original Table VI.1,[42] they now argue that the corrected results, which have significant coefficients of the *opposite* sign, continue to support the same conclusion. As stated in the August 13, 2010, letter from Michael H. Hammer, "Drs. Israel and Katz have informed me that they have discovered an error in the coding used in their statistical analysis and that correcting this error changes their numerical results but not their fundamental finding that application of Professor Goolsbee's test to Comcast's behavior supports the conclusion that the incentives to engage in anticompetitive foreclosure are insignificant."

38) As explanation for how Drs. Israel and Katz's conclusion could remain unchanged in the face of completely contrary evidence, the August 13, 2010, letter from Michael H. Hammer states, "Specifically, the corrected results establish that – contrary to what the Goolsbee test indicates would be expected in the presence of anti-competitive incentives – there is not a robust, stable relationship between rival MVPDs' share in a DMA and Comcast's carriage rate of its own networks." The fact that correcting a mistake that caused 87% of the observations to be dropped from the analysis caused the results to change is no reason to view the corrected results as non-robust or unstable.[43] Similarly, differences with unweighted regression results, which treat all headends as equal regardless of the number of consumers served by them, would not normally be a reason to view the weighted results as non-robust or unstable.

39) In summary, if the Israel and Katz study did not contain a coding mistake, this analysis pursued by Comcast's own economists would have found that Comcast engages in strategic foreclosure, with the data pointing to the anti-competitive explanation for their propensity to carry their own networks.

40) In their second analysis, Drs. Israel and Katz use data from Warren Communications' *Television and Cable Factbook* to report the system bandwidth of cable operators as evidence that vertically integrated MSOs have increased incentives to invest in channel capacity.[44] The figure below simply reproduces the data of Drs. Israel and Katz's Table VI.2 in graphical form and shows [[

]][45] [[

[42] Israel and Katz at paragraph 146.

[43] This is particularly true because one might expect systematic differences between the observations that were retained (those with telco entry) and those that were dropped (those with no telco entry).

[44] Drs. Israel and Katz use the *Factbook* data for this analysis despite their earlier statement that *Factbook* data have been "shown to be unreliable" when compared with Comcast's internal carriage data and so should not be used for the analysis based on Goolsbee (2007). (Israel and Katz at paragraph 144)

[45] Vertically integrated MSOs shown are Time Warner Cable, Comcast, Cablevision, Cox, and Bright House.

||

42) In a final set of analyses, Drs. Israel and Katz argue that Comcast does not limit carriage of unaffiliated women's and sports networks.[46] This is unconvincing evidence for a number of reasons, but particularly because Drs. Israel and Katz's own data and empirical framework show that Comcast *does* limit carriage of at least one unaffiliated women's network and one unaffiliated sports network.

43) First, Drs. Israel and Katz's analysis combines sports and women's networks, so it is not possible based on the evidence in their report to identify the separate effects. Furthermore, even if one did split out sports networks, Drs. Israel and Katz's analysis does not rule out the explanation that Comcast might prefer to own sports networks exactly because those are the types of networks Comcast would like to carry to its potential subscribers in greater numbers.[47]

[46] Although Drs. Israel and Katz emphasize that they use SNL Kagan's definition of women's and sports networks (Israel and Katz at paragraph 150), they instead define women's programming to include Comcast's The Style Network, which SNL Kagan categorizes as being in the arts and entertainment genre. (http://www1.snl.com/interactivex/BriefingBook/TvNetwork/NetworkProfile.aspx?Id=233, accessed August 12, 2010)

[47] In addition to the basic cable network Versus, Comcast has a substantial portfolio of interests in sports networks, including wholly-owned networks: Comcast SportsNet California, Comcast SportsNet Mid-Atlantic, Comcast SportsNet New England, Comcast SportsNet Northwest, Comcast SportsNet (Philadelphia) and Comcast Sports Southwest; majority-owned networks: Cable Sports Southeast and Comcast SportsNet Bay Area; half ownership in The Mtn. –

44) Second, even if it were true that Comcast does not currently discriminate against unaffiliated women's and sports networks, it would not mean Comcast would not have the ability and incentive to limit carriage of rival business news programming networks if Comcast were affiliated with the rival business news network CNBC. Indeed, it is reasonable to conclude that Comcast's foreclosure behavior would be expanded in the case of business news programming networks because Comcast's incentives to protect the supracompetitive margins associated with CNBC would be even stronger than its current incentives to protect its relatively less successful affiliated networks.

45) Third, for Fuel TV, a sport network dedicated to extreme sports that might be considered a rival to Versus (which shows, for example, ultimate fighting and professional hockey), the same Rovi data and empirical framework used by Drs. Israel and Katz [[

]][48] Similarly, for [[

]][49] the same Rovi data and empirical framework used by Drs. Israel and Katz show that [[

]][50] These effects are exactly as predicted by foreclosure theory and suggest that Comcast limits carriage of rivals to its affiliated networks, with the implication that Comcast would have the ability and incentive to limit carriage of Bloomberg TV if Comcast were affiliated with CNBC, as would be the case under the proposed Transaction.

