Time Warner Cable, and Verizon, were discussing subscriber-based on-line TV models preceding the announcement of the TV Everywhere initiative on June 24, 2009.[103]

114) The TV Everywhere principles are: "Bring more TV content, more easily to more people across platforms. Video subscribers can watch programming from their favorite TV networks on-line for no additional charge. Video subscribers can access this content using any broadband connection. Programmers should make their best and highest-rated programming available on-line. Both networks and video distributors should provide high-quality, consumer friendly sites for viewing broadband content with easy authentication. A new process should be created to measure ratings for on-line viewing. The goal should be to extend the current viewer measurement system to include advertiser ratings for TV content viewed on all platforms. TV Everywhere is open and non-exclusive; cable, satellite or telco video distributors can enter into similar agreements with other programmers."[104]

115) Fancast XFINITY TV is the Comcast service following the TV Everywhere principles. A cable TV customer of Time Warner Cable can register for the TV Everywhere service and watch some of the content of participating cable networks on-line.[105]

116) Although this initiative was termed pro-competitive and consumer friendly by the cable providers, it has been criticized by the consumer group Free Press, which alleges that the cable providers' intention behind the TV Everywhere initiative is to limit on-line availability of video programming.[106]

117) I would not expect the TV Everywhere principles to be something that could be implemented profitably by a single MVPD because then only the subscribers to that MVPD would have access to the programmer's on-line content. This suggests that it is only through common agreement to the TV Everywhere principles by major MVPDs that it can be implemented. This raises the question of whether the agreement by MVPDs to TV Everywhere principles should be viewed as collusion – I expect competition authorities would be concerned if a (hypothetical) monopolist MVPD in the US market imposed the restrictions on on-line distribution embodied by the TV Everywhere principles.

C.4.2. History related to restrictions on on-line distribution

118) The incentive to limit competition from on-line distribution, including degrading the quality of streaming video, is demonstrated by past strategic behavior of MVPDs in relation to (free) on-line

[103] "Some Online Shows Could Go Subscription-Only," *New York Times*. March 29, 2009, available at http://www.nytimes.com/2009/03/30/business/media/30cable.html, accessed April 15, 2010.

[104] See http://www.comcast.com/About/PressRelease/PressReleaseDetail.ashx?PRID=883, accessed March 26, 2010.

[105] It is my understanding that TBS and TNT are currently the only participating networks in Time Warner Cable's TV Everywhere service, although it is Time Warner Cable's intention to add more networks in the future (see http://www.timewarnercable.com/Corporate/learn/cable/tv_everywhere_preview.html, accessed March 26, 2010).

[106] Marvin Ammori, "TV Competition Nowhere: How the Cable Industry is Colluding to Kill Online TV," January 2010, available at http://www.freepress.net/files/TV-Nowhere.pdf, accessed April 1, 2010.

distribution. For example, Comcast was alleged to have secretly discriminated against video peer to peer (P2P) applications such as BitTorrent in a complaint filed by a consumer group with the FCC.[107] The Commission ordered Comcast in 2008 to stop the conduct.[108] A publication by Free Press points to additional activities by distributors that might be interpreted as discouraging free on-line on demand video by competitors:[109] (1) In 2009, large cable companies such as Time Warner Cable or AT&T initiated metering trials for on-line services which were (temporarily) stopped due to consumer pressure. Such pricing strategies for on-line services have the potential to put on-line TV providers at a disadvantage as large broadband capacity is occupied for streaming and downloading activities; (2) The FCC notes in 2009 that competition has not emerged in the market for retail navigation devices and the market for set–top boxes, which hampers innovation and therewith the convergence of video, TV and internet protocol based content.[110] Free Press alleges that the lack of competition in set-top boxes is due to strategic action by the cable TV industry: "Third-party box makers have little to no hope of penetrating the set-top box market for delivering cable TV programming (including video-on-demand). Cable operators have spent almost two decades actively thwarting congressional and FCC efforts meant to ensure consumers can attach devices to the network;"[111] (3) Free Press contends that cable TV distributors have tried to deny content access to on-line services by threatening programmers with lower per subscriber fees if they continue to offer content on-line. Advertising Age reported in December 2008 on fee disputes between Time Warner Cable and Viacom over the availability of Viacom's programming for free on the Internet. It says that Time Warner Cable threatened Viacom with a loss of carriage on its systems.[112]

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[107] See In re Formal Compl. of Free Press & Public Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications, 23 F.C.C.R. 13,028 (2008) (Order), reversed on other grounds, Comcast v. Federal Communications Commission, No. 08-1291, 2010 U.S. App. LEXIS 7039 (D.C. Cir. April 6, 2010). The FCC investigated the behaviour and found that Comcast subscribers had problems with P2P applications due to interference of Comcast. Comcast argued that the interference was due to reasonable network management – some P2P applications generate significant traffic, which might lead to congestion and result in slower connection for neighboring consumers. However, the Commission found that: "Comcast's practice selectively blocks and impedes the use of particular applications, and we believe that such disparate treatment poses significant risks of anticompetitive abuse." (FCC (2008b), "Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications and Broadband Industry Practices Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for 'Reasonable Network Management,'" Memorandum Opinion and Order, FCC 08-183, Adopted August 1, 2008, Released August 20, 2008, at paragraph 47. Available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-183A1.pdf, accessed April 1, 2010.) The fact that Comcast did not convey its network management conduct to its customers was interpreted by the FCC as an indication for the anticompetitive harm of those actions (FCC, 2008b, paragraph 52).

[108] A US appeals court judged in April 2010 that the FCC order was void as the FCC had no "express statutory authority" over the Internet access that Comcast grants its customers. The court however did not comment on the discrimination accusation (see Global Competition Review, "FCC looks ahead after internet neutrality loss," April 7, 2010).

[109] Marvin Ammori, "TV Competition Nowhere: How the Cable Industry is Colluding to Kill Online TV," January 2010, available at http://www.freepress.net/files/TV-Nowhere.pdf, accessed April 1, 2010.

[110] See "FCC Identifies Critical Gaps in Path to Future Universal Broadband," November 2009 (available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-294706A1.pdf, accessed April 1, 2010).

[111] Marvin Ammori, "TV Competition Nowhere: How the Cable Industry is Colluding to Kill Online TV," January 2010, p.16, available at http://www.freepress.net/files/TV-Nowhere.pdf, accessed April 1, 2010.

[112] See http://nobosh.com/sr/viacom-vs-time-warner-cable-is-hulu-to-blame/162144/, accessed April 15, 2010.

119) During the 2010 Winter Olympics, NBCU limited access to Olympics coverage on its Internet web site. As described by Senator Herb Kohl, Chairman of the Senate Subcommittee on Antitrust, Competition Policy, and Consumer Rights, in a letter to NBCU President and CEO Jeff Zucker, "In order to access a portion of Olympic video content on the NBC-owned Internet web site NBCOlympics.com, fans must first register with this web site. As described on that web site, in order to register, a viewer must 'validate your subscription to your cable, satellite or IPTV provider.' A consumer who has no such subscription will be unable to register, and therefore is unable to access the abundance of Olympic video content available on NBCOlympics.com."[113] The restrictions imposed by NBCU in conjunction with MVPD partners illustrate that Comcast-NBCU will have the incentive and ability to restrict competition from on-line video.

C.4.3. Remedies related to on-line distribution restrictions

120) Concerns about anticompetitive effects resulting from restricting on-line distribution are most compelling for news and information programming, including business news programming. Such concerns are easily resolved by prohibiting the use by Comcast of restrictions, limitations, or disincentives related to the distribution of news and information programming on other platforms, including the Internet, and prohibiting Comcast from diminishing or degrading the quality of signal delivery for news and information programming, including business news, on any of its content-distribution platforms without the consent of the programmer. By focusing this remedy on news and information programming, it is less likely to have negative effects in terms of possible foregone efficiencies.

