

Table V.6: Analysis of RSN Transactions

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

Notes:

Robust standard errors in parentheses

** p<0.01, * p<0.05

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

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

networks discussed above.

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

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

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

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

Table V.7: National Cable Network Transactions

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

Notes:

We analyze those events highlighted in gray

[a] Event not analyzed because of insufficient data

Sources:

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

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

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

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

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

Table V.8: Analysis of National Cable Network Transactions

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

Notes:

Robust standard errors in parentheses

** p<0.01, * p<0.05

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

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

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

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

130. We address arguments regarding carriage decisions as follows:

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

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

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

- Second, we present empirical evidence showing that Comcast is actually *more* likely than other MVPDs to carry unintegrated networks operating in the same general programming categories as Comcast’s own networks, the opposite of what one would expect if Comcast were engaged in foreclosure to competitively advantage its own networks. We also show that application of an empirical test pioneered by Professor Austan Goolsbee indicates that Comcast’s carriage decisions are not driven by foreclosure motives.
- Finally, we turn to Professor Marx’s specific claims regarding business news networks. We demonstrate that: her empirical analysis is based on deeply flawed econometrics, which generates instances of nonsensical results; her arguments in support of “business news cable networks” as a distinct relevant market are economically and econometrically unsound; and her theories of harm regarding carriage, tier, neighborhood, or bundling decisions are unsound.

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

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

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

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

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

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

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and (b) her statement that Comcast’s shares in some large DMAs exceed 60 percent.¹⁷⁹

Professor Marx fails to note that Comcast’s share in the New York, New York DMA (the largest

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

¹⁷⁹ Marx Report, ¶ 89.

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

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

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

¹⁸⁰ *Marx Report*, Table 2.

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

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

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

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

¹⁸³ See *Marx Report*, ¶ 86.

¹⁸⁴ *Crawford Presentation* at 34-38.

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

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

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

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

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

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

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

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

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

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

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

- Our first study relies on an approach pioneered by Professor Austan Goolsbee. Using his approach, we find that Comcast’s carriage decisions are not driven by foreclosure motives.
- Our second study focuses on how Comcast’s carriage of a network is related to whether Comcast currently owns a network in the same programming category as the network in question. Our results show that, contrary to the predictions of foreclosure theories, Comcast is *more* likely to carry networks competing in the same categories as its own networks (*i.e.*, women’s programming or sports programming) than are other MVPDs.

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

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

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

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

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

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

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

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

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

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

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

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

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

¹⁹⁴ Professor Goolsbee noted:

At the outset, though, it is vital to consider the difference between the *existence* of vertical integration in television programming and the *rationale* for it. To the extent there is an existing literature examining some of these questions, it tends to have a hard time answering the nagging question of why such vertical relationships exist.

One view holds that vertical integration and foreclosing/self-promoting behavior is a strategic move on the part of powerful monopolies and is anti-competitive in nature. The other view, espoused by opponents of regulating such relationships, argues that vertical integration comes about because it is more efficient, that a combined entity is better able to create shows or networks that people will watch or to save money in producing the shows or in some other way generate a synergy.

(Goolsbee (2007) at 4.)

¹⁹⁵ Goolsbee (2007).

¹⁹⁶ Goolsbee (2007) at 26.

simple comparison with Comcast's internal carriage data.¹⁹⁷

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

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

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

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

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

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

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

Robust standard errors clustered by MVPD system in parentheses

** p<0.01, * p<0.05

Notes:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Robust standard errors clustered by MVPD system in parentheses

** p<0.01, * p<0.05

Notes:

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

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

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

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

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

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

Robust standard errors clustered by MVPD system in parentheses

** p<0.01, * p<0.05

Notes:

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

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

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

- Professor Marx’s market-definition analysis is fatally flawed and does not establish that business news networks constitute a relevant market. Her claim that Bloomberg TV and CNBC do not compete with other cable news and broadcast networks relies on fundamentally flawed attempts at analysis. Indeed, as we show, one of her principle lines of argument supports the conclusion that CNBC and Teen Nickelodeon are substitutes for one another but the Disney Channel and Nickelodeon are not. Her approach to market definition is manifestly unsound and unreliable.
- Professor Marx’s conclusion that Comcast would have anticompetitive incentives to deny Bloomberg TV carriage is the result of her using incorrect values for Comcast’s profit margin and CNBC revenues in her model. Using correct values for these parameters, Professor Marx’s foreclosure model supports the conclusion that Comcast would *not* have economic incentives to engage in foreclosure of Bloomberg TV.
- Professor Marx’s analyses in support of her claims regarding several other types of potential harms (*e.g.*, channel-neighborhood and channel-bundling effects) are similarly unsound and unreliable.

1. *The reasoning and empirical analysis underlying Professor Marx’s attempt to justify a “business news network market” are fatally flawed.*

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

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

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

²⁰⁴ *Marx Report*, Table 4.

²⁰⁵ *Ibid.*

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

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

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

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

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

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

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

Robust standard errors clustered by MVPD system in parentheses

** p<0.01, * p<0.05

Notes:

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

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

networks would find it profitable to raise its price by {{ }}, which she asserts means that the hypothetical monopolist test commonly used in merger analysis would be passed.^{208, 209}

As we will now demonstrate, Professor Marx has inappropriately applied the hypothetical monopolist test, and her approach leads to nonsensical results.

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

²⁰⁸ Marx Report, Table 5.