46) In summary, Drs. Israel and Katz provide no credible evidence that the tendency of Comcast to favor its own affiliated networks (established above through Drs. Israel and Katz's own analysis) would not lead to the exclusion of rival networks. Their data and empirical framework, in fact, suggest the opposite, i.e., that Comcast does limit carriage of rivals to its affiliated networks. It is consistent with fundamental economic logic, the empirical economics literature, and the analysis of Comcast's specific behavior that Comcast would have an incentive to exclude rival networks as it favors its own affiliated networks.

MountainWest Sports Network; and minority-owned networks: Comcast SportsNet Chicago and SportsNet New York. (Marx Report at paragraph 39)

[48] [[
]]

[49] [[ ]]

[50] [[
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D. Comcast would have the incentive to pursue anti-competitive foreclosure strategies against Bloomberg TV

47) Comcast argues that it would not have the incentive to foreclose rival business news programming networks such as Bloomberg TV upon acquiring control of CNBC. There are four components to this argument: (1) that the economics literature provides no evidence that vertically integrated MVPDs discriminate against unaffiliated genre programming, (2) that the evidence does not support anti-competitive foreclosure by Comcast, (3) that there is insufficient evidence for the existence of an antitrust market for TV business news programming, and (4) that my vertical foreclosure model used incorrect values for Comcast's profit margin and CNBC's revenues. I have already thoroughly rebutted (1) and (2) above, showing that Drs. Israel and Katz's own analysis if performed correctly is sufficient to rebut these points. I rebut each of the remaining two arguments below.

D.1. TV business news programming is a relevant antitrust market

48) Comcast contends that I am not able to offer any competent evidence supporting the existence of a market for TV business news programming. The Opposition further claims that my analysis examining the decisions of cable operators to carry Bloomberg TV and CNBC (on their cable headends) as a function of their carriage decisions of related networks cannot speak to whether or not they are substitutes and thus in the same antitrust market. Citing supporting analysis by Drs. Israel and Katz, they conclude that the correlation in channel carriage decisions "reveals nothing about whether consumers and advertisers regard these networks as substitutes."[51] They fail to note that their own experts admit consumers and advertisers regard these networks as substitutes[52] and that the contribution made by an analysis of carriage decisions is to gain a greater understanding of whether distributors regard these networks as substitutes.

49) Furthermore, this last conclusion demonstrates a fundamental lack of understanding of the nature of the antitrust market definition. The goal of market definition, as embodied for example in the standard SSNIP test, is to assess the extent to which consumers would substitute should a hypothetical monopolist over a set of products (e.g. business news networks) attempt to raise its price.

50) This substitution can be direct or indirect. In the case of indirect substitution, an MVPD would raise its price in response to an increase in the cost of business news networks. Consumers could respond to these price increases by switching to another MVPD or leaving the market. In the case

[51] Opposition at p.170.

[52] Israel and Katz at paragraph 157.

of direct substitution, the MVPD could decide not to carry business news networks in response to the price increase. This could be the optimal decision if relatively few consumers chose to purchase another MVPD product or leave the market due to the absence of business news in the bundle. I considered both direct and indirect effects in the hypothetical monopolist tests I conducted in my original Report.

D.1.1. Analysis of carriage decisions

51) Analyzing the carriage decisions of cable operators speaks directly to the direct substitution effects described above and is thus immediately relevant to a market definition analysis. How to interpret the coefficients in such an analysis, however, is subtle. The best way to explain is with an analogy.

52) Consider a grocery store. All items in a grocery store are substitutes in the sense that they all take up shelf space. Items within similar product categories are closer substitutes to each other than to products in other categories. Bigger stores carry more brands within a category, but that does not mean the brands are not substitutes for one another. Smaller stores, although they might still carry two brands of, say, baby food, might elect to carry only one brand of, say, granulated sugar, although they still carry other sweeteners. This says that the close substitutability between different brands of granulated sugar is sufficient to overcome the incentive for the store to offer more than one brand of that product.

53) For the situation described above, one would expect a probit analysis such as the one I perform to find a negative coefficient between brands of granulated sugar, but a positive coefficient between a particular brand of granulated sugar and another sweetener. Such an analysis might also reveal positive coefficients between brands of baby food because in that case the incentive to carry multiple brands when offering that category might be stronger than the incentive to substitute. That does not mean that different brands of baby food are not substitutes for one another.

54) Taking this analogy to the case at hand, the positive coefficients that I find between business news networks and general news networks do not imply that these networks are not, at some level, substitutes.[53] It does support the conclusion that business news networks are less strong substitutes for general news networks than they are for each other, which supports my conclusion that business news networks comprise a relevant antitrust market.[54]

[53] The finding of positive coefficients between networks in an analysis such as the probit analysis I perform is not unexpected because it is often difficult to control for the effect of the fact that larger systems carry more of all types of programming. As Comcast notes, headends in DMAs with populations of viewers that favor certain programming are more likely to carry multiple networks.

[54] Drs. Israel and Katz admit that business news networks "may be closer substitutes for one another than for some other news networks." (paragraph 172). See also Israel and Katz at paragraph 167.