C.5. Potential harms relating to bundling of carriage

121) The Transaction increases the incentive and ability of Comcast to use market power to exclude non-integrated programming from rival MVPD platforms and on-line platforms, with potential harm to consumers and competition. Thus, another relevant theory of harm is that the bundling of CNBC with other Comcast and NBCU cable networks for carriage will lead to foreclosure of unaffiliated business news networks such as Bloomberg TV from carriage on non-Comcast systems or from carriage on the same tier as CNBC on non-Comcast systems.

122) The FCC describes the concern with bundling for carriage as follows: "When programming is available for purchase only through programmer-controlled packages that include both desired and undesired programming, MVPDs face two choices. First, the MVPD can refuse the tying arrangement, thereby potentially depriving itself of desired, and often economically vital,

[113] Letter from Senator Herb Kohl to Jeff Zucker dated February 26, 2010, available at http://www.freepress.net/files/Kohl_NBC_Olympics.pdf, accessed May 20, 2010.

programming that subscribers demand and which may be essential to attracting and retaining subscribers. Second, the MVPD can agree to the tying arrangement, thereby incurring costs for programming that its subscribers do not demand and may not want, with such costs being passed on to subscribers in the form of higher rates, and also forcing the MVPD to allocate channel capacity for the unwanted programming in place of programming that its subscribers prefer."[114] Because of the effect on the MVPD's channel allocation, tying arrangements cause harm at the upstream level by excluding other programmers from the MVPD platform or from a desired tier.

123) In the UK, Ofcom prohibits the bundling of networks for carriage.[115] According to a Bloomberg representative, the practice was widespread and was prohibited by Ofcom because some owners of multiple networks were able to force their less popular networks onto a platform by threatening to withhold their most popular networks, leaving fewer available positions on the platform for independent networks.[116]

C.5.1. Empirical analysis of bundling effects

124) As a matter of economics, one would expect MVPDs to favor their affiliated networks. As mentioned above (paragraph 87), a senior Comcast official has confirmed this for the case of Comcast. This is further borne out in the data, which show that Cablevision and Comcast are the leading carriers of their own networks, Cox is by far the highest carrier of the Discovery networks, and Time Warner generally carries all of Time Warner's networks on its systems.[117] The Transaction will provide Comcast—because of its ownership of CNBC—with an incentive to discriminate against Bloomberg TV in terms of carriage, channel placement, tiering, and bundling to non-Comcast MVPDs. As of 2007, Comcast carried the NBCU networks Bravo, CNBC, CNBC World, MSNBC, Sci Fi, Sundance, and USA to only 13.4% of its households, and carried at least six of the seven networks to only 73.6% of its households.[118] Thus, there is scope for significant carriage increases for NBCU networks.

125) In order to analyze the effects of carriage bundling, I use regression analyses to estimate the incremental number of subscribers reached by a network as a result of having a major multi-network

[114] FCC (2007), "Report and Order and Notice of Proposed Rulemaking re Review of the Commission's Program Access Rules and Examination of Programming Tying Arrangements," MB Docket No. 07-198, FCC 07-169, Adopted September 11, 2007, Released October 1, 2007, at paragraph 120. The FCC also notes that "small cable operators and MVPDs are particularly vulnerable to such tying arrangements because they do not have leverage in negotiations for programming due to their smaller subscriber bases." (FCC, 2007, paragraph 120) The FCC notes that "OPASTCO/tTAA, representing small and rural MVPDs, cites the practice of programmers to require carriage of less popular programming in specified (usually basic) tiers in return for the right to carry popular programming as an onerous and unreasonable condition that denies consumers choice and impedes entry into the MVPD market." FCC (2007, at paragraph 119)

[115] Based on notes of interviews of Lindsey Oliver, Head of International Distribution, Bloomberg TV, April 15, 2010. See also Ofcom's "Guidance on ITC's Bundling Remedies," available at http://www.ofcom.org.uk/tv/ifi/guidance/bundling_remedies/, accessed April 15, 2010.

[116] Based on notes of interviews of Lindsey Oliver, Head of International Distribution, Bloomberg TV, April 15, 2010.

[117] Source: 2007 TMS Data. The data pre-date the spin off of Time Warner Cable from Time Warner Inc.

[118] Source: 2007 TMS Data. In contrast, Time Warner carries all of these NBCU networks to 53.5% of its households.

owner. Because some major multi-network owners are vertically integrated MVPDs, the results for those firms reflect a combination of bundling effects and vertical integration effects.

126) The regression results are reported in Table 15 and discussed in the accompanying text. The results show that the effect of ownership by a major multi-network owner is positive for all the major multi-network owners and is statistically significant for all except Cablevision, Liberty Media, and Scripps. The regression results imply that if an independent network were purchased by Comcast, all else equal, the network could expect an increase in its reach of 14 million subscribers, with a 95% confidence interval of 10 to 19 million subscribers. The regression results show that for Comcast, News Corp., Scripps, Time Warner, and Walt Disney, an increase in the number of networks owned results in a statistically significant increase in carriage for all owned networks. For example, the results imply that if the number of networks that are majority owned by Comcast increases by 1, then all Comcast-owned networks experience an increase in subscribers of 3 million, with a 95% confidence interval of 1 to 5 million. Thus, not only is ownership by a major multi-network owner valuable in terms of increasing a network's subscribers, but that ownership tends to be even more valuable the greater is the number of networks owned by the multi-network owner. The results suggest that the overall effect of the Transaction will be to increase the total subscribership for Comcast-NBCU networks, to the detriment of other networks, particularly those such as Bloomberg TV that offer substitutes to the Comcast-NBCU networks but do not have comparable carriage leverage.

C.5.2. Channel capacity constraints

127) As a complement to the analysis of carriage bundling, I examine whether there is evidence for channel capacity constraints on cable systems. I conclude that indeed there is a relatively firm channel capacity constraint around 80 channels for basic plus expanded basic tiers, although this is not the case for digital basic tiers. See Table 16. Considering all tiers, major MSOs, including Comcast, do not distribute all of their own networks to all of their households. See Table 17. This suggests binding capacity constraints even among the major MSOs.

C.5.3. Shapiro test for bundling carriage

128) One method for determining whether bundling harms competition is the "Shaprio Test" as described by Nalebuff (2002).[119] That test consists of the five multiple-part questions. My responses, in Table 18, applied to the bundling of Comcast/NBCU programming networks for distribution lead to the conclusion that competitive harms related to bundling for carriage as a result of the Transaction should be a concern to competition authorities.

[119] Nalebuff, Barry J. (2002), "Bundling and the GE-Honeywell Merger," Yale SOM Working *Paper No. ES-22.*

C.5.4. Remedies related to carriage bundling

129) This analysis suggests a possible remedy would be to prohibit bundling in carriage demands. This is the approach of Ofcom, and a similar restructuring measure was applied in the Time Warner-Turner case. "In order to prohibit the merged company from exerting substantially greater negotiating leverage over cable operators to take unwanted programming by bundling all or some of the marquee or crown jewel networks and offering them only as a package, the consent order would bar Time Warner from bundling HBO with Turner networks. Time Warner also would be barred from bundling CNN, TNT or WTBS with Time Warner channels."[120]

130) More specifically, a possible remedy would be to prohibit Comcast from requiring that any combination of Comcast-NBCU networks be purchased as a bundle and to prohibit Comcast from offering terms for combinations of Comcast-NBCU networks that are more favorable than on an "a la carte" basis.

