offered by Comcast. Indeed, online video may be a "killer application" for broadband services that is capable of generating sizable economic returns for Comcast's investment in broadband Internet access infrastructure.

206. In response to our analysis of the complementarity between online video and broadband Internet access services, Dr. Singer claims that we "confuse the demise of OTT providers (a good thing for Comcast) with the demise of online video viewing (a bad thing for Comcast)."[286] In particular, he argues that Comcast could rely on the existence of Fancast Xfinity TV to make up for broadband Internet access traffic lost through foreclosure of other online video providers.[287]

207. Dr. Singer's argument ignores the fact that current users of Fancast Xfinity TV use approximately **[[ ]]** of data per month, while it has been estimated that an online consumer replicating traditional television viewing would use nearly 300 gigabytes of data per month.[288] This usage difference reflects the fact that, as we discuss more fully in Section VIII,

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286 *Singer Declaration*, ¶ 207.

287 *Ibid.*

288 *Online Distribution Declaration*, ¶ 43.

below, Fancast Xfinity TV is designed to be a complement to the traditional Comcast cable service, not a substitute.[289] For example, it does not offer live sporting events or news.[290] Consumers do not pay extra for Fancast Xfinity TV beyond the cost of their cable service, and there is no expectation that consumers will replace the bulk of their traditional television viewing with online viewing.

C. Responses to Dr. Singer's, Dr. Cooper's, and Professor Wilkie's criticisms of the online foreclosure model in our *Online Distribution Declaration*.

208. Several commenters have criticized the foreclosure model used in our *Online Distribution Declaration*. Each of these criticisms is based on faulty economics, unsupported by the facts, or unrelated to the present transaction. In this part, we review the flaws in the arguments. None of these criticisms changes the fundamental conclusion of our *Online Distribution Declaration* that, even if an "online MVPD" offering a substitute to traditional MVPD services were to emerge, Comcast could not profitably induce NBCU to withhold content from the online MVPD.[291]

1. Dr. Singer's criticisms of our online foreclosure model are weak and do not alter the central conclusion that foreclosure is very unlikely.

209. Dr. Singer criticizes several of the assumptions built into the foreclosure model. We address each of his criticisms in turn.

210. First, Dr. Singer argues that we overstated the losses to NBCU from an online foreclosure strategy because the losses in revenues from advertising and affiliate fees are reduced to the extent that foreclosure either prevents subscribers from cutting the cord or induces them to

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289 Amy Banse, President, Comcast Interactive Media, July 16, 2010, interview.

290 *Ibid.*

291 *Online Distribution Declaration,* § III.

switch back to Comcast if they already subscribe to an online MVPD.[292] Contrary to Dr. Singer's claim, however, we explicitly accounted for both possibilities in the model.[293]

211. Second, Dr. Singer argues that online MVPDs would pay lower affiliate fees than current MVPDs, meaning that we overstate the losses to NBCU from a foreclosure strategy.[294] As we described in our report, there are sound reasons to expect that, if online MVPDs offered content that mirrored that of traditional MVPDs, then online MVPDs would be likely to pay licensing fees at least as large as those paid by traditional MVPDs.[295] If, on the other hand, an online MVPD negotiated a lower affiliate fee by foregoing some content (*e.g.,* live sporting events and news), as Dr. Singer suggests, then this strategy also would reduce the importance of NBCU networks as a competitive tool and would reduce the amount of switching one would expect to see in the event that those networks were withheld.

212. Next, Dr. Singer argues that our assumption that NBCU would be unable to withhold content from some viewers because they could continue to access content over-the-air "does not pass the laugh test."[296] As we noted in our earlier declaration, Sezmi seamlessly incorporates the NBC over-the-air broadcast signal into a viewer's programming menu.[297] Dr. Singer dismisses the existence of Sezmi by saying that it is just one provider and that this solution would not be

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292 *Singer Declaration*, ¶ 209.

293 *Online Distribution Declaration*, ¶¶ 81-82, 131-134

294 *Singer Declaration,* ¶ 209.

295 *Online Distribution Declaration,* ¶ 68.

296 *Singer Declaration,* ¶ 210 and n. 426.

297 Indeed, Sezmi's business model also involves sending cable channels to viewer's homes via over-the-air digital broadcast signals. Sezmi, "How It Works," *available at* http://www.sezmi.com/what-is-sezmi/how-it-works/overview.php, *site visited* July 16, 2010.

available for all subscribers.[298] We never claimed that a Sezmi-like solution would be a good option for all consumers. We simply note that, to pursue this business model, Sezmi must believe that a reasonably large number of viewers are able to receive high-quality over-the-air digital signals from broadcast stations, which implies that online MVPDs may be able to use this as an alternative way to provide their customers access to NBC broadcast stations' signals if NBCU were to attempt to withhold access. Clearly the existence of such alternative access methods limits the ability to use NBC as part of a foreclosure strategy.

213. Dr. Singer then claims that we should have considered diversion to Time Warner Cable and other out-of-region cable operators because "Comcast's current exclusionary conduct is being carried out *jointly*" via TV Everywhere.[299] This claim is pure assertion for which Dr. Singer provides no evidence. The fact that other MVPDs have launched—or are considering launching—services similar to Comcast's Fancast Xfinity TV does not mean that these companies act as a single firm or engage in collusion.

214. Dr. Singer also argues that our diversion rates may be too low because we assume that NBCU would withhold content from the hypothetical online MVPD but not from traditional MVPDs.[300] Dr. Singer ignores the fact that this assumption was derived from economic modeling. In a hypothetical world in which online MVPDs exist in addition to traditional MVPDs, it can be expected that cable margins would be no higher than those used in our earlier analysis. When coupled with the analysis described in our *Foreclosure Declaration,* this fact

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298 *Singer Declaration,* ¶ 210.

299 *Singer Declaration,* ¶ 211 [emphasis in original].

300 *Singer Declaration,* ¶ 211, n. 428.

implies that a strategy of foreclosing traditional MVPD rivals would be unprofitable in the presence of online MVPDs.[301]

215. Finally, Dr. Singer claims that, under the Commission's foreclosure model that we adopted for our foreclosure analysis, it is not appropriate to simultaneously model foreclosure (which assumes substitutability between traditional MVPD video service and online MVPDs) and model complementarity between online video and broadband Internet access service.[302] This is nonsense. An online MVPD clearly would offer a service that would be complementary to broadband service. And—for the sake of argument—our analysis took as given that the online MVPD would offer a service that was a substitute for traditional MVPD service (if not, then foreclosure would certainly be unprofitable and there would be no need undertake the calculations). One can—and should—account for these effects simultaneously when estimating whether foreclosure would be profitable.

216. Dr. Singer concludes with a laundry list of other "errors" that he purports to find in our analysis, but all of his claims are incorrect, misleading, or unsupported:[303]

- Dr. Singer argues that unintegrated studios would be willing provide content to online MVPDs because they would not consider the gains to Comcast. This claim has no

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301 *Online Distribution Declaration,* ¶ 54.