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

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

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

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

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

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

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

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

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

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

²¹⁵ *Marx Report*, ¶¶ 60 and 94.

²¹⁶ *Marx Report*, ¶ 60.

Table VI.6: DBS Provider Channel Lineups

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

Note:

"General" news networks lightly shaded

"Business" news networks darkly shaded

Sources:

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

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

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

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

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

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

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

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

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

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

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

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

²²⁰ *Marx Report*, Table 13.

- *Comcast's Video Profit Margin:* Professor Marx uses data for the cable industry average price for expanded basic and an estimate of the cable industry average operating margin to estimate Comcast's video profit margin.²²¹ Her estimate is \$19.51 per video subscriber per month. However, as noted in Section IV.B.2.c), above, the average Comcast variable profit per video subscriber is at least {{ }}.²²²
- *CNBC Advertising Revenue:* Professor Marx relied on Kagan's estimate that CNBC earned [[]] in advertising revenues in 2009. In fact, CNBC's actual 2009 advertising revenue was {{ }}.²²³

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

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

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

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

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

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

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

²²⁶ *Marx Report*, Table 13, ¶ 9.

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

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

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

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

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

]].

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

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

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

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

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

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

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

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

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

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

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

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

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

b) Harms related to Bloomberg TV’s channel neighborhood

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

²³² *Marx Report*, ¶ 105.

²³³ *Marx Report*, ¶ 94.

²³⁴ *Marx Report*, ¶ 121.

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

²³⁶ *Marx Report*, ¶ 105.

²³⁷ *Marx Report*, ¶ 94.

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

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

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

²³⁸ *Marx Report*, Table 10.

²³⁹ *Marx Report*, ¶ 94.

²⁴⁰ *Ibid.*

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

Table VI.9

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

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

²⁴¹ *Marx Report*, ¶ 89.

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

c) Network bundling effects

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

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

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

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

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

²⁴⁴ *Marx Report*, ¶¶ 121-122.

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

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

²⁴⁵ *Marx Report*, Table 12.

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

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

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

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

²⁴⁷ *Wilkie Report*, ¶¶ 26-27.

²⁴⁸ *Id.*, ¶ 27.

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

²⁵⁰ *Wilkie Report*, ¶ 27.

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

VII. USE OF NBCU PROGRAMMING TO FORECLOSE ONLINE DISTRIBUTORS

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

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

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

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

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

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

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

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

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

²⁵⁶ *Online Distribution Declaration*, ¶ 3.

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

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

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

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

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

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

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

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

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

]]²⁶⁰

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

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

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

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

²⁶⁰ *Online Distribution Declaration*, ¶ 40.

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

²⁶² *Singer Declaration*, ¶ 201.

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

- Dr. Singer also asserts—without foundation—that, absent the growth of online video, traditional television viewing would have grown even faster.²⁶³ Although Dr. Singer speculates about hypothetical alternative trends, the simple facts are that traditional television viewing has expanded as online video usage has increased, and the most obvious explanation is that these products currently are complements.
- He notes that it is possible that online video is a substitute for traditional video for some segments of the population.²⁶⁴ Although this is a possibility, what matters for Comcast’s and NBCU’s incentives are whether online video is a substitute or complement for traditional television *overall*, and that is the question to which our evidence speaks. Dr. Singer similarly argues that, because we acknowledged that, if some people respond to the loss of NBCU programming on their current MVPD by turning to online video, we are implicitly acknowledging that the products are substitutes.²⁶⁵ This argument fails to recognize that finding that some people might switch from one product to another if the first product become unavailable is very

²⁶³ *Singer Declaration*, ¶ 202.

²⁶⁴ *Singer Declaration*, ¶ 203.

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

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

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

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

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

²⁶⁶ *Singer Declaration*, ¶ 206.

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

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

complement to a 50-plus dollar subscription from a cable or satellite company.”²⁶⁹ Richard

Greenfield, an analyst reviewing Hulu Plus makes this point sharply:²⁷⁰

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

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

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

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

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

²⁷¹ *Singer Declaration*, ¶ 115.

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

²⁷³ *Singer Declaration*, ¶ 115.

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

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

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

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

²⁷⁴ *Ibid.*

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

²⁷⁶ *Singer Declaration*, ¶ 115.

²⁷⁷ *Ibid.*

²⁷⁸ Nielsen, Video Census, May 2010 data.

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

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

²⁷⁹ *Singer Declaration*, ¶ 115.

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

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

²⁸² *Singer Declaration*, ¶ 115.

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

204. Finally Dr. Singer (among others) also cites to a recent study from the Convergence Consulting Group finding that, in 2008-2009, 800,000 households canceled their pay TV subscription services and that number is expected to double by 2011.²⁸⁵ Critically, it is not clear what proportion of these 800,000 households cancelled their subscriptions *because* of increased

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

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

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

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

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

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

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

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

²⁸⁶ *Singer Declaration*, ¶ 207.

²⁸⁷ *Ibid.*

²⁸⁸ *Online Distribution Declaration*, ¶ 43.

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

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

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

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

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

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

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

²⁹⁰ *Ibid.*

²⁹¹ *Online Distribution Declaration*, § III.

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

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

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

²⁹² *Singer Declaration*, ¶ 209.

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

²⁹⁴ *Singer Declaration*, ¶ 209.

²⁹⁵ *Online Distribution Declaration*, ¶ 68.