C.6. Potential harms relating to bundling of advertising

131) The Transaction increases the incentive and ability of Comcast to use market power to foreclose non-integrated programmers from access to key advertisers.

132) Comcast-NBCU could offer advertisers time on multiple networks that have viewer characteristics similar to those of Bloomberg TV, including CNBC and The Golf Channel. {{ [redacted] }}

133) The bundling of advertising is a particular concern with regard to the Transaction because the Transaction brings under common ownership two networks, CNBC and The Golf Channel, that along with Bloomberg TV, are among the small set of networks that deliver the affluent adult male audiences of particular interest to financial services and insurance advertisers. {{ [redacted] }}

[120] http://www.ftc.gov/opa/1996/09/timewarn.shtm, accessed April 15, 2010. A sunset period of ten years was set for the conditions.

134) Comcast has already demonstrated its willingness and ability to bundle networks for advertising. According to a 2009 report, "Comcast is 'combining the national sales teams of Versus and Golf Channel under the Comcast Sports Sales banner,' according to Show & Ourand of Sportsbusiness Journal. Comcast made the move 'to offer a one-stop shop for ad buyers looking to buy on one of Comcast's sports properties.' Comcast Sports Sales, which will be led by Comcast Network Advertising Sales President David Cassaro, allows Comcast to 'try to sell advertisers positions on more than one network, not to mention on-line and in video-on-demand.'"[121]

C.6.1. Model of bundled advertising

135) To provide intuition for how the bundling of advertising might be used by Comcast-NBCU in a way that reduces advertising revenue to Bloomberg TV, Table 19 provides a stylized example.

C.6.2. Shapiro test for bundling advertising

136) Table 20 applies the Shapiro test of Section C.5.3 to advertising and concludes that the Transaction raises concerns of competitive harm related to the bundling of advertising.

C.6.3. Remedies related to bundling of advertising

137) [[ ]] and to prohibit Comcast from offering discounts and other incentives to advertisers for refraining from advertising on non-Comcast-owned networks such as Bloomberg TV.

D. Summary including proposed remedies

138) "TV business news" is appropriately viewed as an antitrust market. It is home to Bloomberg TV, which is one of the few remaining cable networks not owned by a major multi-network owner or MVPD and is the last major independent video news source. The Transaction will integrate the dominant business news network, CNBC, with the dominant cable provider, Comcast. Without intervention, Comcast will have incentives to foreclose Bloomberg TV and deprive consumers of that independent source of news and information. This would contravene the FCC's commitment to both competition and diversity in the media marketplace.

[121] "Comcast Combines Versus, Golf Channel National Ad Sales Teams," Street & Smith's SportsBusiness Daily, January 27, 2009, available at https://www.sportsbusinessdaily.com/article/127232, accessed April 16, 2010.

139) The five potential harms affecting TV business news described above could be avoided through a requirement that CNBC be divested as a condition of approval of the Transaction. Short of this, the identified adverse effects associated with the Transaction could be ameliorated through adoption of the conditions below, although these conditions would require regulatory and/or judicial supervision to ensure compliance.

140) A remedy requiring that Comcast place the business news networks it carries in a business news neighborhood, carrying competing business news networks, including Bloomberg TV, on the same tier with and on channels contiguous and adjacent to CNBC in every tier and channel position where CNBC is placed, would alleviate concerns related to channel placement and has strong international precedent.

141) A remedy requiring that Comcast (a) carry competing business news networks, including Bloomberg TV, on its systems, (b) carry competing business news networks, including Bloomberg TV, on the same tier with and on channels contiguous and adjacent to CNBC in every tier and channel position where CNBC is placed, and (c) be prohibited from imposing carriage terms for business news networks that are not fair, reasonable, and non-discriminatory (including with respect to the payment of appropriate subscription fees) would alleviate concerns related to refusal to carry and has strong US precedent. In addition, Comcast could be prohibited from offering discounts or inducements to any MVPD on condition that the distributor provide non-Comcast business news networks with less favorable terms or conditions of carriage than they otherwise would.

142) A remedy prohibiting the use by Comcast of restrictions, limitations, or disincentives related to the distribution of news and information programming, including business news, on other platforms, including the Internet, and prohibiting Comcast from diminishing or degrading the quality of signal delivery for news and information programming, including business news, on any of its content-distribution platforms without the consent of the programmer would alleviate concerns related to restrictions on on-line distribution and the potential impact on the diversity and accessibility of on-line news and information sources.

143) A remedy prohibiting Comcast from requiring that any combination of Comcast-NBCU networks be purchased as a bundle and prohibiting Comcast from offering terms for combinations of Comcast-NBCU networks that are more favorable than on an "a la carte" basis would alleviate concerns related to network bundling and has strong US and international precedent.

144) A remedy prohibiting Comcast from bundling CNBC with other networks for advertising sales would alleviate concerns related to advertising bundling. Alternatively, a remedy precluding bundling that is not justified by cost reductions over a la carte sales would alleviate concerns. A remedy capping CNBC's advertising prices at their pre-transaction levels would alleviate concerns related to advertising bundling and has strong precedent.

ECONOMIC REPORT
ON THE PROPOSED
COMCAST-NBC UNIVERSAL TRANSACTION

BY

LESLIE M. MARX

June 21, 2010

Appendix

List of tables

Table 1: Market Shares for the Largest MVPDs

	2000		2004		2006		2009	
1	AT&T	19.07	Comcast	23.37	Comcast	22.44	Comcast	23.78
2	TimeWarner	14.92	DirecTV	12.10	DirecTV	16.20	DirecTV	18.73
3	DirecTV	10.28	TimeWarner	11.87	EchoStar (Dish)	13.01	EchoStar (Dish)	14.23
4	Comcast	8.43	EchoStar (Dish)	10.63	Time Warner	11.52	Time Warner Cable	12.98
5	Charter	7.36	Cox	6.92	Charter	6.17	Cox	5.32
6	Cox	7.27	Charter	6.73	Cox	5.64	Charter	4.87
7	Adelphia*	5.94	Adelphia*	5.88	Adelphia*	5.09	Cablevision	3.09
8	EchoStar (Dish)	5.11	Cablevision	3.19	Cablevision	3.20	Verizon FIOS	2.89
9	Cablevision	4.29	Bright House	2.37	Bright House	2.38	Bright House	2.30
10	Insight	1.23	Mediacom	1.66	Mediacom	1.48	AT&T U-verse	2.08
	Top 4	52.70	Top 4	57.97	Top 4	63.17	Top 4	69.73
	Top 8	78.38	Top 8	80.69	Top 8	83.27	Top 8	85.90
	Top 25	89.75	Top 25	90.41	Top 25	93.46	Top 14	94.15
	HHI	954	HHI	1097	HHI	1187	HHI	1371

*Adelphia market share now accrues to Comcast and Time Warner Cable.
Source: 2000, 2004, 2006: FCC Reports on competition in the video programming industry, various years; 2009: SNL Kagan Q4 '09 Multichannel Subscribers by DMA, March 29, 2010 (contains copyrighted and trade secret material distributed under license from SNL).[1]

[1] This notice applies to all uses of SNL Kagan data in this report.