302 Dr. Singer states, "…with regard to the claim that an OTT provider that was a direct competitor to Comcast's cable television service would be complementary to Comcast's cable modem service, Comcast's economists appear to be backtracking on the fundamental assumption of the FCC's model. Either one must assume online video is a substitute to cable television service and implement the FCC's foreclosure model, or one must assume the two services are complements and abandon the modeling exercise. But Comcast's economists pursue a 'third way' that involves modeling foreclosure and rejecting the fundamental assumption of substitutability; again, they cannot have it both ways." (*Singer Declaration*, ¶ 212.)

303 *Singer Declaration,* ¶ 213.

bearing on our foreclosure model, which in fact assumes that studios do provide content to online MVPDs.

- Dr. Singer criticizes us for relying on current content delivery network ("CDN") prices because future prices may be lower due to economies of scale and technological advances. Whatever the merits of Dr. Singer's price predictions, they are irrelevant for the analysis of our foreclosure model. We relied on current CDN prices solely to demonstrate the current existence of an economic barrier to the viability of online MVPDs. Our foreclosure model implicitly assumes that CDN and related costs have fallen sufficiently far to make an online MVPD commercially viable.

- In our earlier declaration, we made the point that, if an online MVPD were unprofitable or only marginally profitable, then it would pose little competitive threat to Comcast because the firm would be unlikely to survive and/or develop into a significant rival.[304] Dr. Singer observes that even marginally profitable or "less efficient" competitors can impose pricing discipline and that a firm such as Google might be willing to finance an online MVPD service while earning little or no profits directly from that service in the short run. The situation identified by Dr. Singer is easily treated by stating the logic of our initial point in a more general fashion: if an online MVPD were at the margin of exiting the industry absent foreclosure, then that firm would pose little competitive threat

[304] *Online Distribution Declaration,* ¶52, n. 74.

to Comcast because the firm would be unlikely to survive and/or develop into a significant rival.[305]

- Based on a citation to a Bernstein Research report in our *Online Distribution Declaration,* Dr. Singer suggests that as many as [[ ]] percent of online viewers might largely consume online video via their televisions and that, to the extent they do so, it would indicate that online video is replacing traditional television viewing. However, included in this [[ ]] percent are people who watch online video on video game consoles and wireless devices, as well as on traditional televisions.[306] Dr. Singer offers no basis for concluding that these viewers do, in fact, largely view online video on their televisions. The following statement by the authors of the Bernstein study suggests that these viewers do not:[307]

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It should also be noted that even those households that do make use of their televisions to view online content could be doing so to supplement traditional television viewing (*e.g.,*

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305 Moreover, our viability requirement does not imply that the online MVPD must earn a profit from online video on a standalone basis. To the extent that a competitor such as Google can enter with a compelling product that loses money as a standalone online video offering but supports a broader business model, this would fit the description of a viable entrant to which our analysis applies.

306 Michael Nathanson, *et al.*, "Web Video: Friend or Foe…And to Whom?" *Bernstein Research*, October 7, 2009, at 37.

307 *Ibid.* The [[ ]] figure in the quotation refers to viewers who indicated that they have connected online video directly to their televisions for at least some of their online viewing.

catching up on missed episodes of a television series or watching "behind the scenes" clips for specific shows).

- Dr. Singer incorrectly claims we did not consider the effects of cord-shaving (*i.e.*, the practice of subscribing to a traditional MVPD for basic video service but obtaining premium content online) in our previous analysis. As we pointed out in our earlier declaration, cord-shaving is unlikely to be implicated by this deal because NBCU controls very little premium content.[308]

- Dr. Singer claims that one should also consider Time Warner Cable's video content in a foreclosure analysis. He offers no evidence that Time Warner Cable and Comcast are somehow colluding, and he ignores the fact that Time Warner Cable no longer has a significant interest in programming networks, since its 2009 separation from Time Warner Inc.[309]

- Dr. Singer claims that NBCU's limited (*i.e.*, 10-to-11-percent) share of total viewing minutes does not capture the "must-have" nature of NBCU's online video content. However, he provides no reason why the relative importance of content is not captured by its viewership share, nor does he offer any alternative means for assessing the importance of NBCU's online video content. We continue to believe that viewership

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308 *Online Distribution Declaration,* ¶ 50, n. 73. {{

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309 *See* Mike Farrell, "Agencies Approves Time Warner Cable Split," *Multichannel News*, February 16, 2009, *available at* http://www.multichannel.com/article/174237-Agencies_Approves_Time_Warner_Cable_Split.php, *site visited* July 15, 2010; Time Warner Cable Inc., Form 10-K for the fiscal year ended December 31, 2009, Item 1.

shares provide a reasonable basis on which to assess of the relative importance of NBCU's content.[310]

- Dr. Singer criticizes us for considering critical departure rates only as high as 33 percent. However, he fails to present any evidence that actual switching would be even that high. As discussed in detail in the Appendix below, all of the evidence—including that submitted by commenters opposing the proposed transaction—indicates that actual departure rates following loss of NBCU content would be substantially lower than 33 percent.

- Dr. Singer claims that the "penalty price" for stand-alone broadband (*i.e.*, the *discount* for purchasing multiple Comcast services) "suggests that Comcast should induce a significant percentage of OTT video customers to switch back to Comcast's cable television service." Dr. Singer offers no justification for this claim and, in fact, one might expect the opposite to be true: those consumers who chose to go with an online MVPD despite the pricing pattern to which Dr. Singer objects might be consumers who would be particularly unlikely to switch back to Comcast cable if their online MVPD lost NBCU content.

- Finally, Dr. Singer argues that there would be no reduction in data usage by a Comcast broadband Internet access subscriber who dropped her online video service because that user was likely already a "high-end" user. It is far from evident what basis Dr. Singer has

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310 If anything, these shares—which include traditional television viewing— may overstate the importance of NBCU content to online viewers. As Dr. Singer emphasizes in his report, non-sports and non-event programming makes up the bulk of online viewing. (*Singer Declaration*, ¶177) To the extent that broadcast networks have been designated as "must-have" based, at least in part on their sports and live-event programming, it is not clear that this designation also applies with regard to online viewership.

for making this claim. As discussed above and in our earlier declaration, the data demands from online video viewing that replicates traditional television viewing swamps the demands from other uses of data.[311] Even high-end data users would likely significantly reduce data usage if they switched back to a traditional MVPD for their television viewing. Dr. Singer also argues that the "best estimate of Comcast's decrease in broadband revenues associated with successful foreclosure is zero" because of the "speculative nature" of the estimate. This is clearly incorrect. Uncertainty is no excuse for ignoring important effects. The appropriate approach is to use the best available estimates and then test sensitivities as we did in our *Online Distribution Declaration.*[312]

2. Dr. Cooper & Mr. Lynn's criticisms of our online-foreclosure analysis are weak and do not alter the central conclusion that foreclosure is very unlikely.

217. Dr. Cooper and Mr. Lynn criticize the analysis of online foreclosure presented in our *Online Distribution Declaration*. These criticisms appear to be based on a misunderstanding of the model and a misreading of the declaration. First, they claim that our model does not consider the emergence of new online video services but rather only considers a situation with online video "already having 'a significant number of subscribers.'"[313] In fact, we explicitly examined the incentives to foreclose a viable new entrant into online video.[314] As we concluded in our *Online Distribution Declaration,* "in the new-entrant scenario, too, Comcast would be very unlikely to be able profitably to induce NBCU to withhold its content from online MVPDs in

311 *Online Distribution Declaration,* ¶ 43 ("If a household were to watch eight hours of television content per day online, of which **[[ ]]** percent was high definition, then the household would download more than 288 gigabytes ("GB") of data per month to support that viewing. In contrast, the average household with a Comcast high-speed data subscription currently downloads only approximately two to four GB per month, roughly one hundredth as much.")