55) Ideally, to analyze substitutability, one would want to fix channel capacities and all other channels carried, randomly assign CNBC to certain cable systems, and then let the cable system decide whether or not to carry Bloomberg TV. In the absence of the ability to conduct that type of experiment, the relative magnitudes of the effects across channels are of key importance. It is clear from the negative coefficients between Bloomberg TV and CNBC in my analysis that for capacity-constrained cable operators, the strong substitutability of the two networks is stronger than the incentive to provide more networks and more variety for business news.

56) Drs. Israel and Katz offer two regressions involving CNBC and children's networks as "examples demonstrating the fundamental error of [my] methodology. . ."[55] Neither is convincing. *First*, neither example includes Bloomberg TV and therefore neither has any ability to speak to the substitutability between CNBC and Bloomberg TV. Second, the positive coefficient they obtain in their regression involving Disney and Nickelodeon illustrates only that Disney and Nickelodeon are often carried together. Much as leading brands of grocery products are often carried together (even in small stores), the particularly broad demand for these networks merely suggests they are unlikely to be marginal, even for capacity-constrained systems.

57) Third, and most important, their claims that the negative coefficient between CNBC and Teen Nick demonstrates some flaw in my analysis are baseless. Much as a grocery store facing shelf-space constraints may elect not to carry both a second brand of granulated sugar and a third brand of baby food, this does not mean they are stronger substitutes than are the two granulated sugars.

58) To demonstrate this point, I follow the example provided by Drs. Israel and Katz and add children's programming to my previous analysis. The table below replicates my original results and adds those with the channels proposed by Israel and Katz.[56] I also follow Drs. Israel and Katz in adding the number of analog channels carried, which only strengthens the negative relationship between Bloomberg and CNBC.

Table 3: Probit Analysis of Bloomberg TV Carriage on Basic and Expanded Basic by Non-MSOs Including Children's Networks

	Marx Report (Table 4)	Expanded Analysis
	Marginal Effects of Bloomberg TV Carriage on Basic or Expanded Basic	Marginal Effects of Bloomberg TV Carriage on Basic or Expanded Basic
Number of Analog Channels		0.003*** (0.000)

[55] Israel and Katz at paragraph 159.

[56] Due to differences in the age of our underlying data, I replaced Teen Nick (used by Israel and Katz) with Nick GAS as Teen Nick was "Nick Games & Sport" (or Nick GAS) in early 2007. It was replaced in December, 2007, by "The N" which was replaced by "Teen Nick" in September 2009. (http://en.wikipedia.org/wiki/TeenNick, accessed August 15, 2010)

CNBC on B or EB	-0.025***	-0.031***
	(0.010)	(0.008)
CNN on B or EB	-0.014	0.014
	(0.041)	(0.011)
Fox News on B or EB	0.074***	0.006
	(0.012)	(0.008)
MSNBC on B or EB	0.059***	0.008
	(0.015)	(0.007)
Headline News on B or EB	0.030***	-0.004
	(0.010)	(0.007)
Disney on B or EB		-0.003
		(0.007)
Nickelodeon on B or EB		-0.007
		(0.013)
Nick Toons on B or EB		0.045
		(0.063)
Toon Disney on B or EB		-0.010**
		(0.005)
Cartoon Network on B or EB		-0.015*
		(0.008)
Boomerang on B or EB		0.022
		(0.016)
GAS on B or EB		0.089
		(0.088)
Not reported are coefficients for the networks above on DB and CNBC World on DB		
Observations	1,907	1,907

Robust 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

59) As shown in the table above, the relation between CNBC and Bloomberg TV remains negative and significant. Furthermore, all other relations with basic/expanded basic networks are positive or insignificant except those with Toon Disney and Cartoon Network, but even in these cases, the coefficient on CNBC is more than twice as large.[57] Furthermore, while the effects of Cartoon Network and Toon Disney are only marginally significant, one can reject the hypothesis that CNBC has anything more positive than a -1.6 percentage point impact on the probability of Bloomberg TV carriage at 95% confidence levels.[58]

[57] It is more than one-and-a-half times the other negative significant coefficients for digital basic, which are found for CNBC World, Fox News, Toon Disney, Cartoon Network, and GAS. These are less relevant, however, as I am particularly interested in the choices made by cable systems facing capacity constraints. The digital basic variables are largely included to ensure the basic/ expanded basic carriage variables do not reflect features of digital basic carriage on the cable systems in the sample.

[58] The upper limit on the 95% confidence interval of the marginal effect of CNBC basic/expanded basic carriage on Bloomberg TV basic/expanded basic carriage is -1.63.

60) Results are similar using carriage of CNBC as the dependent variable as well as including all offered basic and expanded basic networks. In all cases, CNBC and Bloomberg are the most significant substitutes for each other.

61) This augmented analysis suggests that although other networks may be marginal channels for capacity-constrained cable operators, and thus substitutable with Bloomberg TV, the degree of substitutability between those channels is not nearly as strong as that between CNBC and Bloomberg TV. Thus, contrary to claims by Drs. Israel and Katz, the analysis clearly demonstrates the substitutability of CNBC and Bloomberg TV, which supports the conclusion that CNBC and Bloomberg TV belong to the same antitrust market.