Table 2: MVPD Subscriber Shares by DMA

DMA Rank	DMA	MVPD Subs 2009Q4	Comcast	Direc TV	DISH	Time Warner Cable	Cablevi sion	Top-Ten US MVPDs Combined
1	New York, NY	7,094,617	10%	9%	5%	19%	42%	98%
2	Los Angeles, CA	4,688,508	0%	25%	13%	39%	0%	99%
3	Chicago, IL	3,074,209	62%	18%	12%	0%	0%	96%
4	Philadelphia, PA	2,613,617	63%	11%	6%	0%	1%	92%
5	Dallas-Ft. Worth, TX	2,324,330	0%	22%	19%	26%	0%	92%
6	San Fran-Oak-San Jose, CA	2,153,566	58%	20%	12%	1%	0%	97%
7	Boston, MA	2,122,088	65%	11%	6%	1%	0%	96%
8	Atlanta, GA	2,113,981	43%	23%	21%	0%	0%	98%
9	Washington, DC	2,080,408	45%	19%	10%	0%	0%	94%
10	Houston, TX	1,850,034	40%	18%	15%	0%	0%	86%
11	Detroit, MI	1,656,120	54%	16%	11%	0%	0%	98%
12	Phoenix, AZ	1,696,468	0%	16%	12%	0%	0%	90%
13	Tampa-St. Pete-Sara, FL	1,663,003	13%	11%	6%	0%	0%	97%
14	Seattle-Tacoma, WA	1,493,165	59%	16%	14%	0%	0%	93%
15	Minneapolis-St. Paul, MN	1,469,278	41%	21%	17%	0%	0%	88%
	Total	38,093,392	32%	17%	11%	10%	8%	95%

Source: Total MVPD Subs by DMA: SNL Kagan U.S. Multichannel Market Subscriber Summary;
Subs by MVPD by DMA: SNL Kagan U.S. Multichannel Operator Comparison By Market

1. A graphical depiction of the subscriber shares of the major MVPDs in the top 15 DMAs is shown in the figure below.

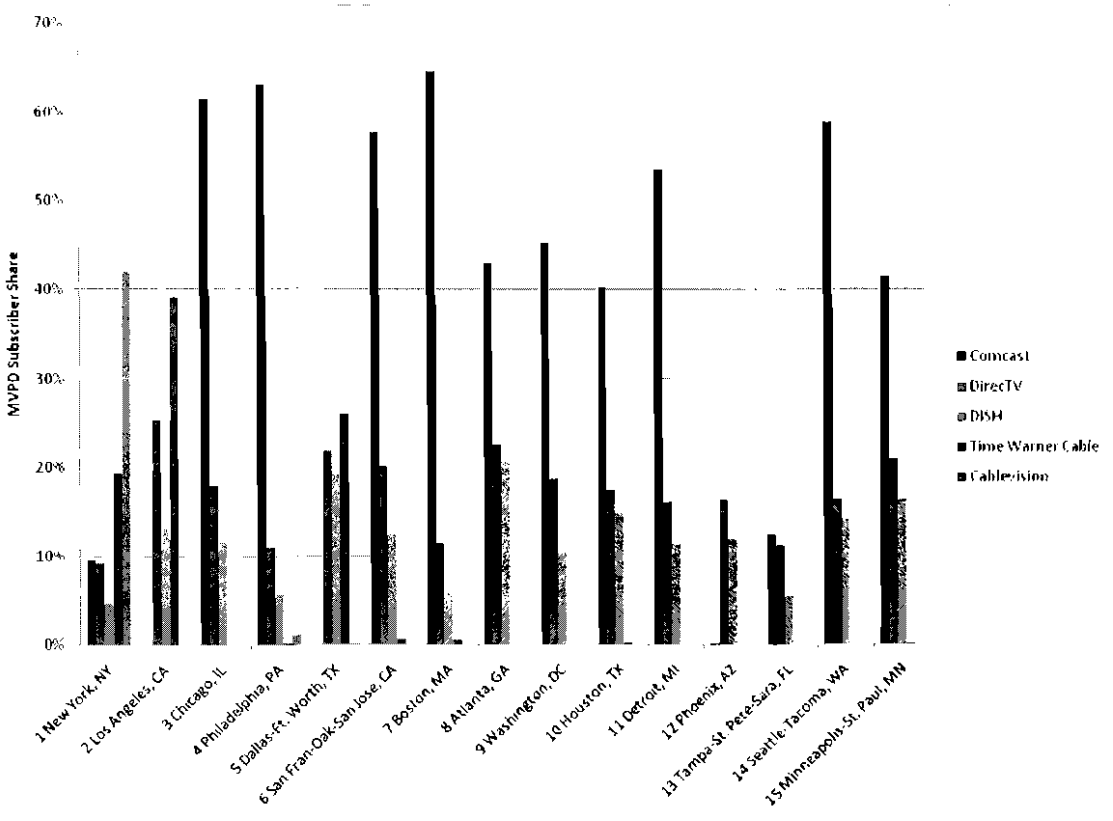

Figure: MVPD Subscriber Shares in the Top 15 DMAs

Source: SNL Kagan U.S. Multichannel Operator Comparison By Market

Table 3: Ownership of Major Cable Networks, April 2009

Top-50 Networks by 2009 Year-End Subscribers plus Business News Networks (Bloomberg TV - 63, CNBC World - 102, Fox Business Network - 79)

Network	Owner(s) (ownership shares)	Major Multi-Network Owner (5+ networks) or MVPD	Other
Bloomberg TV	Bloomberg		1
AMC	Cablevision Systems	1	
WE tv	Cablevision Systems	1	
E! Entertainment Television	Comcast	1	
Golf Channel	Comcast	1	
Travel Channel	Cox Communications	1	
Hallmark Channel	Crown Media Holdings		1
C-SPAN	C-SPAN	1	
Animal Planet	Discovery Communications Inc.	1	
Discovery Channel	Discovery Communications Inc.	1	
Discovery Health Channel	Discovery Communications Inc.	1	
TLC	Discovery Communications Inc.	1	
TV Guide Network	Lion's Gate Entertainment Corp.		1
Bravo	NBC Universal Inc.	1	
CNBC	NBC Universal Inc.	1	
CNBC World	NBC Universal Inc.	1	
Oxygen Network	NBC Universal Inc.	1	
Syfy	NBC Universal Inc.	1	
USA	NBC Universal Inc.	1	
A&E	NBC Universal Inc. (25), The Walt Disney Co. (37.5), Hearst (37.5)	1	
History	NBC Universal Inc. (25.0), The Walt Disney Co. (37.5), Hearst (37.5)	1	
MSNBC	NBC Universal Inc. (82), Microsoft (18)	1	
The Weather Channel	NBC Universal Inc. (na), Blackstone Group LP (na), Bain Capital LLC (na)	1	
FOX Business Network	News Corp. (FOX Entertainment)	1	
FOX News	News Corp. (FOX Entertainment)	1	
FOX Sports Net	News Corp. (FOX Entertainment)	1	
FX Network	News Corp. (FOX Entertainment)	1	
SPEED	News Corp. (FOX Entertainment)	1	
HGTV	Scripps Networks Interactive	1	
Food Network	Scripps Networks Interactive (69), Tribune Company (31)	1	

ABC Family Channel	The Walt Disney Co.	1	
Disney Channel	The Walt Disney Co.	1	
Disney XD	The Walt Disney Co.	1	
Lifetime Movie Network	The Walt Disney Co. (50), Hearst (50)	1	
Lifetime Television	The Walt Disney Co. (50), Hearst (50)	1	
ESPN/ESPN HD	The Walt Disney Co. (80), Hearst (20)	1	
ESPN2	The Walt Disney Co. (80), Hearst (20)	1	
Cartoon Network	Time Warner Inc.	1	
CNN/HLN	Time Warner Inc.	1	
TBS	Time Warner Inc.	1	
TCM	Time Warner Inc.	1	
TNT	Time Warner Inc.	1	
truTV	Time Warner Inc.	1	
WGN America	Tribune Company		1
BET	Viacom	1	
CMT	Viacom	1	
Comedy Central	Viacom	1	
MTV	Viacom	1	
MTV2	Viacom	1	
Nickelodeon/Nick At Nite	Viacom	1	
Spike TV	Viacom	1	
TV Land	Viacom	1	
VH1	Viacom	1	
Net Ad Rev. 2009, ($000s)		15,164,573	488,844
Net Ad Rev. 2009 relative to total for all basic cable nets ($17,507.849m)		87%	3%

Source: Ownership information: SNL Kagan's Economics of Basic Cable Networks, 2009, "Cable Network Ownership: April 2009." Ranking by subscribers and net advertising revenue: SNL Kagan TV Networks Peer Analysis, 2010.