312 *Online Distribution Declaration,* ¶ 120.

313 *Cooper and Lynn Declaration* at 23, n. 10.

314 *Online Distribution Declaration,* ¶¶ 131-134.

order to increase Comcast's non-NBCU profits."[315] Dr. Cooper and Mr. Lynn provide no evidence to counter this conclusion.

218. Second, Dr. Cooper and Mr. Lynn assert that our attention to "how much bandwidth cost savings Comcast would receive by having IMVPD subscribers move back to Comcast's video service through the withholding of content misses the mark entirely."[316] We account for bandwidth cost savings as one part of a larger calculation of the marginal profit that Comcast would obtain via a foreclosure strategy. This comprehensive model weighs the costs of such a strategy (*i.e.*, the loss of network and broadband Internet access profits) against the gain (*i.e.*, increased MVPD profits). This analysis finds that Comcast could not profitably induce NBCU to withhold content from an online MVPD. In asserting that "[i]t is undoubtedly in Comcast's financial interest to ensure this competition never develops," Dr. Cooper and Mr. Lynn simply ignore this comprehensive model, while providing no analysis of their own.[317]

3. Professor Wilkie's claim regarding the implication of uncertainty is incorrect.

219. Professor Wilkie contends that because we acknowledged that some of the parameters used in our online foreclosure model are highly uncertain, it must follow that "there is a substantial probability that the proposed transaction will harm consumer welfare.[318] Professor Wilkie's claim is false as a matter of logic and fact. To account for the inherent uncertainty in the parameters, we performed sensitivity analyses in which we evaluated the online foreclosure model under a broad range of parameter values. For *none* of these parameters did we find that foreclosure was profitable. Consequently, a clear implication of our analysis is that there is *not* a

315 *Online Distribution Declaration,* ¶ 134.

316 *Cooper and Lynn Declaration* at 23, n. 10.

317 *Cooper and Lynn Declaration* at 23, n. 10.

318 *Willkie Declaration,* ¶ 35.

significant probability that the proposed transaction would harm consumer welfare through foreclosure of online competition.

4. Dr. Cooper's analysis of the online music industry is irrelevant.

220. In his declaration, Dr. Cooper includes an essay on the effect of Internet technology on the music industry.[319] He presumably intends to draw inferences about likely effects of the proposed transaction, although any specific transaction-related conclusions are left unstated. Any serious attempt to apply lessons from one industry (music) to another (television) requires careful attention to the detailed differences between the industries. Dr. Cooper provides none. To the extent that a lesson can be drawn from the music industry, it may be simply that one should expect new business models based on internet technology to emerge, as is happening in television with the development of Fancast Xfinity TV and similar services, content-owner websites, online aggregators that supplement traditional linear offerings (*e.g.,* Hulu, Netflix, iTunes), and venues for user-generated video, such as YouTube.com. However, nothing in Dr. Cooper's discussion of the music industry speaks in any way to whether a vertical merger in television would tend to speed or slow such developments or, more generally, increase or decrease consumer welfare.

VIII. FANCAST XFINITY TV

221. Fancast Xfinity TV is an innovative, pro-consumer upgrade of Comcast's traditional MVPD service.[320] Fancast Xfinity TV allows Comcast cable television subscribers to access some of the programming that they are authorized to view via their cable subscription over the

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319 *Cooper Declaration,* at 34-59.

320 Services such as Fancast Xfinity TV, which allow viewers to watch the content covered by their MVPD subscription online and/or on mobile devices, are sometimes generically referred to as "TV Everywhere." We avoid the use of this generic term as it is not consistently defined by those using it.

Internet, including on mobile devices. At its core, the concept is simple: Fancast Xfinity TV embraces new distribution technology to provide additional benefits to Comcast cable television subscribers by giving them additional flexibility in how they view video programming. In this respect, it is similar to the earlier innovation of offering cable subscribers video on demand.

222. The purpose of Fancast Xfinity TV and other authenticated supplementary online services is to provide subscribers with the convenience of watching television legally on multiple platforms while enabling Comcast to compete more effectively to attract and retain subscribers. As noted by an internal Comcast presentation, Fancast Xfinity TV {{

}}[321] Further illustrating Fancast Xfinity TV's role as an upgrade to Comcast's traditional MVPD service is the fact that Fancast Xfinity TV offers a variety of tools (*e.g.*, interactive TV listings, a VOD browse page, and remote DVR management) that are designed to support the "traditional living room experience."[322] Comcast launched a beta trial of what is now known as Fancast Xfinity TV in 2009. The pro-consumer nature of the innovation was illustrated by a Comcast study following this trial that found that [[ ]] percent of respondents had a more favorable opinion of Comcast as a result of the service and that [[ ]] percent were more likely to stay with Comcast if the service were free.[323]

223. Comcast is not the only MVPD that has recognized the value of offering an enhanced service to customers. AT&T, Cablevision, DISH Network, DirecTV, Time Warner Cable and

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321 Comcast, "On Demand Online Update" presentation ODOL Boardms7-27-09.pptx, slide 2.

322 Amy Banse, President, Comcast Interactive Media, July 16, 2010, interview.

323 Comcast, "On Demand Online Beta, Participant Research Report," prepared by Muldoon Marketing Research, Inc. and MSI, September 22, 2009 at 3.

other companies are working on similar authenticated supplementary online services, which are often referred to generically as TV Everywhere services.[324] Content providers are also playing an active role in this innovation. Indeed, a network owner (Time Warner Inc.) was the leading early proponent of the concept.[325]

224. For an innovation that benefits consumers, Fancast Xfinity TV and other authenticated online supplementary services have received a remarkable amount of criticism from those commenting on the proposed joint Comcast-NBCU-GE transaction.[326] This criticism is somewhat ironic, as it seems almost certain that, if MVPDs had not responded to the growth of online video by making content available to their subscribers over the Internet, then they would have been attacked for failing to embrace new technology to serve consumers better. More troubling, this criticism comprises a series of convoluted and internally inconsistent theories of harm that have nothing to do with the proposed transaction and ignore the primary effect of services like Fancast Xfinity TV: to benefit consumers by enabling MVPD subscribers to access subscription programming on additional devices at no additional charge.

225. In the remainder of this section, we address claims regarding Fancast Xfinity TV that have at least the appearance of being related to the analysis of competitive effects. We show that, despite claims to the contrary:

- Fancast Xfinity TV is not an attempt to deny other distributors online access to content, particularly the NBCU content relevant to this transaction;

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324 Ronald Lamprecht, SVP, Business Development & Sales (Digital & Affiliate Distribution), NBC Universal, July 15, 2010, interview.

325 Matt Bond, Executive Vice President of Content Acquisition, Comcast Cable, July 19, 2010, interview.

326 *See, e.g.*, *Marx Report*, ¶ 109; *Singer Declaration*, ¶¶ 156-159; *Cooper Declaration* at 3-33.