D.1.2. Hypothetical monopolist test

62) Despite Drs. Rosston and Topper citing the Draft Revised Horizontal Merger Guidelines for the proposition that "it is critical to show that a hypothetical monopolist of the candidate relevant market would pass the SSNIP test," Drs. Israel and Katz criticize my use of the SSNIP test.[59] Drs. Israel and Katz (p.170) further argue that I inappropriately apply the hypothetical monopolist test to an environment where prices are determined through bilateral bargaining.[60]

63) In this section, I first discuss Drs. Israel and Katz's misportrayal of the hypothetical monopolist test performed in my original Report. I then extend my hypothetical monopolist test to allow bargaining between networks and MVPDs, which shows that this results in little change in the threshold switching rate required and thus no change in the conclusion that TV business news programming is a relevant antitrust market.

64) Drs. Israel and Katz portray my analysis as suggesting that "any group of networks on which at least {{ }} of viewers spend at least 1/5 of their viewing time constitutes a relevant market."[61] In fact, I suggest no such thing. As far as I can tell, they derive this distorted portrayal of my analysis in three parts. First, they pick out the threshold switching rate of {{ }} This is the lower bound on the share of subscribers that must switch as a result of losing all business news programming that I calculate based on parameters specific to business news networks in order for a {{ }} by a hypothetical price-setting business news monopolist to be profitable. This business news threshold cannot, however, simply be applied to any arbitrary grouping of networks as suggested by Drs. Israel and Katz. Second, they imply that it would generally hold for arbitrary groupings of networks that more that {{ }} of subscribers would

[59] Rosston and Topper at paragraph 58.

[60] Drs. Israel and Katz contend that a standard SSNIP test in which a hypothetical monopolist considers setting an increased price is inappropriate for any market that does not involve take-it-or-leave-it posted prices, which includes most intermediate good product markets.

[61] Israel and Katz at paragraph 161.

spend 1/5 or more of their viewing time watching those networks. This result again is specific to business news (see the figure showing the distribution of business news viewing in Table 5 of my original Report).

65) Third, they imply that subscribers who spend 1/5 of their viewing time watching any network would switch if that network were no longer available. As I explicitly state in my original Report, this depends on whether good substitutes are available. As Drs. Israel and Katz admit, business news networks are close substitutes for each other in the eyes of viewers and less close substitutes with other networks.[62] Thus, as I suggest, one might expect that subscribers who spend 1/5 or more of their viewing time watching business news might switch when faced with the loss of all business news programming because there are not close substitutes to replace that lost programming.[63] This is not the same, as suggested by Drs. Israel and Katz, as expecting that subscribers losing a randomly selected network or group of networks with this level of viewing would switch. It depends on whether there exists sufficiently close substitute programming to meet the subscriber's needs. For example, if a subscriber watches certain programming for entertainment value, there may be a vast array of other networks that can meet that general entertainment need, whereas a subscriber watching business news is likely doing so to obtain a specific type of news and information, for example related to market openings and closings, that does not have close substitutes among other networks.

66) Drs. Israel and Katz portray the fact that business news and news networks are grouped together by DBS providers as indicating a flaw in my argument, when it is completely consistent with my view that TV business news programming represents a relevant antitrust market within the larger TV news and information programming category. As described in Section 4.1.1 of the Proposed Revised Horizontal Merger Guidelines, "the Agencies usually evaluate mergers in the smallest relevant market satisfying the hypothetical monopolist test."[64] Drs. Israel and Katz's suggestion that this smallest relevant market includes "current national, international, sports, financial and weather news and/or information, and other similar programming"[65] does not follow the Guidelines and ignores the specifics of the TV business news market described in my original Report, here, and in Drs. Israel and Katz's own report.[66]

[62] Israel and Katz at paragraphs 157, 167, and 172.

[63] I offer the lost "share of viewing" associated with meeting the threshold {{ }} as a way to help the Authorities evaluate whether the {{ }} threshold is likely to be met because it arguably provides a more intuitive way of thinking about the decision facing a subscriber who has lost valued programming.

[64] Proposed Revised Guidelines at Section 4.1.1.

[65] Israel and Katz at paragraph 166.

[66] In fact, Comcast and Drs. Israel and Katz themselves rely on analyses that involve narrowly defined programming markets, including channels targeting black audiences (Opposition at pp.172-175), women's networks and sports networks (Israel and Katz at 151-152), and cartoon networks, classic movie channels, and channels targeting female audiences (Israel and Katz at footnote 192 citing the Crawford Presentation at 43-46).

67) [[ ]][67] [[ ]]

68) Furthermore, while the relevant market suggested by Drs. Israel and Katz is based on the FTC decision in Time Warner / Turner,[68] that decision in fact supports my conclusion that business news constitutes a distinct market within the larger news category. The FTC required Time Warner to carry a new "24-hour per day service consisting of current national, international, sports, financial and weather news and/or information" on the basis of its conclusion that the "all-news segment," had the fewest close substitutes of any programming category in which the post-merger firm would participate, and that actual or potential entrants were required to "erode CNN's market power." The FTC's findings implicitly treated CNN as belonging in a separate market than CNBC, which was already well-established at the time, or other networks offering specialized news in other categories, such as ESPN or the Weather Channel.[69] In short, the relevant precedent supports my conclusions. Moreover, the Guidelines say the relevant product market is the smallest group of products that satisfies the SSNIP test, and my analysis shows that TV business news programming meets that test.