Table 4: Probit Analysis of Bloomberg TV Carriage on Basic or Expanded Basic by Non-MSOs

VARIABLES	Bloomberg TV Carriage on Basic or Expanded Basic (carriage in sample = 4.0%)	Marginal Effects on Bloomberg TV Carriage on Basic or Expanded Basic
CNBC on B or EB	-0.304***	-0.025***
	(0.118)	(0.01)
CNN on B or EB	-0.153	-0.015
	(0.381)	(0.041)
Fox News on B or EB	0.895***	0.074***
	(0.16)	(0.012)
MSNBC on B or EB	0.557***	0.059***
	(0.113)	(0.015)
Headline News on B or EB	0.374***	0.03***
	(0.133)	(0.01)
CNBC on DB	0.271	0.029
	(0.712)	(0.093)
CNBC World on DB	-0.454	-0.027**
	(0.363)	(0.014)
CNN on DB	0.014	0.001
	(1.549)	(0.136)
Fox News on DB	-0.755	-0.035
	(1.468)	(0.029)
MSNBC on DB	-0.042	-0.003
	(0.701)	(0.056)
Headline News on DB	1.057	0.197
	(0.833)	(0.251)
Constant	-2.371***	
	(0.387)	
Observations	1906	
Pseudo R-squared	0.1397	

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Sample: Non-MSOs (1907 headends, 18.7 m households, 4.0% of households in sample have access to Bloomberg TV on Basic or Expanded Basic)

Source: 2007 TMS Data

1) The above is a probit analysis based on 2007 channel lineup data from Tribune Media Services (2007 TMS Data).[2] The analysis estimates the probability of carriage of Bloomberg TV as part of the basic

[2] The 2007 TMS Data used provides channel lineups by every cable headend in the US in February 2007. An observation is a

or expanded basic tiers as a function of carriage of CNBC, CNN, Fox News, MSNBC, and Headlines News either in the basic/expanded basic tier or in the digital basic tier. For this analysis, in order to isolate the effects of substitutability, one needs to control for overall system size because larger systems would be more likely to carry both CNBC and Bloomberg TV, regardless of whether they were substitutes. In order to control for system size, I limit the analysis to non-MSOs. As shown in Table 4, in this sample, the presence of CNBC on the basic or expanded basic tier has a significant negative effect on the carriage of Bloomberg TV on that tier. None of the general news networks has a significant negative effect – the effects of general news networks are either positive or negative and insignificant.[3]

2) The marginal effects given in Table 4 show that the carriage of CNBC on basic or expanded basic decreases the carriage rate for Bloomberg TV by close to two-thirds (63%).[4]

3) Repeating the analysis with CNBC carriage as the dependent variable shows that the presence of Bloomberg TV on the basic or expanded basic tier has a significant negative effect on the carriage of CNBC on that tier. None of the general news networks has a significant negative effect – the effects of general news networks are either positive or negative and insignificant. The marginal effects show that the carriage of Bloomberg TV on basic or expanded basic decreases the carriage rate for CNBC by 26%.[5] These results show that Bloomberg TV and CNBC are substitutes for carriage and support the inclusion of Bloomberg TV and CNBC in a business news market that is distinct from the market for general news networks.

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cable headend. The data include roughly 8,000 headends. For each headend, the data report the zip codes served by the headend. Multiple headends can serve the same zip code, both within an MSO and across MSOs. For example, an MSO might have separate analog and digital headends within an MSO, and multiple MSOs might serve the same zip code. For cases where a single MSO has multiple headends within a zip code, I have retained only the headend with the greatest number of channels. Because some households are passed by more than one cable operator, the TMS data counts a total of 146.8 million headend-household pairs (FCC (2009a), "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Thirteenth Annual Report," Accepted November 27, 2007, Released January 16, 2009, Table B-1, p.143, shows 110.21 million TV households and 95.78 million MVPD households). Dish has two headends (different satellite positions). DirecTV has one headend for its national networks and many regional ones with the local programming that differs across markets.

[3] A similar probit analysis (not reported) on a sample of "smaller MSOs" defined as MSOs other than Cablevision, Charter, Comcast, Cox, and Time Warner (2733 headends and 37.4 million households) shows a negative but statistically insignificant effect of carriage of CNBC on the carriage rate for Bloomberg TV, with general news channels once again having either a positive or negative and insignificant effect.

[4] In the sample of non-MSOs, 4.0% of households have access to Bloomberg TV as part of their basic or expanded basic tiers. The marginal effect of CNBC on B or EB is -0.025 on a base for Bloomberg TV of 4.0%, for a decrease in carriage of 63%.

[5] Source: 2007 TMS Data. The marginal effect of Bloomberg TV on B or EB is -0.110 on a base for CNBC of 42.8%, for a decrease in carriage of 26%.

Table 5: Critical Loss Analysis

1) The critical loss analysis begins by considering a hypothetical monopolist that owns Bloomberg TV, CNBC, CNBC World, and Fox Business Network. I ask whether that hypothetical monopolist would find it profitable to increase per-subscriber license fees to an MVPD for the bundle of all four business news networks by 10% (assuming that the hypothetical monopolist does not make the networks available on an a la carte basis).

Indirect demand substitution

2) I begin by analyzing the potential for indirect demand substitution. Some of the analysis of this section will be useful for the analysis of direct demand substitution.

3) I consider an MVPD that continues to carry all the business news networks, but tries to pass along price increases to consumers. The Critical Loss is defined as $S/(S+m^{up})$ where S is the percentage price change of interest, typically 10%,[6] and m^{up} is the upstream programmer's margin as a percentage of price, m^{up} = *(price-marginal cost)/price*. Taking m^{up} to be close to 100%, as would be the case with low marginal cost, then the Critical Loss is approximately 9%. If more than 9% of subscribers drop MVPD service (or switch to an MVPD not carrying the programming), then the price increase is not profitable.

4) The Critical Loss Elasticity is the elasticity of demand such that for more elastic demand,[7] the loss in subscribers exceeds the Critical Loss and so the price increase is not profitable. The Critical Loss Elasticity is calculated by dividing the Critical Loss by the percentage change in price to subscribers and multiplying by minus one.[8] Thus, to calculate the Critical Loss Elasticity, I need an estimate of the price increase to subscribers.

5) License fees per subscriber per month for 2009 are reported by SNL Kagan to be $0.29 for CNBC and $0.11 for Fox Business Network. [[ ]][9] Given CNBC World's limited distribution, I assume for purposes of this report that CNBC World does not receive license fees. Thus, total license fees for the four business news networks are approximately $0.40. In contrast, the FCC's 2009 Report on Cable

[6] Draft Revised Merger Guidelines, Section 4.1.2, released for public comment on April 20, 2010, available at http://www.ttc.gov/os/2010/04/100420hmg.pdf, accessed April 20, 2010.

[7] The elasticity of demand for cable is the percentage change in the number of subscribers for a one percent change in the price of a subscription.