- Comcast's decision to offer Fancast Xfinity TV only to subscribers within in its cable television system footprint is not evidence of a market-diversion conspiracy among cable companies; and

- The Fancast Xfinity TV enhancement of Comcast's cable television service is not an example of anticompetitive bundling.

A. Fancast Xfinity TV is not an attempt to deny other distributors online access to content.

226. Some of those commenting on the transaction attempt to paint Fancast Xfinity TV as a form of exclusive distribution of Comcast content. For example, in discussing our online foreclosure analysis, Dr. Singer asserts that:[327]

> …it bears noting that Comcast *already* ties its online video content portfolio to its cable television and cable modem service. Accordingly, importing and calibrating a theoretical model to assess whether Comcast *would* foreclose [over-the-top] providers is a curious exercise (and moot point).

Dr. Singer's tying claim is deeply confused. Fancast Xfinity TV is an extension of Comcast's cable distribution business, for which Comcast negotiates with content owners to obtain the rights required to make content available online to paying Comcast subscribers. That Comcast makes this content available only to its own subscribers is no more an anticompetitive exclusionary practice than that Comcast limits its VOD offerings to its own paying subscribers,

327 *Singer Declaration*, ¶ 208.

rather than providing access to all households passed by Comcast cable whether they are Comcast subscribers or not.[328]

227. An alternative version of the theory is that, when negotiating for distribution rights, Comcast Cable may request terms limiting the usage of the content (online or otherwise) by other distributors.[329] Of course, as a matter of economics, it is entirely rational and expected that the terms that one distributor will agree to for content carriage rights depend on the terms at which the rights are made available to other distributors. In any case, the terms that Comcast Cable is able to negotiate with content owners are entirely unrelated to the present transaction. Determining whether or not the specific terms agreed to between distributors and content owners embed anticompetitive market power would require a careful, detailed economic analysis. None of the economics reports that have been submitted in this proceeding contains such analysis and it is rightly beyond the scope of this proceeding. Moreover, we note that regulatory restrictions imposed on the terms that can be included in carriage agreements would run a serious risk of inefficiently preventing negotiating parties from reaching mutually beneficial agreements. Such restrictions could be particularly hard on new, independent network providers, who may wish to offer some degree of exclusivity as a means of inducing an MVPD to take the risk of committing resources to the promotion and distribution of programming of unproven value.

228. Finally, we note that the question relevant to this transaction—whether it would create enhanced ability or incentive to withhold NBCU content from online distributors—has been fully

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328 Dr. Singer's reference to Comcast's "online video content portfolio" is also unclear. He fails to indicate whether he is referring to the content Comcast owns via its own networks or the content for which Comcast has negotiated specific distribution rights from other content owners. Because decisions about how to distribute the content for which Comcast Cable has negotiated distribution rights from content owners are entirely distinct from decisions that the Comcast Programming Group makes about distribution of its own "video content portfolio," the ambiguity makes Dr. Singer's claims difficult to understand or analyze.

329 *See, e.g., Cooper and Lynn Declaration* at 18; *Singer Declaration*, ¶ 181.

analyzed and answered in the negative in our *Online Distribution Declaration* and again in the present declaration.[330]

B. Fancast Xfinity TV is not part of an anticompetitive market-division scheme.

229. Another claim in several comments is that, because Comcast offers Xfinity TV only to consumers who also subscribe to Comcast's cable services and, thus, who are located within its cable system footprint, Comcast is engaged in a collusive market-division scheme with other cable operators.[331] Inherent in this argument is a claim that Comcast Cable would, on its own, have an incentive to offer an "over-the-top" version of its traditional cable service outside of its footprint. This view runs counter to the facts. Instead, the decision by Comcast not to offer an over-the-top version of its traditional MVPD service outside its footprint reflects Comcast's view that such an offering would not be profitable.

230. Before addressing the economics of a Comcast out-of-footprint, over-the-top offering, we note that Comcast currently does have an online offering that is available at no charge to subscribers across the country—Fancast (as opposed to Fancast Xfinity TV, which is available only to Comcast subscribers). Through its website, Fancast.com, Fancast provides a wide range of television content—including content licensed from Hulu, other cable and broadcast network content, and movies—to consumers nationwide, whether or not they are Comcast Cable subscribers.

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}} (Jodi Brenner, Senior Vice President, Business & Legal Affairs, NBC Universal, July 16, 2010, interview.) Thus, such this condition will be in effect with or without the proposed transaction and is irrelevant to a review of the transaction.

331 *See, e.g., Marx Report*, ¶ 117; *Singer Declaration*, ¶ 59; *Cooper Declaration* at 4.

231. Given the existence of the Fancast service, any claim of market division must refer to Comcast's decision not to offer the full set of content available to Comcast subscribers via Fancast Xfinity TV as a standalone over-the-top offering. However, this decision is entirely consistent with Comcast's views, summarized in our *Online Distribution Declaration*, that over-the-top distribution of a broad set of television programming today would not be a profitable business model.[332]

232. Beyond the costs associated with large-scale online distribution, Comcast would also face other sources of higher costs (and lower revenues) were it to offer a national standalone online video service.[333] First, Comcast would have to undertake the time and expense of negotiating for the necessary content licenses to offer such a service. {{ }}[334] and—assuming it could obtain them—these rights would constitute an additional cost. Second, the transition into a new market would require substantial additional costs for customer service, marketing and advertisement. For example, Comcast's customer service resources are currently set up to serve customers within its own geographic footprint. In order to provide services for customers outside of its footprint, Comcast would have to establish customer service infrastructure and resources in those areas.[335] Finally, not only would Comcast face higher costs with a standalone online service, such a product would

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332 *Online Distribution Declaration*, ¶¶ 42-47.

333 Interview with Robert Victor, Senior Vice President of Strategic and Financial Planning, Comcast Corp., July 19, 2010.

334 Interview with Matt Bond, Executive Vice President of Content Acquisition for Comcast Cable, July 19, 2010.

335 Interview with Robert Victor, Senior Vice President of Strategic and Financial Planning, Comcast Corp., July 19, 2010.

also generate less revenue. In particular, outside its cable footprint, Comcast would not be able to sell its HSD and telephony services.

233. In summary, the decision to offer Fancast Xfinity TV as an enhancement to Comcast's MVPD service, rather than attempt to become a national, over-the-top video provider is in no way evidence of anticompetitive intent or action. More broadly, we are unaware of any credible evidence regarding the existence of a market-division scheme. Certainly no such evidence was provided in the comments that we have reviewed in this proceeding.

C. Fancast Xfinity TV is not an instance of anticompetitive tying or predation.

234. Several commenters have also claimed that, by giving Comcast subscribers online access to programming at no incremental charge, Comcast is engaging in anticompetitive tying and/or predatory pricing. For example, Dr. Singer argues that "[t]he proper lens to view this conduct is a tie-in, with Comcast's cable television service serving as the tying product and the online content serving as the tied product."[336] Dr. Cooper and Mr. Lynn describe this as a strategy to "cut off the air supply of the Internet as a platform for competing with Comcast's core franchise business, multi-channel video programming,"[337] at least in part by giving Comcast's MVPD subscribers online access to programming at no additional charge. The economic theory underlying these claims is that, by providing free access to online video to subscribers, MVPDs could make it difficult for purely online distributors to attract enough viewers to compete (or might force them to generate revenues via only advertising, not subscriptions).[338]

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336 *Singer Declaration*, ¶ 157.