69) I conclude this section by extending the hypothetical monopolist test in my original Report to allow bargaining.

70) To demonstrate that basic incentives are unchanged with bargained prices, I extend my hypothetical monopolist test to allow bargaining between networks and MVPDs. I calculate the new critical switching rate that would make dropping business news unprofitable under the assumption that firms bargain so as to divide the gains from trade relative to their disagreement payoffs,[70] and then I compare that to the critical switching rate without bargaining I used in my

[67] [[ ]]

[68] 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, available at http://www.ftc.gov/os/1997/02/c3709.do.pdf, accessed August 11, 2010.

[69] 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, available at http://www.ftc.gov/os/1997/02/c3709.do.pdf, accessed August 11, 2010.

[70] This approach is outlined in Section IV.A of Drs. Israel and Katz's Rebuttal Report. See John Nash (1950), "The Bargaining Problem," *Econometrica* 18(2), 155-162, Ken Binmore, Ariel Rubinstein, and Asher Wolinsky (1986), "The Nash Bargaining Solution in Economic Modelling," *Rand Journal of Economics*, 17(2), 176-188.

original Report. As I show, the critical switching rates are similar and the qualitative conclusion continues to hold that switching rates are likely to be sufficiently high to make dropping business news unprofitable, implying that the SSNIP test establishing TV business news as a relevant antitrust market is satisfied.

71) The similarity of the results is as expected because the analysis using a price-setting model and a bargaining model turn on essentially the same point: whether an MVPD will lose a sufficient number of subscribers if it does not carry any business news. For a price-setting model, the analysis asks whether an MVPD will lose a sufficient number of customers if it drops all business news that it is willing to pay at least a {{ }} higher price for business news. For a bargaining model, the analysis asks whether an MVPD's "disagreement payoff" if it drops all business news would be sufficiently reduced (from losing a sufficient number of customers) that the associated bargaining outcome would give the hypothetical monopolist at least a {{ }} higher price.

72) A standard bargaining model calls for the incremental joint surplus of an MVPD and network created though the carriage of the network by the MVPD to be divided between the MVPD and network.[71] Thus, affiliate fees would be set so that network i receives a fraction (corresponding to its bargaining power) of the incremental joint surplus from the MVPD.

73) Let N be the number of subscribers with all business news networks and let p be the subscription price for an MVPD carrying all business news networks with affiliate fees negotiated through bargaining with individual networks. As in my report, I let m be the MVPD's operating margin, i.e., $m=(p-PerSubscriberProgrammingCost)/p$, and I assume the MVPD adjusts its subscription price so as to maintain its profit margin percentage. Let a_i be the per-subscriber affiliate fee for network i and a_m be the per-subscriber affiliate fee for a hypothetical business news monopolist. Let e (a negative number) denote the elasticity of demand for cable. Let σ_i denote the share of subscribers that would switch or drop service if the MVPD did not carry network i (holding the subscription price constant). I denote network i's bargaining power by parameter λ_i, so network i captures share λ_i of the gains from trade in it negotiations with MVPDs. For business news network i, the affiliate fee revenue to network i will give it share λ_i of the incremental surplus created by having the MVPD carry network i, which we can write as:

74) $a_i*N = \lambda_i*(m*p*N + a_i*N - m*p_i*N*(1-\sigma_i)*(1+e*(p_i-p)/p))$,

75) where $p_i = p - a_i/(1-m)$ is the adjusted (lower) subscription price when the MVPD does not carry network i.[72] The amount $m*p*N + a_i*N$ is the joint payoff of the MVPD and network i if the

[71] See footnote 70.

[72] As a consistency check, using a_{CNBC} = {{ }}, a_{BTV} = {{ }}, and a_{FBN} = {{ }}, this implies $\sigma_i = 1 - (m*p + a_i - 2*a_i)/(m*p_i*(1+e*(p_i-p)/p))$, which gives {{ }}. These switching rates for the loss of an individual network are consistent with values considered in my report.

MVPD carries network i, as well as all other networks. The term $m*p_i*N*(1-\sigma_i)*(1+e*(p_i-p)/p))$ is the joint payoff of the MVPD and network i if the MVPD does not carry network i, taking into account a loss of share σ_i of subscribers due to the loss of network i and the gain in subscribers due to the lower subscription price.

76) I calibrate the model using on the assumption that {{ }} of CNBC viewers would switch or drop service if their MVPD dropped CNBC.[73] More specifically, I assume that 2.5% of CNBC viewers who watch CNBC and do not watch Bloomberg TV, would switch or drop service if their MVPD dropped CNBC. Using the viewership shares from the Marx Report at Table 11, this implies σ_{CNBC} = {{ }} This produces a value for λ_{CNBC} of {{ }}

77) For a hypothetical monopolist in business news, the affiliate fee would satisfy:

78) $a_m*N*(1+e*(p_m-p)/p) = \lambda_m*((m*p_m*N+a_m*N)*(1+e*(p_m-p)/p) - m*p_0*N*(1-s)*(1+e*(p_0-p)/p))$,

79) where $p_m = p + (a_m - (a_{CNBC}+a_{BTV}+a_{FBN}))/(1-m)$ is the adjusted (higher) subscription price with monopoly controlled business news and $p_0 = p - (a_{CNBC}+a_{BTV}+a_{FBN})/(1-m)$ is the adjusted (lower) subscription price with no business news.