[8] See Ofcom's discussion of the "dilution effect" in "Market Definition Appendices: Annex 6 to Pay TV Phase Three Document," available at http://www.ofcom.org.uk/consult/condocs/third_paytv/annex6.pdf, accessed May 11, 2010.

[9] [[ ]]

Industry Prices shows, for 2008, an average monthly subscription price of $49.65.[10] Even if all of the 10% price increase of $0.04 were passed along to consumers, the change in the subscription price would be only 0.08%, implying a Critical Loss Elasticity of -113. Thus, for any reasonable assumptions, this calculation produces an elasticity that is far more elastic than any existing estimate for the own-price elasticity for cable service.[11]

Direct demand substitution

6) When considering direct demand substitution, the Critical Loss analysis above implies that we need to ask whether a 10% price increase for business news programming would lead sufficiently many MVPDs to drop business news such that the hypothetical business news monopolist would lose access to more than the Critical Loss of 9% of subscribers.

7) The loss of one of the large MSOs as a buyer would be sufficient to exceed the Critical Loss. A relevant question is then whether an MSO would have an incentive to drop business news programming in the face of a 10% price increase for the bundle of all business news networks. To answer that, I must consider how many of the MSO's subscribers would cancel their subscriptions as a result.

8) I assume the MSO responds to changes in its programming costs by adjusting its subscription price so as to maintain its profit margin percentage. Under this assumption, and using estimates for the demand elasticity for cable, I can examine MSO profits with and without business news.

9) If an MSO carries the more expensive business news programming and adjusts its subscription price so as to maintain its profit margin percentage, then the number of subscribers decreases because of the increase in subscription price. If the MSO does not carry business news, there are two effects. The number of subscribers decreases because of the loss of business news, but the number of subscribers increases because the subscription price decreases. As notation, p is the subscription price, m is operating margin, i.e., $m=(p- PerSubscriberProgrammingCost)/p$, S is the SSNIP of 10%, w is the license fee for the bundle of business news programming, N is the number of subscribers, s is the fraction of subscribers who drop their subscription because of the loss of business news, and e (a

[10] FCC (2009b), "Report on Cable Industry Prices," Adopted January 15, 2009, Released January 16, 2009, at Chart 1, p.3. Available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-53A1.pdf (accessed May 10, 2010).

[11] The FCC (2002, paragraph 44) estimates the own-price elasticity for cable service to be -2.19. The GAO's (2003) estimate is -3.22, Chipty's (2001) estimate is -5.9, Goolsbee and Petrin's (2004) estimate is -1.5 for Expanded Basic, -3.2 for Digital Basic, and -2.4 for Satellite, and Crawford and Yurukoglu's (2009) estimate is -1.93 for Basic, -4.81 for Expanded Basic, -10.70 for Digital Basic, and -2 for Satellite. These researchers have all separately estimated the own-price elasticity of cable services using market share regressions, diverse data sets, and instrumental variables techniques. References are: FCC (2002), "Report on Cable Industry Prices," Adopted April 1, 2002, Released April 4, 2002, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-107A1.pdf, accessed May 10, 2010. GAO (2003), "Issues Related to Competition and Subscriber Rates in the Cable Television Industry," Technical Report, General Accounting Office October 2003, GAO-04-8. Chipty, T. (2001), "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry," *American Economic Review* 91(3), 428-453. Goolsbee, A. and A. Petrin (2004), "Consumer Gains from Direct Broadcast Satellites and the Competition with Cable TV," *Econometrica* 72 (2), 351–81. Crawford, G. S. and A. Yurukoglu (2009), "The Welfare Effects of Bundling in Multi-Channel Television Markets," Working Paper, University of Warwick.

negative number) is the elasticity of demand for cable. The MSO's profit (subscription revenue minus license fees) with the more expensive business news programming is: $m*p'*N*(1+e*(p'-p)/p)$, where $p' = p + S*w/(1-m)$ is the adjusted (higher) subscription price. The MSO's profit without business news is $m*p''*N*(1-s)*(1+e*(p''-p)/p)$, where $p'' = p - w/(1-m)$ is the adjusted (lower) subscription price.

10) Comparing these two scenarios, the cutoff value of s is: $s^* = 1 - p'*(1+e*(p'-p)/p)/(p''*(1+e*(p''-p)/p))$. If the fraction of MSO subscribers who switch when business news is withdrawn is more than s^*, then the MSO prefers to purchase the more expensive business news programming and so the 10% price increase by the hypothetical monopolist is profitable. Thus, the SSNIP test for a market is satisfied if more than s^* subscribers switch when business news is withdrawn.

11) Assuming total license fees for the four networks of w=\$0.40 per subscriber per month,[12] and assuming an operating margin of m=39.3%,[13] applied to an average monthly price per subscriber of p=\$49.65,[14] and using the FCC's (2002) elasticity estimate of -2.19,[15] the cutoff value of s is 1.67%.[16]

12) Using the FCC's elasticity estimate, these calculations suggest that if 1.67% or more of subscribers would switch to a different MVPD or drop MVPD service as a result of their MVPD no longer carrying any business news programming, then a 10% price increase would be profitable for a hypothetical monopolist in TV business news programming, and so the SSNIP test would be met.[17]

13) To assess whether one would expect this switching threshold to be met, consider the Distribution of Business News Viewing figure below, which shows the distribution of the share of viewing time spent watching business news by business news watchers, based on MRI Data.[18] These data are

[12] See Table 5 on indirect demand substitution (paragraph 5).

[13] FCC (2009a) at Table 5, p.23.

[14] FCC (2009b) at Chart 1.

[15] FCC (2002) at paragraph 44. See footnote 11 for other elasticity estimates.

[16] For elasticities between -1.5 and -5.9 (the range of estimates for expanded basic service given in the literature discussed in footnote 11), which I view as the relevant range of elasticities, the cutoff value of s ranges from 0.70% to 6.63%.

[17] The threshold might be as low as 0.70% or as high as 6.63% given cable demand elasticity estimates in the literature.

[18] The source of the MRI Data used is GfK Mediamark Research & Intelligence, LLC ("Mediamark"), Mediamark Studies: Doublebase 2002, 2004, 2006, and 2008, used under license from Mediamark. The MRI Data used is a survey database on media exposure including cable TV subscriptions which is assembled by Mediamark Research and Intelligence. A description of the sampling methodology is available at http://www.mediamark.com/external/TechGuides.aspx (accessed April 1, 2010). The total dataset used is the MRI data (2001-2008) with roughly 200,000 survey respondents; however, the data shown in this report use only the last 4 of these years when Bloomberg TV viewing was included in the survey. I use the following filters when working with the MRI data: 1. Drop if subscribe to more than one satellite (0.1%). 2. Drop 2002 and 2004 samples (50.4%, no Bloomberg TV). 3. Drop if satellite operator other than Dish or DirecTV (0.4%). 4. Drop if not a cable or satellite subscriber (17.5%). 5. Drop if a digital cable and satellite subscriber (not clear how to classify them in the cable versus satellite regressions) (1.2%). 6. Keep if a basic cable and satellite subscriber (they likely buy cable for the broadcast channels) and classify as a satellite subscriber (1.3%). This leaves 82,021 of 204,189 original respondents (40.2%). Viewing times in the MRI data are not continuous; MRI allows survey respondents to select the following options when reporting their hours watched of a channel: 1, 2, 3, 4, 6-9, 5, 10, 11-15, 16-20, 21+. For the four ranges, I assign a specific value to each household based on a random draw of an integer in that range. For example, for each household that reports 6-9 hours watched, I randomly draw with equal probability that they watched 6, 7, 8, or 9 hours. For the top range, I randomly draw an integer between 21 and 30. In comparison to assigning midpoints, this approach avoids "unrealistic" lumpiness around the midpoints.

informative because it is natural to expect that the viewers who are most likely to switch or drop MVPD service as a result of the loss of business news programming are those with the greatest share of their TV viewing time devoted to business news. As shown in the figure, 22.7% of households watch business news, with an average number of hours watched per week, conditional on watching business news, of 2.62 hours/week. Also shown in the figure, 5% of business news viewers (1.1% of households) spend one-quarter or more of their viewing time on business news, 7.5% of business news viewers (1.7% of households) spend one-fifth or more of their viewing time on business news, and 10.2% of business news viewers (2.3% of households) spend one-sixth or more of their viewing time on business news.[19] Given an estimate of the share of viewed programming that would need to be lost in order to induce subscribers to switch MVPD or drop MVPD service, I could calculate the percentage of subscribers that would switch MVPD or drop MVPD service as a result of the loss of business news programming.