337 *Cooper and Lynn Declaration* at 66.

338 *Singer Declaration*, ¶ 182.

235. In evaluating such a claim, one should start by noting that the first-order effect of adding online access to programming at no additional charge is that cable subscribers obtain a more valuable video distribution service without having to pay more for it. That clearly is a consumer benefit. Hence, before condemning or limiting such a practice, policymakers should demand rigorous and compelling economic analysis demonstrating specific competitive harms from the practice that would overwhelm the pro-consumer effects of the strategies.[339] None of the reports and declarations that we have reviewed in this proceeding provides any such analysis.

236. Indeed, a more careful look reveals the tying claims to be inconsistent with other positions taken by Dr. Singer, Dr. Cooper, and Mr. Lynn, and others commenting on the transaction. In particular, at other points in their declarations, Dr. Cooper and Mr. Lynn refer to online video as a potential "alternative platform to compete with cable,"[340] and Dr. Singer asserts that "several OTT providers, including Boxee and Playon.tv, are 'direct competitors for traditional MVPD services'...."[341] To the extent that online distributors are (at least to some degree) competitors for traditional MVPDs—a position that would seem to be central to claims that Comcast has an incentive to harm these distributors—then the tying claims make no sense. From the point of view of a competitor to Comcast's traditional MVPD service, the online product is not "free," but rather is included as part of the overall price for the MVPD service. Online competitors for MVPD services do not have to compete with the "imputed price of zero" for Fancast Xfinity TV;[342] they have to compete with the full price of Comcast's MVPD service

339 This type of concern is exactly why allegations of predatory pricing are treated with caution. For example, the courts require that plaintiffs in predatory pricing cases must prove recoupment as well as below-cost pricing.

340 *Cooper and Lynn Declaration* at 53.

341 *Singer Declaration*, ¶ 208.

342 *Singer Declaration*, ¶ 207.

(which Dr. Cooper and Mr. Lynn among others claim is unreasonably high).[343] In the language of economics, a tying strategy works by leveraging the market power of the tying product (MVPD service under the theory) into the *separate market* of the tied product (online distribution). If the products are competitors in the same market, the theory makes no sense.

237. Dr. Singer attempts to respond to this point by arguing that "the economics literature recognizes that a firm could engage in exclusionary conduct…to prevent a rival in the tied (and complementary) market from evolving into a competitor in the tying market in future periods" and that "Comcast's tie-in of its affiliated online content portfolio to its cable television service could prevent that evolution [of online competitors] from occurring."[344] Although there are market conditions under which strategies to prevent so-called two-stage entry can be rational, Dr. Singer offers absolutely no evidence that these conditions are satisfied here. Indeed, he offers no evidentiary support for his far-fetched claim that Comcast's policy of granting its subscribers online access to video programming (which they value) is actually an anticompetitive attempt to prevent entry of an unnamed future online rival. In any case, if Comcast's strategy is to prevent the emergence of online complementors, who may someday become competitors for Comcast's MVPD service, the strategy has been strikingly unsuccessful given the (complementary) online offerings of Apple, Netflix, Hulu, Amazon.com, Google's YouTube, and many others.

IX. CONCLUSION

238. Several of the reports and declarations filed in opposition to the proposed transaction repeatedly confuse harm to competitors with harm to competition. That is, they are concerned with the economic welfare of particular suppliers rather than consumers. The various reports and

343 *Cooper and Lynn Declaration* at 33-34.

344 *Singer Declaration,* ¶ 205.

declarations that we have reviewed above also contain numerous errors and unsubstantiated claims. As our analysis of these reports and declarations has made clear, far from undermining our earlier conclusions regarding the absence of significant threats of competitive harms, these reports and declarations reinforce those conclusions. The Commission should reject these flawed claims of potential harm from the proposed transaction. The Commission should also reject calls for "remedies" to the alleged competitive problems. Although space and time constraints do not allow us to address the issue in any depth, even a cursory example of many of the proposals reveals that the remedies are designed to improve the economic welfare of the proposers, not consumers.

APPENDIX: ESTIMATION OF EXPECTED SWITCHING RATES TO COMCAST IF NBCU NETWORKS WERE WITHHELD FROM OTHER MVPDS

239. In this Appendix, we examine evidence on the extent to which withholding NBC or other NBCU networks from non-Comcast MVPDs would induce subscribers to those MVPDs to *switch* to Comcast. This issue is relevant to the examination of: (a) whether Comcast could profitably engage in foreclosure by inducing NBCU to withhold its networks from other MVPDs, and (b) whether the equilibrium affiliate fees for NBCU networks would be likely to rise as a result of the proposed transaction. We presented evidence on switching rates in our *Foreclosure Declaration,* and additional evidence has now been presented in the *Murphy Report* and *Kunz Declaration*. Although these submissions approach the question with different data and from different perspectives, taken together they yield a clear, consistent conclusion: although the loss of a broadcast network may cause some subscribers to depart their MVPD, the events available for study (involving DBS providers) show no evidence that those subscribers *switched to Comcast* in significant numbers.

240. As we discussed in our earlier declaration, it is useful to recognize that the number of subscribers who would switch to Comcast if their non-Comcast MVPDs lost the rights to carry NBC or other NBCU networks can be decomposed into two components.[345] Specifically, the rate at which subscribers would switch from the foreclosed MVPD to Comcast can be expressed as $\alpha \times d$, where d denotes the rate at which subscribers depart a foreclosed MVPD for *any* other MVPD and α denotes the fraction of those departing subscribers who specifically choose to switch to Comcast as their new MVPD. α is known as the "diversion ratio."

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345 *Foreclosure Declaration,* ¶¶ 26-27.

241. It is important to keep in mind that the rate at which subscribers would switch to Comcast in response to foreclosure may be very small even though the foreclosed MVPD would see a high departure rate (*i.e.*, a large value of *d*). This can happen when the diversion rate is low (*i.e.*, α is small). In our *Foreclosure Declaration*, we followed the Commission's approach in DirecTV/News Corp. by assuming that diversion rates were proportional to market shares.[346] However, the combined evidence from all the reports now submitted indicates that the diversion rates are likely smaller than this. In his report, Dr. Singer provides an intuitive explanation for this finding, noting that "[i]f a customer has already shown a preference for DBS service by choosing DISH, then that customer would be likely to switch from DISH to DirecTV…were the absence of that content burdensome to the customer."[347]

242. In the remainder of this appendix, we evaluate three types of evidence on departure and switching rates that have been presented in these proceedings. Part A examines the effect of DISH Network's roughly 6-month dispute with Fisher Broadcasting. Part B examines the effect of DBS providers' rollout of local-into-local broadcast service. Finally, Part C examines Professor Murphy's attempt to back departure rates out of a theoretical bargaining model.

A. DISH Network may have lost significant numbers of subscribers due to the Fisher dispute, but switching to Comcast was de minimis.