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

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

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

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

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

²⁹⁸ *Singer Declaration*, ¶ 210.

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

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

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

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

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

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

³⁰¹ *Online Distribution Declaration*, ¶ 54.

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

³⁰³ *Singer Declaration*, ¶ 213.

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

- Dr. Singer criticizes us for relying on current content delivery network (“CDN”) prices because future prices may be lower due to economies of scale and technological advances. Whatever the merits of Dr. Singer’s price predictions, they are irrelevant for the analysis of our foreclosure model. We relied on current CDN prices solely to demonstrate the current existence of an economic barrier to the viability of online MVPDs. Our foreclosure model implicitly assumes that CDN and related costs have fallen sufficiently far to make an online MVPD commercially viable.
- In our earlier declaration, we made the point that, if an online MVPD were unprofitable or only marginally profitable, then it would pose little competitive threat to Comcast because the firm would be unlikely to survive and/or develop into a significant rival.³⁰⁴ Dr. Singer observes that even marginally profitable or “less efficient” competitors can impose pricing discipline and that a firm such as Google might be willing to finance an online MVPD service while earning little or no profits directly from that service in the short run. The situation identified by Dr. Singer is easily treated by stating the logic of our initial point in a more general fashion: if an online MVPD were at the margin of exiting the industry absent foreclosure, then that firm would pose little competitive threat

³⁰⁴

Online Distribution Declaration, ¶152, n. 74.

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

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

[[

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

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

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

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

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

- Dr. Singer incorrectly claims we did not consider the effects of cord-shaving (*i.e.*, the practice of subscribing to a traditional MVPD for basic video service but obtaining premium content online) in our previous analysis. As we pointed out in our earlier declaration, cord-shaving is unlikely to be implicated by this deal because NBCU controls very little premium content.³⁰⁸
- Dr. Singer claims that one should also consider Time Warner Cable’s video content in a foreclosure analysis. He offers no evidence that Time Warner Cable and Comcast are somehow colluding, and he ignores the fact that Time Warner Cable no longer has a significant interest in programming networks, since its 2009 separation from Time Warner Inc.³⁰⁹
- Dr. Singer claims that NBCU’s limited (*i.e.*, 10-to-11-percent) share of total viewing minutes does not capture the “must-have” nature of NBCU’s online video content. However, he provides no reason why the relative importance of content is not captured by its viewership share, nor does he offer any alternative means for assessing the importance of NBCU’s online video content. We continue to believe that viewership

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

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

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

- Dr. Singer criticizes us for considering critical departure rates only as high as 33 percent. However, he fails to present any evidence that actual switching would be even that high. As discussed in detail in the Appendix below, all of the evidence—including that submitted by commenters opposing the proposed transaction—indicates that actual departure rates following loss of NBCU content would be substantially lower than 33 percent.
- Dr. Singer claims that the “penalty price” for stand-alone broadband (*i.e.*, the *discount* for purchasing multiple Comcast services) “suggests that Comcast should induce a significant percentage of OTT video customers to switch back to Comcast’s cable television service.” Dr. Singer offers no justification for this claim and, in fact, one might expect the opposite to be true: those consumers who chose to go with an online MVPD despite the pricing pattern to which Dr. Singer objects might be consumers who would be particularly unlikely to switch back to Comcast cable if their online MVPD lost NBCU content.
- Finally, Dr. Singer argues that there would be no reduction in data usage by a Comcast broadband Internet access subscriber who dropped her online video service because that user was likely already a “high-end” user. It is far from evident what basis Dr. Singer has

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

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

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

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

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

³¹² *Online Distribution Declaration*, ¶ 120.

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

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

order to increase Comcast’s non-NBCU profits.”³¹⁵ Dr. Cooper and Mr. Lynn provide no evidence to counter this conclusion.

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

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

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

³¹⁵ *Online Distribution Declaration*, ¶ 134.

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

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

³¹⁸ *Willkie Declaration*, ¶ 35.

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

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

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

VIII. FANCAST XFINITY TV

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

³¹⁹ *Cooper Declaration*, at 34-59.

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

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

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

}}³²¹ Further

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

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

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

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

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

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

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

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

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

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

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

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

- Comcast’s decision to offer Fancast Xfinity TV only to subscribers within in its cable television system footprint is not evidence of a market-diversion conspiracy among cable companies; and
- The Fancast Xfinity TV enhancement of Comcast’s cable television service is not an example of anticompetitive bundling.

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

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

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

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

³²⁷ *Singer Declaration*, ¶ 208.

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

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

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

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

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

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

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

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

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

³³⁰ {{

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

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

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

232. Beyond the costs associated with large-scale online distribution, Comcast would also face other sources of higher costs (and lower revenues) were it to offer a national standalone online video service.³³³ First, Comcast would have to undertake the time and expense of negotiating for the necessary content licenses to offer such a service. {{

}}³³⁴ and—assuming it could obtain them—these rights would constitute an additional cost. Second, the transition into a new market would require substantial additional costs for customer service, marketing and advertisement. For example, Comcast's customer service resources are currently set up to serve customers within its own geographic footprint. In order to provide services for customers outside of its footprint, Comcast would have to establish customer service infrastructure and resources in those areas.³³⁵ Finally, not only would Comcast face higher costs with a standalone online service, such a product would

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

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

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

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

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

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

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

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

³³⁶ *Singer Declaration*, ¶ 157.