80) Setting $a_m = 1.1*(a_{CNBC}+a_{BTV}+a_{FBN})$ and assuming the hypothetical monopolist's bargaining share λ_m parameter would be the same as for CNBC, we can solve for the threshold value of $s*$ that would generate at least a 10% increase in affiliate fees for business news:

81) $s* = 1+(1/\lambda_{CNBC}*a_m*(1+e*(p_m-p)/p) - (m*p_m+a_m)*(1+e*(p_m-p)/p))/(m*p_0*(1+e*(p_0-p)/p))$

82) The table below compares the estimated value for $s*$ from this analysis with that given in my report.[74]

Table 4: Market Definition Switching Threshold Based on a Bargaining Model[75]

	Threshold Switch Rate	
Demand elasticity	Bargaining Model	Traditional SSNIP Test
-2.19	2.00%	1.67%

[73] See Marx Report at Table 13.

[74] I use the parameter values given in Table 5 of my original Report. Substituting Comcast's video profit margin of {{ }}, which can be calculated from its confidential data, does not substantially change the result.

[75] This table reports the threshold rate of switching from an MVPD that failed to carry business news programming above which a {{ }} price increase by a hypothetical monopolist of business news programming would be profitable.

83) As shown in the table above, the threshold for subscribers who would need to switch MVPDs if business news is dropped that is suggested by the bargaining model is similar to that suggested by the more traditional SSNIP test performed in my original Report (at Table 5).

84) Thus, my qualitative conclusions are not affected. As shown in my original Report (at Table 5), one might expect switching rates of 5.95% based on rough calculations derived from a carriage dispute involving the cable network Versus, which offers sports-oriented programming and is owned by Comcast, being withdrawn from DirecTV. In addition, the threshold is met if a subscriber who spends a 17.6% or more of his or her viewing time watching business news would switch or drop service if his or her MVPD stopped carrying any business news programming.[76]

85) In summary, the analysis provides an answer for the threshold on how many subscribers an MVPD must lose for the SSNIP test to be met, which is {{ }} for the price-setting model and {{ }} for the bargaining model. The threshold is achieved if business news viewers who spend more than 18-20% of their total viewing time watching business news choose to cancel their subscriptions when their MVPD drops all business news. Meeting the threshold does not require that viewers with trivial business news viewership switch video providers, but rather it requires only that business news viewers who spend approximately one-fifth of their total viewing time watching business news react to the loss of that programming by switching or dropping MVPD service.

D.1.3. Price discrimination in business news advertising

86) Comcast economists Drs. Gregory L. Rosston and Michael D. Topper (Rosston and Topper) submitted a report in which they dramatically mischaracterize the analysis and conclusions contained in my original Report, repeatedly arguing that I made conclusions that I did not and then criticizing those conclusions for not being supported by evidence. Their report does not provide a meaningful contribution to the debate and should be disregarded.

87) I begin by focusing on Drs. Rosston and Topper's comments as they relate to the business news market, then provide additional evidence in support of a possible antitrust market related to business news advertising, and conclude by addressing some of Drs. Rosston and Topper's more general comments.

88) Drs. Rosston and Topper begin by mischaracterizing the set of networks I include as business news networks, saying there are only three,[77] when my original Report clearly states and

[76] The threshold of 2% of subscribers corresponds to 8.8% of business news viewers. The top 8.8% of business news viewers in terms of the share of viewing devoted to business news spend 17.6% or more of their viewing time watching business news.

[77] Rosston and Topper at paragraph 56.

Comcast's other economists Drs. Israel and Katz recognize that I include four networks: Bloomberg TV, CNBC, CNBC World, and Fox Business Network. The selection of these networks is detailed in my original Report.

89) Drs. Rosston and Topper quote a portion of a sentence from my original Report to imply that I reached the conclusion that TV business news advertising is a relevant antitrust market, and then proceed to criticize me for not carrying out a formal SSNIP test. Specifically, Drs. Rosston and Topper state: "Professor Marx asserts a purported market for 'TV business news programming' and concludes that 'the advertising side of the market for TV business news programming is an antitrust market.'"[78] The full quote from my Report is as follows. "The evidence tends to support the conclusion that the advertising side of the market for TV business news programming is an antitrust market, although it is not conclusive standing alone. In my opinion, there is ample evidence to compel a review of the effect of the Transaction on TV business news advertising."[79] As is made clear in my Report, I do not claim to have carried out a formal test for the presence of a relevant antitrust market in TV business news advertising. I did not do so because the data for such a test is, to my knowledge, not available. Drs. Rosston and Topper seem well aware that this data is not available, even as they say that a proper analysis would require the examination of cross-price elasticities in this market (paragraph 56) and that a SSNIP test is critical to market analysis (paragraph 58), as described in the Proposed Revised Horizontal Merger Guidelines. In fact, the Guidelines allow the possibility of a price discrimination market,[80] which as I show below finds support in the TV business news advertising market.