243. In our *Foreclosure Report,* we evaluated the effect on Comcast's share (defined as Comcast subscribers divided by homes passed by Comcast cable) of the retransmission dispute

346 *Foreclosure Declaration*, ¶¶ 54-55.

347 *Singer Declaration*, ¶ 197. One might ask what this logic implies for a customer at a non-DBS MVPD such as a telco video provider. The short answer is that we know of no events from which to answer this question, but the findings on the DBS events indicate that one cannot simply assume that Comcast will capture a proportional share of switchers. This is particularly true given that the offerings of the telco provider tend to be large, all digital channel lineups, with large basic tiers, similar to the lineups of the DBS providers. (*See Marx Report*, ¶ 29.)

between DISH Network and Fisher Broadcasting, which resulted in DISH Network's losing the retransmission rights to eight ABC, CBS, and/or Fox affiliates and two Univision affiliates in seven DMAs for approximately six months, from December 17, 2008 until June 10, 2009.[348] We presented evidence that the dispute had no statistically significant effect on Comcast's share in the Fisher DMAs in which it operates cable systems.[349] In response, DISH Network submitted an analysis by Vincent Kunz, Senior Marketing Manager for Reporting and Analytics, which used internal data from DISH Network to show that the Fisher dispute had {{ }} on DISH Network's penetration rate in the affected DMAs, causing DISH's penetration {{ }} overall.[350]

244. For the reason described in the introduction to this appendix, there is no tension between these findings. The fact that the Fisher dispute resulted {{ }}, while there was no significant effect on Comcast's share, strongly suggests that, although {{ }}, so Comcast gained very few subscribers.[351, 352]

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348 *Foreclosure Declaration*, ¶¶ 96-104. We also examined shorter disputes including: the three-day dispute between DISH Network and Allbritton Communications in 2003; the two-day dispute between DISH Network and Viacom in 2004; and the three-day dispute between DISH Network and Young Broadcasting. In each case, we found no significant increase in Comcast's penetration level due to the event.

349 Comcast operates systems in the following DMAs affected by the Fisher dispute: Eugene, OR, Portland, OR, and Seattle, WA.

350 *Kunz Declaration*, ¶ 10. {{ }} (*Kunz Declaration*, ¶ 12.)

351 Note that those subscribers who chose DISH Network before the Fisher dispute indicated a preference for an MVPD other than Comcast. Many of the subscribers who left the DISH Network may have gone to DirecTV or other rival MVPDs.

245. As one response to this logic, DISH network argued that {{

}}[353] However, if anything,

{{ }}

Comcast did not expect to gain many subscribers from DISH. That is, if there would be gains to Comcast from a foreclosure strategy, then similar gains were presumably present during the Fisher event. The fact that Comcast might not have chosen to invest resources to exploit this situation and did not capture a significant number of subscribers argues strongly against claims that Comcast would try to recreate a similar situation by withholding NBCU, particularly given that, in that case, NBCU would have to bear the costs of such an action.

246. Another response of DISH Network to our finding of a low switching rate was to assert that our econometrics were somehow mistaken.[354] We have addressed this assertion by performing several robustness tests. These tests reaffirm our conclusion that the Fisher dispute had no substantive impact on Comcast's penetration rates in the affected regions.

247. As described in our *Foreclosure Declaration*, we analyzed the effect of the Fisher dispute on Comcast penetration rates by using a difference-in-differences model to compare the changes in Comcast's shares during the dispute period in the affected DMAs to the changes in

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352 Note that, based on these two factors, the Katz, Orszag, and Sullivan (2009) report is not directly relevant here. (Michael L. Katz, Jonathan Orszag, and Theresa Sullivan, "An Economic Analysis of Consumer Harm from the Current Retransmission Consent Regime," November 12, 2009.) That report discussed only departure rates from MVPDs, not switching rates to any particular alternative MVPD. In addition, its discussions of departure rates was not informed by the results of our studies of the various retransmission disputes or local-into-local events.

353 *DISH Supplemental Report*, n. 12.

354 *Murphy Report,* ¶¶ 69-76; *DISH Supplemental Report* at 9-10.

Comcast's shares during the dispute in control DMAs.[355] The results of this model demonstrate that the Fisher dispute had no significant effect on Comcast's penetration rates.[356] No commenters have performed any econometric analysis that suggests that our conclusions regarding the effect of the Fisher dispute on Comcast's penetration rate are incorrect. Instead, they have claimed that: (i) our control groups are arbitrary,[357] or (ii) that our data and methodology lack power.[358] We address each criticism in turn.

248. To address the criticism that our control groups were arbitrary, we initially note that there is only one relevant question in determining whether a set of DMAs make up a good control group: Do they provide a good prediction of what would have happened in the affected DMAs in the absence of the Fisher event? In his study of DISH's penetration levels, Mr. Kunz argued that he could not use {{

}}[359] {{

}}[360]

249. Mr. Kunz's reasoning is incorrect. It is a perfectly sound approach to use market performance data from the *pre-event* period to evaluate whether a potential set of control DMAs is appropriate. Indeed, the extent to which penetration levels and changes in the different areas

355 *Foreclosure Declaration,* ¶¶ 96-104.

356 *Foreclosure Declaration,* ¶ 102.

357 *DISH Supplemental Report* at 9-10.

358 *Murphy Report,* ¶ 72.

359 *Kunz Declaration,* ¶ 7.

360 *Kunz Declaration,* Exhibit A.

match during the pre-event period is the most plausible indicator for whether they would have continued to match in the absence of the event and thus whether the proposed set of control DMAs is appropriate.

250. With this logic for selecting control groups in mind, consider Figure 3 from the *Foreclosure Declaration,* repeated below as Figure A1. Although our initial criterion for selecting control DMAs was based on geographic proximity, we also carefully compared the pre-dispute penetration levels to ensure that our control group matched our treatment group.[361] As can be seen in the figure, the pre-event trends match very closely, indicating that our selected control area is appropriate.

251. Indeed, without needing to turn to any more sophisticated tests, the message from Figure A1 is unmistakable—the affected DMAs closely tracked the penetration trends in the control DMAs before the Fisher event *and continued to do so during the event*. It is quite clear that Comcast did not gain a material number of subscribers in affected regions during the Fisher event.

[361] The closest DMAs to the three Fisher DMAs in which Comcast operated cable systems were the Fresno and Sacramento DMAs comprising Comcast's Central California region.

Figure A1

{{

}}

252. Next, consider the DMAs that Mr. Kunz proposed as controls. {{

}}[362]

[362] {{

}}

Figure A2

{{

}}

253. Figure A3 contains a similar picture of Comcast's share in Seattle relative to {{

}} Nevertheless, in what follows, we demonstrate that our results are robust to the use of these alternative controls for Seattle, although—for the reasons discussed above—our original specification is preferable.

Figure A3

{{

}}

254. Although our original specification and control group is appropriate, we will now show that our results are robust to the selection of different control groups. Column (1) of Table A1 replicates our original results.[363] Column (2) shows that our substantive results are unchanged if we compare Seattle only to {{

}}. In both sets of results, all of the event-indicator variables' coefficients are small in magnitude and none is

[363] *Foreclosure Declaration,* Table 5.

statistically significantly greater than zero. These results clearly reaffirm our initial conclusion that the Fisher dispute had no appreciable effect on Comcast's penetration rates.