³³⁷ *Cooper and Lynn Declaration* at 66.

³³⁸ *Singer Declaration*, ¶ 182.

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

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

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

³⁴⁰ *Cooper and Lynn Declaration* at 53.

³⁴¹ *Singer Declaration*, ¶ 208.

³⁴² *Singer Declaration*, ¶ 207.

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

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

IX. CONCLUSION

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

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

³⁴⁴ *Singer Declaration*, ¶ 205.

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

APPENDIX: ESTIMATION OF EXPECTED SWITCHING RATES TO COMCAST IF NBCU NETWORKS WERE WITHHELD FROM OTHER MVPDS

239. In this Appendix, we examine evidence on the extent to which withholding NBC or other NBCU networks from non-Comcast MVPDs would induce subscribers to those MVPDs to *switch* to Comcast. This issue is relevant to the examination of: (a) whether Comcast could profitably engage in foreclosure by inducing NBCU to withhold its networks from other MVPDs, and (b) whether the equilibrium affiliate fees for NBCU networks would be likely to rise as a result of the proposed transaction. We presented evidence on switching rates in our *Foreclosure Declaration*, and additional evidence has now been presented in the *Murphy Report* and *Kunz Declaration*. Although these submissions approach the question with different data and from different perspectives, taken together they yield a clear, consistent conclusion: although the loss of a broadcast network may cause some subscribers to depart their MVPD, the events available for study (involving DBS providers) show no evidence that those subscribers *switched to Comcast* in significant numbers.

240. As we discussed in our earlier declaration, it is useful to recognize that the number of subscribers who would switch to Comcast if their non-Comcast MVPDs lost the rights to carry NBC or other NBCU networks can be decomposed into two components.³⁴⁵ Specifically, the rate at which subscribers would switch from the foreclosed MVPD to Comcast can be expressed as $\alpha \times d$, where d denotes the rate at which subscribers depart a foreclosed MVPD for *any* other MVPD and α denotes the fraction of those departing subscribers who specifically choose to switch to Comcast as their new MVPD. α is known as the “diversion ratio.”

³⁴⁵ *Foreclosure Declaration*, ¶¶ 26-27.

241. It is important to keep in mind that the rate at which subscribers would switch to Comcast in response to foreclosure may be very small even though the foreclosed MVPD would see a high departure rate (*i.e.*, a large value of d). This can happen when the diversion rate is low (*i.e.*, α is small). In our *Foreclosure Declaration*, we followed the Commission’s approach in DirecTV/News Corp. by assuming that diversion rates were proportional to market shares.³⁴⁶ However, the combined evidence from all the reports now submitted indicates that the diversion rates are likely smaller than this. In his report, Dr. Singer provides an intuitive explanation for this finding, noting that “[i]f a customer has already shown a preference for DBS service by choosing DISH, then that customer would be likely to switch from DISH to DirecTV...were the absence of that content burdensome to the customer.”³⁴⁷

242. In the remainder of this appendix, we evaluate three types of evidence on departure and switching rates that have been presented in these proceedings. Part A examines the effect of DISH Network’s roughly 6-month dispute with Fisher Broadcasting. Part B examines the effect of DBS providers’ rollout of local-into-local broadcast service. Finally, Part C examines Professor Murphy’s attempt to back departure rates out of a theoretical bargaining model.

A. DISH Network may have lost significant numbers of subscribers due to the Fisher dispute, but switching to Comcast was de minimis.

243. In our *Foreclosure Report*, we evaluated the effect on Comcast’s share (defined as Comcast subscribers divided by homes passed by Comcast cable) of the retransmission dispute

³⁴⁶ *Foreclosure Declaration*, ¶¶ 54-55.

³⁴⁷ *Singer Declaration*, ¶ 197. One might ask what this logic implies for a customer at a non-DBS MVPD such as a telco video provider. The short answer is that we know of no events from which to answer this question, but the findings on the DBS events indicate that one cannot simply assume that Comcast will capture a proportional share of switchers. This is particularly true given that the offerings of the telco provider tend to be large, all digital channel lineups, with large basic tiers, similar to the lineups of the DBS providers. (See *Marx Report*, ¶ 29.)

between DISH Network and Fisher Broadcasting, which resulted in DISH Network’s losing the retransmission rights to eight ABC, CBS, and/or Fox affiliates and two Univision affiliates in seven DMAs for approximately six months, from December 17, 2008 until June 10, 2009.³⁴⁸ We presented evidence that the dispute had no statistically significant effect on Comcast’s share in the Fisher DMAs in which it operates cable systems.³⁴⁹ In response, DISH Network submitted an analysis by Vincent Kunz, Senior Marketing Manager for Reporting and Analytics, which used internal data from DISH Network to show that the Fisher dispute had {{

}} on DISH Network’s penetration rate in the affected DMAs, causing DISH’s penetration {{ }} overall.³⁵⁰

244. For the reason described in the introduction to this appendix, there is no tension between these findings. The fact that the Fisher dispute resulted {{ }} while there was no significant effect on Comcast’s share, strongly suggests that, although {{

}}, so Comcast gained very few subscribers.^{351, 352}

³⁴⁸ *Foreclosure Declaration*, ¶¶ 96-104. We also examined shorter disputes including: the three-day dispute between DISH Network and Allbritton Communications in 2003; the two-day dispute between DISH Network and Viacom in 2004; and the three-day dispute between DISH Network and Young Broadcasting. In each case, we found no significant increase in Comcast’s penetration level due to the event.