90) Drs. Rosston and Topper criticize a market that includes only a limited number of networks as, on its face implausibly narrow, but then follow up by saying I should have carried out the analysis required by the Guidelines, which explicitly admit the possibility that a relevant market may consist of only a few firms.[81]

91) Drs. Rosston and Topper criticize the characterization of the business news audience as "affluent adults, predominantly males" and the assessment that few networks other than business news and some sports networks (with The Golf Channel and ESPN mentioned specifically) serve a similar demographic. They say that the assertion that few (Drs. Rosston and Topper say "very few" although the word "very" does not appear in my Report) other networks reach audiences similar to those reached by business news networks (actually Drs. Rosston and Topper say that I make the claim for "cable news networks" not business news networks, further distorting my Report) is not

[78] Rosston and Topper at paragraph 55.

[79] Marx Report at paragraph 83.

[80] Proposed Revised Guidelines at Section 4.1.4

[81] The Proposed Revised Guidelines state that "the Agencies usually evaluate mergers in the smallest relevant market satisfying the hypothetical monopolist test" (Section 4.1.1) and provide an examples, such as Examples 5 and 6, in which only two or three products are included in the relevant market.

supported by the facts.[82] Drs. Rosston and Topper's own Exhibit 12 shows [[

]] Thus, Drs. Rosston and Topper provide support for the same assessment that they criticize in my Report. [[

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92) Contrary to statements by Drs. Rosston and Topper, I do not claim that business news networks have a uniquely male audience. [[

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93) Drs. Rosston and Topper suggest without elaboration that it is not accurate that CNBC and Bloomberg TV share a large number of common advertisers and those advertisers comprise a large portion of Bloomberg TV advertising. Data on Bloomberg TV advertising contradicting this assertion are provided in my original Report.

94) Drs. Rosston and Topper suggest incorrectly that I limit my analysis of demographics to New York viewers, calling out my data for median household income, when in the same table I provide average household income from a nationwide sample. Similarly, the fraction of male viewers and viewers in different age categories for Bloomberg TV are based on a nationwide sample. Drs. Rosston and Topper's demographic data is based on ScarboroughUSA+ Aug08-Sep09, for which I do not have information on sample selection.

95) Drs. Rosston and Topper claim that the conclusion that business news networks are similar to each other and appeal to a unique audience is not supported by any evidence. First, I clearly state in paragraph 80 of my Report (a paragraph referenced by Drs. Rosston and Topper) that "While business news programming is not the only means of reaching this audience, it is a particularly effective medium for doing so."[83]

96) Drs. Rosston and Topper argue that advertising on TV business news programming is not a relevant antitrust product market because there are many close substitutes available for advertisers to reach the demographic that views business news networks. First, as discussed above, I do not claim to have reached a conclusion that there is such a relevant antitrust market due to data limitations; instead, I wrote that the evidence tends to support the conclusion that the advertising side of the market for TV business news programming is an antitrust market. Second, as I discuss

[82] Rosston and Topper at paragraph 59.

[83] Marx Report at paragraph 80.

below, there is ample evidence that for many advertisers, there are not close substitutes available to advertising on business news networks.

97) Drs. Rosston and Topper claim that I argue Comcast could bundle CNBC with advertising on other networks at "heavily discounted prices,"[84] when in fact I show that Comcast can using the bundling of advertising to simultaneously increase its profits and disadvantage Bloomberg TV through a small discount that draws higher-valuing advertisers to Comcast's networks.[85] My analysis is consistent with the economics literature on bundling as an entry deterrent, which shows that bundling can be used by a firm with market power to preserve that power by deterring a potential entrant or reducing the impact of a one-product rival.[86] Drs. Rosston and Topper are incorrect in saying that "there is no possibility that this transaction would give Comcast the incentive or ability to use bundling to drive Bloomberg TV out of the market for advertising."[87] As described in my original Report, bundling is already used, so the strategy is clearly feasible, the ability to disadvantage CNBC's rival provides the incentive, and the evidence suggesting a possible price discrimination market in business news advertising completes the argument. Within a price discrimination market, Comcast's allotment of advertising spots on Bloomberg TV, as well as its other networks, is potentially sufficient to harm competition in this market. Thus, claims that any bundling would be procompetitive and efficiency enhancing are not correct.

98) In summary, Drs. Rosston and Topper dramatically mischaracterize the analysis and conclusions in my report. Repeatedly arguing that I have made conclusions that I have not and then criticizing those conclusions for not being supported by evidence. [[

]][88] Consequently, the report of Drs. Rosston and Topper should be given no weight.

99) In what follows, I provide additional evidence in support of a possible antitrust market related to business news advertising.

100) As shown in the figure below, CNBC's margins are among the highest of all cable networks.

[[

[84] Rosston and Topper at paragraph 65.

[85] Because Comcast need not lose money in the short run to execute the strategy, Drs. Rosston and Topper's arguments related to recoupment are irrelevant

[86] Barry Nalebuff (2004). "Bundling as an Entry Barrier," *Quarterly Journal of Economics* 159-187.

[87] Rosston and Topper at paragraph 65.