14) Unfortunately, to my knowledge, the economics literature does not provide estimates of the share of viewed programming that would need to be lost in order to induce subscribers to switch MVPD or drop MVPD service. One reason is that the data on subscriber losses from the natural experiments that exist are typically not publicly available, although one could potentially use carriage disputes to calculate cutoff shares of viewed programming.

[19] For comparison, as similar analysis of the distribution of viewing of general news networks among general news watchers shows that 5% of general news viewers spend 62% or more of their viewing time watching general news. General news viewers are 66.3% of the MRI sample, which means 3.3% of total viewers spend 62% or more of their time watching general news.

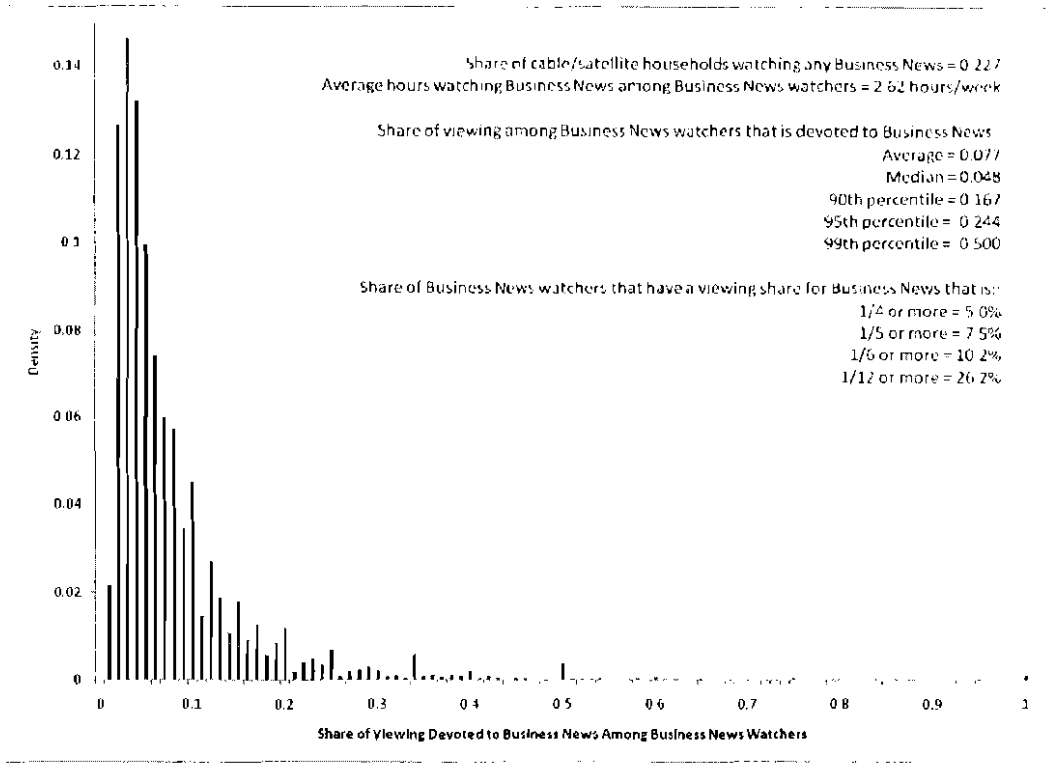


Figure: Distribution of Business News Viewing

Source: MRI Data

15) For example, the cable network Versus, which offers sports-oriented programming and is owned by Comcast, was withdrawn from DirecTV from September 1, 2009, until March 15, 2010, due to a contract dispute between DirecTV and Comcast.[20] Given data on how many DirecTV subscribers dropped their subscriptions as a result of losing access to Versus,[21] I could use data on the viewership share distribution for Versus to calculate the relevant cutoff. That is, I could calculate the cutoff share of viewed programming subscribers would need to lose to drop their subscription that would explain the loss of DirecTV subscribers. I do not have a precise estimate of the number of DirecTV subscribers lost as a result of the loss of Versus, and the estimation of a sophisticated predictive model for DirecTV's number of subscribers is beyond the scope of this report; however, in order to provide an illustrative calculation, I use quarterly data on DirecTV's subscribers from the second quarter of 2005 through the third quarter of 2009 to estimate a linear trend in DirecTV's number of

[20] "Versus Returns to DirecTV," http://www.directv.com/DTVAPP/global/article.jsp?assetId=P6220002&_DARGS=/DTVAPP/global/component/cmpt_v.jsp&_requestid=1554521, accessed May 20, 2010.

[21] During the dispute, Versus launched an ad campaign that encouraged DirecTV subscribers to switch MVPD ("Versus Launches 'Worthless' Ads In Distribution Dispute with DirecTV," *Multichannel News*, September 4, 2009, http://www.multichannel.com/article/339625-Versus_Launches_Worthless_Ads_In_Distribution_Dispute_With_DirecTV.php, accessed May 20, 2010. See also, "Versus DirecTV Fight On," SNL Kagan, September 15, 2009: "During the past few weeks, [Versus President] Davis said, the channel fielded tens of thousands of phone calls and e-mails from DIRECTV subscribers who are unhappy the channel has been pulled."

subscribers.[22] Based on this linear trend and attributing all losses below the trend to the loss of Versus, DirecTV lost 1.42% of its Choice Xtra subscribers,[23] which corresponds to subscribers who spent 7.9% or more of their viewing time watching Versus.[24] Thus, under the assumption that subscribers switch according to their viewership share for the dropped programming, this calculation suggests the loss of 7.9% or more of viewed programming could induce subscribers to switch MVPD or drop MVPD service. Putting this into fractions, this suggests that the loss of as little as one-twelfth of viewed programming could induce subscribers to switch MVPD or drop MVPD service. Although more sophisticated modelling would be required to derive a reliable number based on the Versus contract dispute, it is potentially useful to see that thresholds may be as low as one-twelfth of viewed programming.

16) As shown in the table below, for TV business news programming, the SSNIP test is satisfied if subscribers can be expected to switch or drop MVPD service following the loss of one-fifth or more of the programming that they would typically watch. If the loss of one-fourth of viewed programming is required to induce a switch, then the SSNIP test is not met for the FCC's estimated elasticity, although in that case the test continues to be met for elasticities in the lower end of the range of estimates in the economics literature. If a loss of only one-twelfth of viewed programming is required, as suggested by the sample calculation based on the Versus carriage dispute, then the SSNIP test is met not only for the FCC's demand elasticity estimate, but for almost the entire range of elasticity estimates in the literature.[25]

Evaluation of the SSNIP Test for TV Business News

Viewed programming that must be lost in order to trigger a switch	Business news viewers with this level of business news viewing	Total viewers with this level of business news viewing	Threshold switching rate for SSNIP test to be met (based on FCC demand elasticity estimate)	SSNIP test met
1/12 or more	26.20%	5.95%	1.67%	Yes
1/6 or more	10.20%	2.32%	1.67%	Yes

[22] These calculations are based on data for DirecTV from SNL Kagan Cable Media & Comm Public Company Financials: Operating Profile, Cable & Satellite Operating Metrics, 2010. The slope estimate is 218,600 subscribers per quarter.