Table A1: Fisher Event Regressions with Comcast Penetration as Dependent Variable

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255. Professor Murphy and DISH Network both noted that, in our original specification, the

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}}[364] However, this argument is undermined by the fact that the negative effect (*i.e.*, the very small loss of Comcast subs in the Fisher regions relative to the control DMAs) actually

364 *Murphy Report*, ¶ 71; *DISH Supplemental Report* at 10.

commences *before* the end of the Fisher event period. To demonstrate this fact, we modify the specifications in Table A1 by including a separate indicator for the last full month of the event (May 2009). Table A2 shows that, both in our original model and in the alternative version comparing Seattle to {{ }}, Comcast's share in the last month of the event was also negative and, more importantly, was not significantly different from the measured post-event penetration change (as indicated by the p-values being greater than 0.05). Hence, whatever the source of the small loss of Comcast penetration following the Fisher event, it was not the restoration of DISH Network's retransmission rights to the Fisher stations, as there is no significant difference between Comcast's share at the end of the event period and its share in the post-period event period.[365] The evidence, taken as a whole, makes it clear that Comcast did not gain a significant number of subscribers due to the Fisher event.

[365] We also note that, when we examine the Seattle event in isolation, the "after event" indicator variable is not statistically significant.

Table A2: Fisher Event Regressions Including Dummy for Last Month of Event

{{

}}

256. Finally, Professor Murphy argues that our study of the Fisher event may "not offer sufficient power" to measure the effect of the event, noting that {{

}}[366] This criticism is easily rebutted, as the point estimates from our regressions together with the standard errors enable us to define the confidence interval in which one is 95 percent

366 *Murphy Report*, ¶ 72.

sure the true effect on Comcast's share lies. Table A3 shows these confidence intervals for all the event coefficients in Table A1. In all cases, one can conclude with confidence that the effect on Comcast's share was very small—well less than one percent. For example, the upper bound of the confidence region for the effect during the event period from our base specification is approximately 2/10 of one percent.

Table A3: Fisher Event Regression Confidence Intervals

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B. Analysis of DBS shares following introduction or expansion of local-into-local broadcast service

257. As described in our *Foreclosure Declaration*, the introduction of local-into-local service by DBS providers provides an alternative set of events to study to assess the importance of access to broadcast networks in driving consumers' MVPD choices. As we explained in that declaration, it is critical to distinguish between those cases in which a DBS provider

simultaneously added access to three or four of the major broadcast networks and those cases in which a DBS provider supplemented an existing local-into-local offering by adding the fourth and final major broadcast network.[367] Indeed, our empirical analysis found that, although DBS providers' introduction of access to all four broadcast networks led to a statistically significant reduction in Comcast's penetration (of just less than one percent), the addition of one extra network to an existing offering did not have any statistically significant effect.[368] Because NBC is the only one of the four major networks that NBCU owns, the result for the effect of adding a single network is the one relevant for assessing the potential competitive effects of the proposed transaction.

258. In response to our analysis of the effect of adding a single network to local-into-local service, Professor Murphy argues that, {{

}}"[369] This criticism is without merit. Even if all the true effects are zero, when one estimates eight coefficients, there is a non-trivial chance that one of them will randomly appear to be statistically significant. For example, if the coefficient estimates were statistically independent of one another, then using a 5-percent significance level (as we do), there would be a greater than 1/3 chance that one of the coefficients would randomly appear to be significant. Hence, a single negative and significant coefficient does not invalidate

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367 *Foreclosure Declaration*, ¶ 106.

368 *Foreclosure Declaration*, ¶ 106, n. 125.

369 *Murphy Report*, ¶ 73.

our conclusion that, taken together, the evidence indicates that the addition of a fourth major network to an existing DBS local-into-local offering did not reduce Comcast's penetration.

259. Professor Murphy also offers his own estimate of the effects of gaining or losing retransmission rights to a single network. His analysis proceeds in two steps. First, he relies on evidence from an earlier report produced on behalf of DirecTV to conclude that, if DirecTV failed to offer access to all four of the major broadcast networks, then its penetration would {{ }}[370, 371] Professor Murphy's next step is to claim that the effect of adding a single network can reasonably be approximated by 25 percent of the effect of adding all four networks, or {{ }}[372]

260. The assumption that the effect on subscriber choices of adding a fourth network is just as large as the effect of adding the first network is unreasonable unless the major broadcast networks are not substitutes for one another. To the extent that these networks are, in fact, substitutes for one another, economics indicates that the marginal effect of adding a major broadcast network to an MVPD's lineup would be declining in the number of major broadcast networks in that lineup.[373]

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370 *Murphy Report,* ¶ 45, citing to Benjamin Klein, Andres Lerner, and Emmett Dacey, An Economic Analysis of DIRECTV Providing Local-into-Local Service via Satellite in All 210 DMAs, MB Docket No. 07-18 (August 23, 2007).

371 Whether or not this estimate is consistent with our estimate of just under one point of share change for Comcast depends on the relative penetration levels. As an example, in an area in which DirecTV has a 16 percent market share with all four broadcast networks, a 26 percent decline would be a reduction of roughly four percentage points of share. If 25 percent of this went to Comcast, that would correspond to our finding of roughly a one percentage point share effect on Comcast.

372 *Murphy Report,* ¶ 46.

373 Professor Rogerson presents evidence that broadcast networks (and their local affiliate stations) are close substitutes for one another. (*Rogerson Report* at 14-17.)

261. Because, as a matter of economics, the fourth network surely has less effect than the first, Professor Murphy's conclusion that losing all four networks would reduce DirecTV's penetration by {{ }} implies *only* that the effect of losing a single network must be *less than* {{ }}. Nothing about this logic implies that the loss of penetration from a single network must even be positive. In particular, a situation in which consumers strongly desire an MVPD with at least one or two broadcast networks, but care little about whether the MVPD has four networks instead of three, would be consistent with all of the econometric evidence presented on local-into-local events but would imply that there would be no effect from loss of a single broadcast network.

C. The simplified bargaining framework used by Professor Murphy cannot produce a precise, reliable estimate of the actual departure rate.

262. In his report, Professor Murphy foregoes any independent data analysis of actual departure rates. Instead, he relies entirely on a theoretical "Nash bargaining model" to back out implied departure rates based on assumptions about per-subscriber prices for retransmission consent.

263. Before turning to a detailed discussion of Professor Murphy's attempt to estimate actual departure rates, we note that, even if all of his assumptions were correct, his approach could yield only an estimate of the rate of *departure from* an MVPD's loss of a broadcast network, not an estimate of the *switching to* any particular alternative MVPD. As such, no matter what one makes of Professor Murphy's estimated actual departure rates, these estimates cannot counter the key conclusion that the diversion rate to Comcast following a DBS provider's loss of a single broadcast network is very small.

