EXHIBIT 2

ECONOMIC ANALYSIS OF THE PROPOSED COMCAST-NBCU-GE TRANSACTION

July 20, 2010

Mark Israel
and
Michael L. Katz

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

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*

[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 {{ }}

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

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 {{ }}[30]

- DISH Network contends that our application of the Commission staff model ignores the fact that {{ }}[31] This contention is false. In fact, *all* of

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] {{

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- 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

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-

[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

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

{{

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.

[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

[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]

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

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

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

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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

[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 $\gamma = ½$ 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

[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

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

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

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.

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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]

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

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

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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:

$$\Delta P = \tfrac{1}{2} \times ComGain. \tag{4.4}$$

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.

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

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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.

[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

[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

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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

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		**NBCU National Cable Networks**	
Network	**Ownership Share**	**Network**	**Ownership Share**
E!	100%	Bravo	100%
G4	100%	CNBC	100%
Golf Channel	100%	CNBC World	100%
Style	100%	MSNBC	100%
Versus	100%	mun2	100%
PBS KIDS Sprout	40%	Oxygen Media	100%
TV One	33.5%	Sleuth	100%
NHL Network	15.6%	Syfy	100%
Current Media	10%	Universal HD	100%
MLB Network	8.3%	USA Network	100%
Retirement Living Television	7.7%	Chiller	80%
FEARnet [a]	33.3%	The Weather Channel	25%
Comcast Regional Cable Networks		A&E Television Networks	15.8%
Network	**Ownership Share**	Universal Sports	8.33%
Comcast SportsNet California	100%	ShopNBC	Minority, non-controlling
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%		

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

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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.

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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]

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!.

[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.