³⁴⁹ Comcast operates systems in the following DMAs affected by the Fisher dispute: Eugene, OR, Portland, OR, and Seattle, WA.

³⁵⁰ *Kunz Declaration*, ¶ 10. {{

}} (*Kunz Declaration*, ¶ 12.)

³⁵¹ Note that those subscribers who chose DISH Network before the Fisher dispute indicated a preference for an MVPD other than Comcast. Many of the subscribers who left the DISH Network may have gone to DirecTV or other rival MVPDs.

245. As one response to this logic, DISH network argued that {{

}}³⁵³ However, if anything,

{{ }}

Comcast did not expect to gain many subscribers from DISH. That is, if there would be gains to Comcast from a foreclosure strategy, then similar gains were presumably present during the Fisher event. The fact that Comcast might not have chosen to invest resources to exploit this situation and did not capture a significant number of subscribers argues strongly against claims that Comcast would try to recreate a similar situation by withholding NBCU, particularly given that, in that case, NBCU would have to bear the costs of such an action.

246. Another response of DISH Network to our finding of a low switching rate was to assert that our econometrics were somehow mistaken.³⁵⁴ We have addressed this assertion by performing several robustness tests. These tests reaffirm our conclusion that the Fisher dispute had no substantive impact on Comcast’s penetration rates in the affected regions.

247. As described in our *Foreclosure Declaration*, we analyzed the effect of the Fisher dispute on Comcast penetration rates by using a difference-in-differences model to compare the changes in Comcast’s shares during the dispute period in the affected DMAs to the changes in

³⁵² Note that, based on these two factors, the Katz, Orszag, and Sullivan (2009) report is not directly relevant here. (Michael L. Katz, Jonathan Orszag, and Theresa Sullivan, “An Economic Analysis of Consumer Harm from the Current Retransmission Consent Regime,” November 12, 2009.) That report discussed only departure rates from MVPDs, not switching rates to any particular alternative MVPD. In addition, its discussions of departure rates was not informed by the results of our studies of the various retransmission disputes or local-into-local events.

³⁵³ *DISH Supplemental Report*, n. 12.

³⁵⁴ *Murphy Report*, ¶¶ 69-76; *DISH Supplemental Report* at 9-10.

Comcast’s shares during the dispute in control DMAs.³⁵⁵ The results of this model demonstrate that the Fisher dispute had no significant effect on Comcast’s penetration rates.³⁵⁶ No commenters have performed any econometric analysis that suggests that our conclusions regarding the effect of the Fisher dispute on Comcast’s penetration rate are incorrect. Instead, they have claimed that: (i) our control groups are arbitrary,³⁵⁷ or (ii) that our data and methodology lack power.³⁵⁸ We address each criticism in turn.

248. To address the criticism that our control groups were arbitrary, we initially note that there is only one relevant question in determining whether a set of DMAs make up a good control group: Do they provide a good prediction of what would have happened in the affected DMAs in the absence of the Fisher event? In his study of DISH’s penetration levels, Mr. Kunz argued that he could not use {{

}}³⁵⁹ {{

}}³⁶⁰

249. Mr. Kunz’s reasoning is incorrect. It is a perfectly sound approach to use market performance data from the *pre-event* period to evaluate whether a potential set of control DMAs is appropriate. Indeed, the extent to which penetration levels and changes in the different areas

³⁵⁵ *Foreclosure Declaration*, ¶¶ 96-104.

³⁵⁶ *Foreclosure Declaration*, ¶ 102.

³⁵⁷ *DISH Supplemental Report* at 9-10.

³⁵⁸ *Murphy Report*, ¶ 72.

³⁵⁹ *Kunz Declaration*, ¶ 7.

³⁶⁰ *Kunz Declaration*, Exhibit A.

match during the pre-event period is the most plausible indicator for whether they would have continued to match in the absence of the event and thus whether the proposed set of control DMAs is appropriate.

250. With this logic for selecting control groups in mind, consider Figure 3 from the *Foreclosure Declaration*, repeated below as Figure A1. Although our initial criterion for selecting control DMAs was based on geographic proximity, we also carefully compared the pre-dispute penetration levels to ensure that our control group matched our treatment group.³⁶¹ As can be seen in the figure, the pre-event trends match very closely, indicating that our selected control area is appropriate.

251. Indeed, without needing to turn to any more sophisticated tests, the message from Figure A1 is unmistakable—the affected DMAs closely tracked the penetration trends in the control DMAs before the Fisher event *and continued to do so during the event*. It is quite clear that Comcast did not gain a material number of subscribers in affected regions during the Fisher event.

³⁶¹ The closest DMAs to the three Fisher DMAs in which Comcast operated cable systems were the Fresno and Sacramento DMAs comprising Comcast's Central California region.

Figure A1

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252. Next, consider the DMAs that Mr. Kunz proposed as controls. {{

}}³⁶²

362

{{

}}

Figure A2

{{

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253. Figure A3 contains a similar picture of Comcast’s share in Seattle relative to {{

}} Nevertheless, in

what follows, we demonstrate that our results are robust to the use of these alternative controls for Seattle, although—for the reasons discussed above—our original specification is preferable.