[23] DirecTV's predicted subscriber count in the first quarter of 2010 is 18.802 million, as compared with its actual subscriber count in that quarter of 18.660 million, for a difference of 142k. In a more sophisticated analysis, one would want to account for changes in pricing by DirecTV and rival MVPDs as well as advertising expenditures and other factors that would affect subscribership. Nevertheless, if I attribute all of the 142,000 subs below trend to the loss of Versus, that is 142k/10m = 1.42% of subscribers to DirecTV's Choice Xtra package, which is where Versus was carried. (See "Versus Curses Comcast Financial Results," SNL Kagan, February 5, 2010, indicating that Versus's carriage was reduced by "more than 10 million" subscribers as a result of the dispute.)

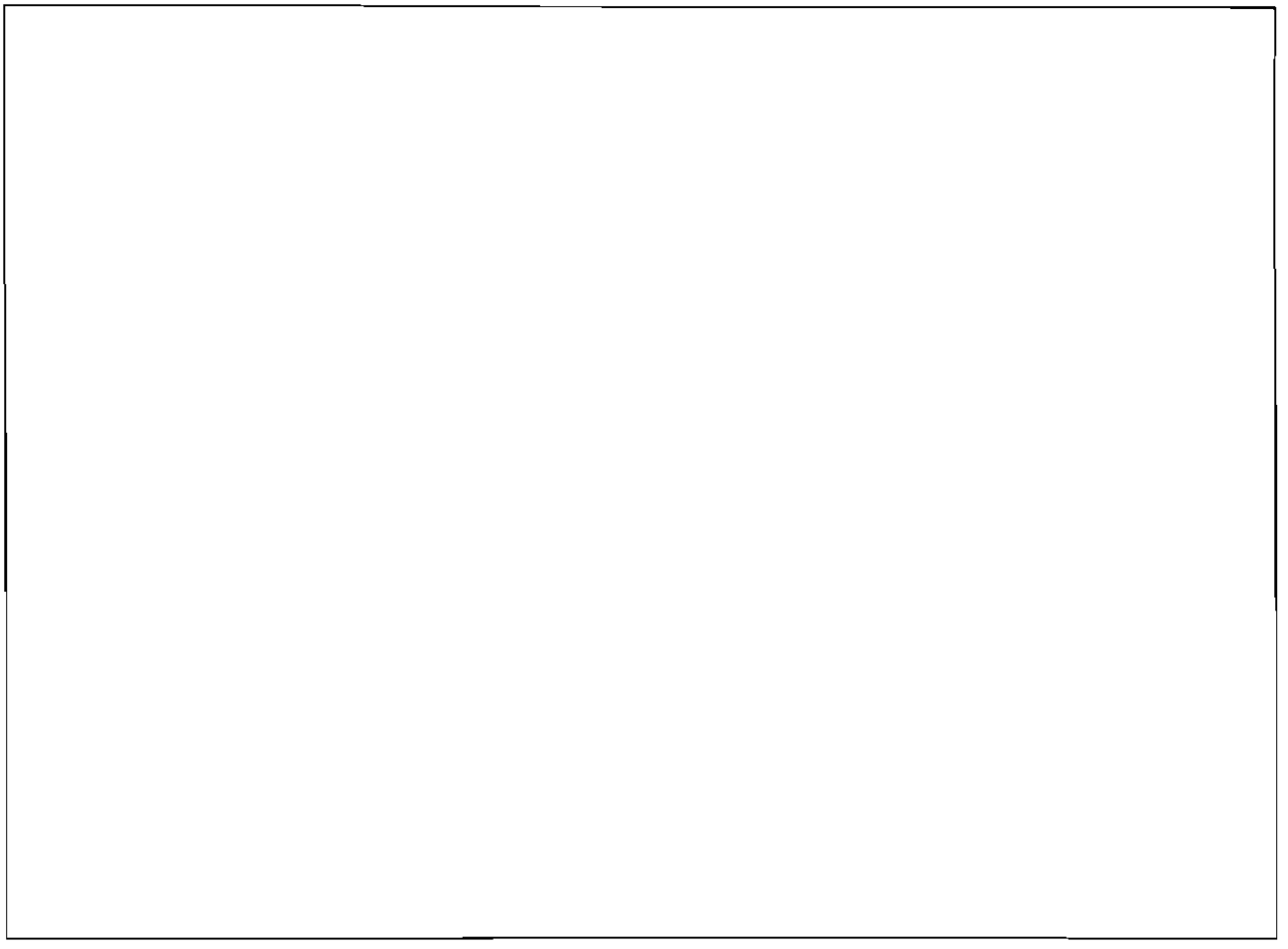
[24] Source: MRI Data.

[25] Based on the estimate of 7.9% from the Versus example, total viewers switching would be 6.51% as compared with the range of thresholds implied by the literature of 0.70% to 6.63% (see footnote 16).

1/5 or more	7.50%	1.70%	1.67%	Yes
1/4 or more	5.00%	1.14%	1.67%	No

17) Overall, this suggests that the formal test for an antitrust market is satisfied, although there are assumptions and elasticity estimates for which it would not be satisfied.

[[[redacted]



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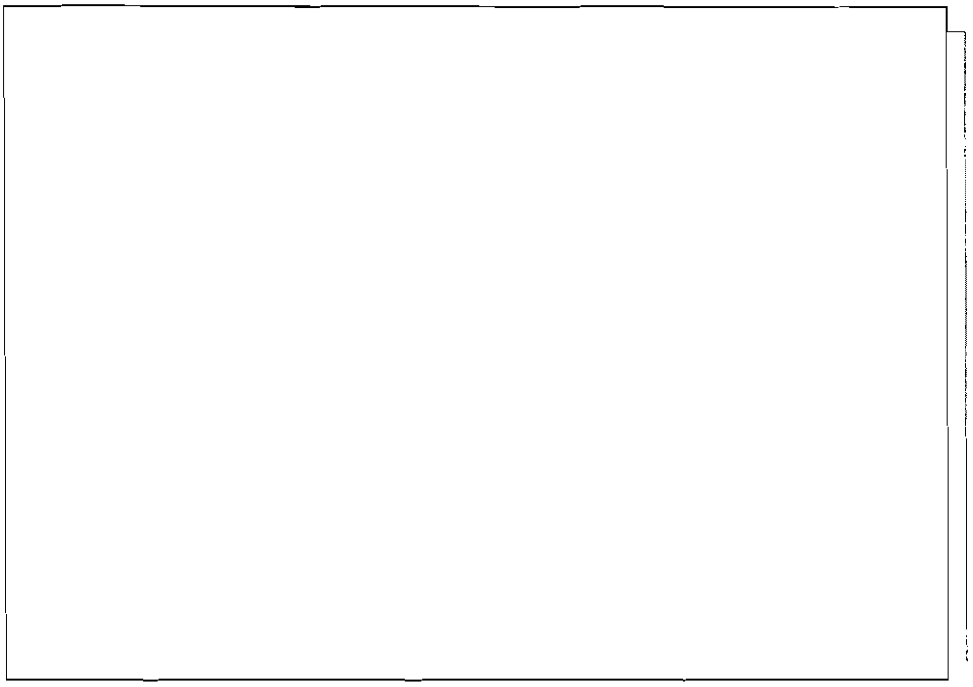

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