264. The logic and details of Professor Murphy's approach are explained on pages 3-16 of his report. We do not reproduce all the details here. Rather, we note that the basic intuition for the approach is as follows. As discussed in Section IV.A above, if the assumptions of the Nash bargaining model are satisfied and one knows the value of the bargaining-ability parameter and has sufficient data on demand, revenues, and costs from which to determine threat points and total gains from trade, then one can, in theory, determine what the per-subscriber price for retransmission consent will be. Professor Murphy's approach reverses this logic to note that, if one knows the price for retransmission consent *and* the bargaining power parameter *and* all the other parameters determining per-subscriber profits for each party (with or without a deal) *except for the actual departure rate*, then one could back out the implied actual departure rate.

265. Unfortunately for Professor Murphy's approach, there are at least two other parameters that are clearly unknown. The first is the bargaining power parameter, which can take any value between zero and one. Professor Murphy correctly notes taking the bargaining-power parameter to equal ½ is "a common assumption" but it also is an assumption that need not hold.[374, 375] In the absence of empirical support for a specific value of the bargaining-power parameter, a more accurate statement is that the model implies a range of actual departure rates depending on what assumption is made about the bargaining-power parameter.

266. The second parameter is the extent to which an MVPD that has lost the carriage rights to one or more networks would choose to lower prices rather than lose subscribers (or, equivalently,

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374 *Murphy Report,* ¶ 16. A parameter of ½ corresponds to an assumption of equal bargaining power and an equal division of the gains from trade. In his footnote 12, Professor Murphy correctly notes that "the assumption that each party receives half of the incremental surplus may not hold for all transactions."

375 See also our discussion of the Nash bargaining solution's equal-bargaining-power assumption in Section IV.B.1 above.

the extent to which an MVPD that has gained the carriage rights to one or more networks would choose to raise prices rather than gain subscribers). Professor Murphy calculates this split (his "k" parameter) based on historical events in which networks have been lost (the Fisher and local-into-local events described above) by assuming that this split would be the same for MVPDs negotiating with a vertically integrated NBCU.

267. Professor Murphy's treatment of k is unsound. An economically rational MVPD will determine how to "split its pain" between price reductions and subscriber losses based on the characteristics of the specific negotiation in which it is involved. One of those characteristics can be whether the MVPD bargaining over carriage rights is negotiating with a network owner that is integrated with a competing MVPD. When negotiating with an integrated network owner, the MVPD purchasing carriage rights would rationally account for the fact that, the greater the extent to which it chooses to take the pain in the form of subscriber losses, the more subscribers the integrated firm's MVPD operations gain in the event of disagreement, and, thus, the more profitable the integrated firm's disagreement point would be. By the standard logic of bargaining models such as the one used by Professor Murphy, a more favorable threat point would improve the integrated firm's bargaining position. So, by the logic of Professor Murphy's bargaining model, an MVPD negotiating with a vertically integrated network has an enhanced incentive to take the losses in the form of lower subscription prices rather than lost subscribers.

268. This logic implies that, under Professor Murphy's assumptions that NBCU internalizes the effects of its actions on Comcast Cable's profits and that significant numbers of subscribers would switch to Comcast in the event that their competing MVPDs lost carriage rights to NBCU networks, an MVPD negotiating with NBCU would have an incentive to commit to price

reductions that are substantially larger than those it would implement when negotiating with an unintegrated network.[376] This commitment could take the form of public commitments made by the MVPD to its subscribers through advertising and news media. Alternatively, the MVPD might provide subscribers with incentives to sign long-term contracts that would be in force at the time of the negotiations with NBCU, thus minimizing departures.[377]

269. The logic of Professor Murphy's bargaining model thus implies that the actual departure rates inferred from disputes involving non-integrated network owners, such as the Fisher broadcasting event, may substantially overstate the actual departure rate that Comcast could expect to generate if it had the ability to induce NBCU to withhold one or more of its networks from other MVPDs.[378]

270. Hence, Professor Murphy's approach faces the intractable problem of identifying three different parameters (bargaining power, division of MVPD losses between price cuts and subscriber losses, and the associated actual departure rate) based on a single retransmission consent price. Even if one relies on historical data for MVPD price cuts following loss of a network, there are still two free parameters (bargaining power and the actual departure rate) and only one price to pin them down. Consequently, as we will now demonstrate, any departure rate

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376 It is worth remembering that, if either NBCU does not internalize the effects of its actions on Comcast Cable's profits or if only an insignificant number of subscribers would switch to Comcast in the event that their competing MVPDs lost carriage rights to NBCU networks, then foreclosure would not occur.

377 *Foreclosure Declaration,* ¶ 59.

378 We do not have details on the ownership status of all the local broadcast stations involved in the local-into-local events, so it is possible some were Fox O&O stations during the time that Fox was vertically integrated with DirecTV. However, for all of the Fox events that we have been to check and for all events involving the other three major broadcast networks, the local-into-local events involved negotiations with a non-integrated network.

between zero and 100 percent is consistent with the theoretical bargaining model and observed retransmission consent fees.

271. We demonstrate Professor Murphy's approach's lack of predictive power by showing that departure rates of zero and 100 percent *both* are consistent with his model:[379]

- *Actual departure rate of zero:* Assume, consistent with DISH's actions during the Fisher dispute, that an MVPD that lost access to a broadcast network would cut its prices by $1. Moreover, suppose that this action would yield an actual departure rate of zero. This fact means that the MVPD's per-subscriber gain from reaching an agreement with the network (gross of the fee it would pay to the network under an agreement) equals $1, the value of the price cut that it otherwise would make. Under Professor Murphy's assumptions, if no subscribers would depart the MVPD in the absence of an agreement, then the broadcast network would lose {{ }} in advertising revenue per subscriber on the {{ }} percent of viewers who would not obtain the content over the air, or a loss of {{ }} per viewer in addition to the lost fee from the MVPD. Hence total gains from trade would be {{ }} per subscriber. Assuming, as Professor Murphy does, that the retransmission consent fee is {{ }}, this means that, under the equilibrium agreement, the MVPD captures {{ }} per subscriber, while the network captures {{ }} per subscriber. That is, the MVPD captures {{ }} of the surplus. This outcome is

379 Similar arguments can be used to show any departure rate in between zero and 100 percent is also consistent with his model, depending on what assumption one makes about the bargaining-power parameter.

consistent with a Nash bargaining model in which the MVPD has a bargaining-power parameter of {{ }}.

- *Actual departure rate of 100 percent:* Suppose that, even if the MVPD were to cut prices by $1 (or more), 100 percent of its subscribers would depart and switch to other MVPDs following loss of the network. In this case, the network would suffer no loss of advertising revenue in the absence of a retransmission agreement, as all subscribers would access its programming at other MVPDs. The MVPD's per-subscriber value of the agreement (gross of the retransmission consent fee) would be equal to the MVPD's full profit margin per subscriber, which Professor Murphy assumes to be {{ }}. With a retransmission consent fee of {{ }}, the network captures surplus of {{ }} per subscriber while the MVPD captures {{ }} per subscriber. That is, the MVPD captures {{ }} percent {{ }} of the surplus. This outcome is consistent with a Nash bargaining model in which the MVPD has a bargaining-power parameter of {{ }}.

The bargaining-power values used in the examples above may be extreme, but they illustrate the central point that Professor Murphy's model provides almost no information regarding true values of the actual departure rates.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Executed on this 20th day of July, 2010.

Mark Israel

Michael L. Katz