Figure A3

{{

}}

254. Although our original specification and control group is appropriate, we will now show that our results are robust to the selection of different control groups. Column (1) of Table A1 replicates our original results.³⁶³ Column (2) shows that our substantive results are unchanged if we compare Seattle only to {{

}}. In both sets

of results, all of the event-indicator variables' coefficients are small in magnitude and none is

³⁶³

Foreclosure Declaration, Table 5.

statistically significantly greater than zero. These results clearly reaffirm our initial conclusion that the Fisher dispute had no appreciable effect on Comcast’s penetration rates.

Table A1: Fisher Event Regressions with Comcast Penetration as Dependent Variable

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255. Professor Murphy and DISH Network both noted that, in our original specification, the

{{

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³⁶⁴ However, this argument is undermined by the fact that the negative effect (*i.e.*, the very small loss of Comcast subs in the Fisher regions relative to the control DMAs) actually

³⁶⁴ *Murphy Report*, ¶ 71; *DISH Supplemental Report* at 10.

commences *before* the end of the Fisher event period. To demonstrate this fact, we modify the specifications in Table A1 by including a separate indicator for the last full month of the event (May 2009). Table A2 shows that, both in our original model and in the alternative version comparing Seattle to {{ }}, Comcast’s share in the last month of the event was also negative and, more importantly, was not significantly different from the measured post-event penetration change (as indicated by the p-values being greater than 0.05). Hence, whatever the source of the small loss of Comcast penetration following the Fisher event, it was not the restoration of DISH Network’s retransmission rights to the Fisher stations, as there is no significant difference between Comcast’s share at the end of the event period and its share in the post-period event period.³⁶⁵ The evidence, taken as a whole, makes it clear that Comcast did not gain a significant number of subscribers due to the Fisher event.

³⁶⁵ We also note that, when we examine the Seattle event in isolation, the “after event” indicator variable is not statistically significant.

Table A2: Fisher Event Regressions Including Dummy for Last Month of Event

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256. Finally, Professor Murphy argues that our study of the Fisher event may “not offer sufficient power” to measure the effect of the event, noting that {{

}}³⁶⁶ This criticism is easily rebutted, as the point estimates from our regressions together with the standard errors enable us to define the confidence interval in which one is 95 percent

³⁶⁶

Murphy Report, ¶ 72.

sure the true effect on Comcast’s share lies. Table A3 shows these confidence intervals for all the event coefficients in Table A1. In all cases, one can conclude with confidence that the effect on Comcast’s share was very small—well less than one percent. For example, the upper bound of the confidence region for the effect during the event period from our base specification is approximately 2/10 of one percent.

Table A3: Fisher Event Regression Confidence Intervals

{{

}}

B. Analysis of DBS shares following introduction or expansion of local-into-local broadcast service

257. As described in our *Foreclosure Declaration*, the introduction of local-into-local service by DBS providers provides an alternative set of events to study to assess the importance of access to broadcast networks in driving consumers’ MVPD choices. As we explained in that declaration, it is critical to distinguish between those cases in which a DBS provider

simultaneously added access to three or four of the major broadcast networks and those cases in which a DBS provider supplemented an existing local-into-local offering by adding the fourth and final major broadcast network.³⁶⁷ Indeed, our empirical analysis found that, although DBS providers' introduction of access to all four broadcast networks led to a statistically significant reduction in Comcast's penetration (of just less than one percent), the addition of one extra network to an existing offering did not have any statistically significant effect.³⁶⁸ Because NBC is the only one of the four major networks that NBCU owns, the result for the effect of adding a single network is the one relevant for assessing the potential competitive effects of the proposed transaction.

258. In response to our analysis of the effect of adding a single network to local-into-local service, Professor Murphy argues that, {{

}}³⁶⁹ This criticism is without merit. Even if all the true effects are zero, when one estimates eight coefficients, there is a non-trivial chance that one of them will randomly appear to be statistically significant. For example, if the coefficient estimates were statistically independent of one another, then using a 5-percent significance level (as we do), there would be a greater than 1/3 chance that one of the coefficients would randomly appear to be significant. Hence, a single negative and significant coefficient does not invalidate

³⁶⁷ *Foreclosure Declaration*, ¶ 106.

³⁶⁸ *Foreclosure Declaration*, ¶ 106, n. 125.

³⁶⁹ *Murphy Report*, ¶ 73.

our conclusion that, taken together, the evidence indicates that the addition of a fourth major network to an existing DBS local-into-local offering did not reduce Comcast’s penetration.

259. Professor Murphy also offers his own estimate of the effects of gaining or losing retransmission rights to a single network. His analysis proceeds in two steps. First, he relies on evidence from an earlier report produced on behalf of DirecTV to conclude that, if DirecTV failed to offer access to all four of the major broadcast networks, then its penetration would {{
}}^{370, 371} Professor Murphy’s next step is to claim that the effect of adding a single network can reasonably be approximated by 25 percent of the effect of adding all four networks, or {{
}}³⁷²

260. The assumption that the effect on subscriber choices of adding a fourth network is just as large as the effect of adding the first network is unreasonable unless the major broadcast networks are not substitutes for one another. To the extent that these networks are, in fact, substitutes for one another, economics indicates that the marginal effect of adding a major broadcast network to an MVPD’s lineup would be declining in the number of major broadcast networks in that lineup.³⁷³

³⁷⁰ *Murphy Report*, ¶ 45, citing to Benjamin Klein, Andres Lerner, and Emmett Dacey, *An Economic Analysis of DIRECTV Providing Local-into-Local Service via Satellite in All 210 DMAs*, MB Docket No. 07-18 (August 23, 2007).

³⁷¹ Whether or not this estimate is consistent with our estimate of just under one point of share change for Comcast depends on the relative penetration levels. As an example, in an area in which DirecTV has a 16 percent market share with all four broadcast networks, a 26 percent decline would be a reduction of roughly four percentage points of share. If 25 percent of this went to Comcast, that would correspond to our finding of roughly a one percentage point share effect on Comcast.

³⁷² *Murphy Report*, ¶ 46.

³⁷³ Professor Rogerson presents evidence that broadcast networks (and their local affiliate stations) are close substitutes for one another. (*Rogerson Report* at 14-17.)

261. Because, as a matter of economics, the fourth network surely has less effect than the first, Professor Murphy's conclusion that losing all four networks would reduce DirecTV's penetration by {{ }} implies *only* that the effect of losing a single network must be *less than* {{ }}. Nothing about this logic implies that the loss of penetration from a single network must even be positive. In particular, a situation in which consumers strongly desire an MVPD with at least one or two broadcast networks, but care little about whether the MVPD has four networks instead of three, would be consistent with all of the econometric evidence presented on local-into-local events but would imply that there would be no effect from loss of a single broadcast network.

C. The simplified bargaining framework used by Professor Murphy cannot produce a precise, reliable estimate of the actual departure rate.

262. In his report, Professor Murphy foregoes any independent data analysis of actual departure rates. Instead, he relies entirely on a theoretical "Nash bargaining model" to back out implied departure rates based on assumptions about per-subscriber prices for retransmission consent.

263. Before turning to a detailed discussion of Professor Murphy's attempt to estimate actual departure rates, we note that, even if all of his assumptions were correct, his approach could yield only an estimate of the rate of *departure from* an MVPD's loss of a broadcast network, not an estimate of the *switching to* any particular alternative MVPD. As such, no matter what one makes of Professor Murphy's estimated actual departure rates, these estimates cannot counter the key conclusion that the diversion rate to Comcast following a DBS provider's loss of a single broadcast network is very small.

264. The logic and details of Professor Murphy’s approach are explained on pages 3-16 of his report. We do not reproduce all the details here. Rather, we note that the basic intuition for the approach is as follows. As discussed in Section IV.A above, if the assumptions of the Nash bargaining model are satisfied and one knows the value of the bargaining-ability parameter and has sufficient data on demand, revenues, and costs from which to determine threat points and total gains from trade, then one can, in theory, determine what the per-subscriber price for retransmission consent will be. Professor Murphy’s approach reverses this logic to note that, if one knows the price for retransmission consent *and* the bargaining power parameter *and* all the other parameters determining per-subscriber profits for each party (with or without a deal) *except for the actual departure rate*, then one could back out the implied actual departure rate.

265. Unfortunately for Professor Murphy’s approach, there are at least two other parameters that are clearly unknown. The first is the bargaining power parameter, which can take any value between zero and one. Professor Murphy correctly notes taking the bargaining-power parameter to equal $\frac{1}{2}$ is “a common assumption” but it also is an assumption that need not hold.^{374, 375} In the absence of empirical support for a specific value of the bargaining-power parameter, a more accurate statement is that the model implies a range of actual departure rates depending on what assumption is made about the bargaining-power parameter.

266. The second parameter is the extent to which an MVPD that has lost the carriage rights to one or more networks would choose to lower prices rather than lose subscribers (or, equivalently,

³⁷⁴ *Murphy Report*, ¶ 16. A parameter of $\frac{1}{2}$ corresponds to an assumption of equal bargaining power and an equal division of the gains from trade. In his footnote 12, Professor Murphy correctly notes that “the assumption that each party receives half of the incremental surplus may not hold for all transactions.”

³⁷⁵ See also our discussion of the Nash bargaining solution’s equal-bargaining-power assumption in Section IV.B.1 above.

the extent to which an MVPD that has gained the carriage rights to one or more networks would choose to raise prices rather than gain subscribers). Professor Murphy calculates this split (his “k” parameter) based on historical events in which networks have been lost (the Fisher and local-into-local events described above) by assuming that this split would be the same for MVPDs negotiating with a vertically integrated NBCU.

267. Professor Murphy’s treatment of k is unsound. An economically rational MVPD will determine how to “split its pain” between price reductions and subscriber losses based on the characteristics of the specific negotiation in which it is involved. One of those characteristics can be whether the MVPD bargaining over carriage rights is negotiating with a network owner that is integrated with a competing MVPD. When negotiating with an integrated network owner, the MVPD purchasing carriage rights would rationally account for the fact that, the greater the extent to which it chooses to take the pain in the form of subscriber losses, the more subscribers the integrated firm’s MVPD operations gain in the event of disagreement, and, thus, the more profitable the integrated firm’s disagreement point would be. By the standard logic of bargaining models such as the one used by Professor Murphy, a more favorable threat point would improve the integrated firm’s bargaining position. So, by the logic of Professor Murphy’s bargaining model, an MVPD negotiating with a vertically integrated network has an enhanced incentive to take the losses in the form of lower subscription prices rather than lost subscribers.

268. This logic implies that, under Professor Murphy’s assumptions that NBCU internalizes the effects of its actions on Comcast Cable’s profits and that significant numbers of subscribers would switch to Comcast in the event that their competing MVPDs lost carriage rights to NBCU networks, an MVPD negotiating with NBCU would have an incentive to commit to price

reductions that are substantially larger than those it would implement when negotiating with an unintegrated network.³⁷⁶ This commitment could take the form of public commitments made by the MVPD to its subscribers through advertising and news media. Alternatively, the MVPD might provide subscribers with incentives to sign long-term contracts that would be in force at the time of the negotiations with NBCU, thus minimizing departures.³⁷⁷

269. The logic of Professor Murphy's bargaining model thus implies that the actual departure rates inferred from disputes involving non-integrated network owners, such as the Fisher broadcasting event, may substantially overstate the actual departure rate that Comcast could expect to generate if it had the ability to induce NBCU to withhold one or more of its networks from other MVPDs.³⁷⁸

270. Hence, Professor Murphy's approach faces the intractable problem of identifying three different parameters (bargaining power, division of MVPD losses between price cuts and subscriber losses, and the associated actual departure rate) based on a single retransmission consent price. Even if one relies on historical data for MVPD price cuts following loss of a network, there are still two free parameters (bargaining power and the actual departure rate) and only one price to pin them down. Consequently, as we will now demonstrate, any departure rate

³⁷⁶ It is worth remembering that, if either NBCU does not internalize the effects of its actions on Comcast Cable's profits or if only an insignificant number of subscribers would switch to Comcast in the event that their competing MVPDs lost carriage rights to NBCU networks, then foreclosure would not occur.

³⁷⁷ *Foreclosure Declaration*, ¶ 59.

³⁷⁸ We do not have details on the ownership status of all the local broadcast stations involved in the local-into-local events, so it is possible some were Fox O&O stations during the time that Fox was vertically integrated with DirecTV. However, for all of the Fox events that we have been to check and for all events involving the other three major broadcast networks, the local-into-local events involved negotiations with a non-integrated network.

between zero and 100 percent is consistent with the theoretical bargaining model and observed retransmission consent fees.

271. We demonstrate Professor Murphy’s approach’s lack of predictive power by showing that departure rates of zero and 100 percent *both* are consistent with his model:³⁷⁹

- *Actual departure rate of zero:* Assume, consistent with DISH’s actions during the Fisher dispute, that an MVPD that lost access to a broadcast network would cut its prices by \$1. Moreover, suppose that this action would yield an actual departure rate of zero. This fact means that the MVPD’s per-subscriber gain from reaching an agreement with the network (gross of the fee it would pay to the network under an agreement) equals \$1, the value of the price cut that it otherwise would make. Under Professor Murphy’s assumptions, if no subscribers would depart the MVPD in the absence of an agreement, then the broadcast network would lose {{ }} in advertising revenue per subscriber on the {{ }} percent of viewers who would not obtain the content over the air, or a loss of {{ }} per viewer in addition to the lost fee from the MVPD. Hence total gains from trade would be {{ }} per subscriber. Assuming, as Professor Murphy does, that the retransmission consent fee is {{ }}, this means that, under the equilibrium agreement, the MVPD captures {{ }} per subscriber, while the network captures {{ }} per subscriber. That is, the MVPD captures {{ }} of the surplus. This outcome is

³⁷⁹ Similar arguments can be used to show any departure rate in between zero and 100 percent is also consistent with his model, depending on what assumption one makes about the bargaining-power parameter.

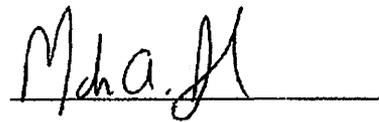
consistent with a Nash bargaining model in which the MVPD has a bargaining-power parameter of {{ }}.

- *Actual departure rate of 100 percent:* Suppose that, even if the MVPD were to cut prices by \$1 (or more), 100 percent of its subscribers would depart and switch to other MVPDs following loss of the network. In this case, the network would suffer no loss of advertising revenue in the absence of a retransmission agreement, as all subscribers would access its programming at other MVPDs. The MVPD's per-subscriber value of the agreement (gross of the retransmission consent fee) would be equal to the MVPD's full profit margin per subscriber, which Professor Murphy assumes to be {{ }}. With a retransmission consent fee of {{ }}, the network captures surplus of {{ }} per subscriber while the MVPD captures {{ }} per subscriber. That is, the MVPD captures {{ }} percent {{ }} of the surplus. This outcome is consistent with a Nash bargaining model in which the MVPD has a bargaining-power parameter of {{ }}.

The bargaining-power values used in the examples above may be extreme, but they illustrate the central point that Professor Murphy's model provides almost no information regarding true values of the actual departure rates.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Executed on this 20th day of July, 2010.

A handwritten signature in cursive script, appearing to read "M. Israel", written over a horizontal line.

Mark Israel

A handwritten signature in cursive script, appearing to read "Michael L. Katz", written over a horizontal line.

Michael L. Katz

CERTIFICATE OF SERVICE

I, Brien C. Bell, hereby certify that on this 21st day of July, 2010, I caused true and correct copies of the Comcast's Opposition to Petitions to Deny and Response To Comments to be served by overnight delivery to:

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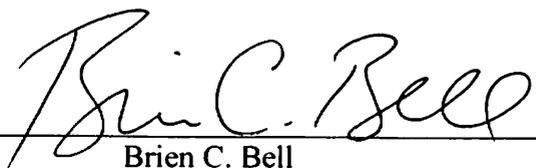
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