[88] [[

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102) Furthermore, as shown in the figure below, CNBC's CPMs are among the highest of all cable networks.

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104) As additional evidence of the distinctiveness of advertising on business news networks, the figure below shows Bloomberg TV's advertising CPMs by day part. As shown in the figure, unlike traditional programming, "prime time" for business news advertising is in the early morning. Business news advertisers pay a premium for advertising time during the early morning relative to other time periods.

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106) As further evidence, I examine advertising data available for a sample of 15 networks (A&E, BBC America, BRAVO, Bloomberg TV, CNBC, CNN, Discovery, ESPN, Golf Channel, HGTV, Nickelodeon, TBS, TLC, USA, and Versus),[89] and I consider the subset of advertisers from the financial industry that advertise on the business news networks CNBC and Bloomberg TV. I refer to these advertisers as financial business news advertisers. Among those financial business news advertisers, I examine whether they also advertise on other networks. As the figure below shows, {{ }} of financial business news advertisers devote more than {{ }} of their advertising dollars to CNBC and/or Bloomberg TV (within the set of fifteen networks considered). This suggests that for financial business news advertisers, business news programming networks in general and CNBC in particular represent a key source of audiences for advertising their products and services.

[89] Data provided by Bloomberg.

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108) {{

}}[90] These advertisers spent a combined $38.5 million on CNBC and/or Bloomberg TV. {{

[91]

[90] {{ }}

[91] {{ }}

[92]

[93] }}

109) This evidence suggests the possibility of a relevant antitrust market in the form of a price discrimination market for advertising on business news networks by certain financial advertisers. Furthermore, this evidence contradicts Drs. Rosston and Topper's claim that "financial firms have close substitutes for advertising on business news cable networks that would frustrate any attempt to increase prices anticompetitively."[94]

110) I conclude with some general issues raised by Drs. Rosston and Topper.

111) Drs. Rosston and Topper argue that advertisers employ a diverse array of media to reach potential customers and that the Transaction "will not lead to market power in the advertising marketplace."[95] They take an overly broad view of the advertising marketplace (without the market definition analysis that they demand of others), including TV, print, direct mail, online, billboard, and other outlets.[96] They claim commenters have not demonstrated the existence of market power in any plausibly defined relevant market and that advertisers have many options to reach potential customers.[97] To the contrary, the evidence in my original Report as well as additional evidence above shows that financial advertisers have limited options outside of business news networks for reaching their desired demographic. Finally, they argue the potential for bundling of advertising by Comcast is a competitive benefit of the Transaction.[98] As I show in my original Report and discuss above, Comcast can potentially use bundled advertising to disadvantage competitors to its affiliated networks, with negative efficiency consequences.

112) As Drs. Rosston and Topper admit, "Concern about competition in the sale of advertising in niche segments would arise if the proposed transaction enhanced Comcast's ability to increase prices for advertising."[99] However, they argue there is no support for a focus on niche segments because they claim there are "many close substitutes for advertisers to reach the audiences that interest them."[100] Because of this, they argue the concerns about harm to competition in markets such as

[92] {{ }}

[93] {{ }}

[94] Rosston and Topper at paragraph 63.

[95] Rosston and Topper at p.24.

[96] Rosston and Topper, Exhibit 5, p.22.

[97] Rosston and Topper at p.25.

[98] Rosston and Topper at p.24.

[99] Rosston and Topper at p.28.

[100] Rosston and Topper at p.28.

business news advertising are without merit. These conclusions are rebutted by the evidence in my original Report and above.

D.2. Using the values provided by Comcast for relevant parameters implies Comcast has an incentive to foreclose Bloomberg TV

113) In this section I first discuss Drs. Israel and Katz's mischaracterization of the analysis I perform in my original Report related to Comcast's incentive to deny carriage to Bloomberg TV. Then I show that contrary to claims by Drs. Israel and Katz, even using values provided by Comcast for the relevant parameters, the analysis shows Comcast has an incentive to deny carriage to Bloomberg TV.

114) Drs. Israel and Katz depict my report as identifying 2.5% as the definitive number of Bloomberg TV viewers who would switch or drop service if their MVPD no longer carried Bloomberg TV. This is not the case, although I do offer this number as a potentially helpful benchmark because it is the estimated share of CNBC viewers who would switch if their cable provider dropped CNBC based on the model of Crawford and Yurukoglu (2009).[101] That said, as I show below, my analysis continues to show thresholds above this level, implying it is profitable for Comcast to deny carriage to Bloomberg TV, when one uses all three of the relevant parameter values provided in the confidential data, not just the two used by Drs. Israel and Katz.[102]

115) Drs. Israel and Katz present updated values for use in my analysis of Comcast's incentive to deny carriage to Bloomberg TV as follows: MVPDProfit = {{ }} per subscriber per month, and CNBCAdRev = {{ }}/12 million per month.[103] However, in recalculating the thresholds provided by my analysis, they fail to update the CPM adjustment factor to use the number for

[101] Gregory S. Crawford and Ali Yurukoglu (2009), "The Welfare Effects of Bundling in Multi-Channel Television Markets," Working Paper, University of Warwick. The data of Crawford and Yurukoglu do not allow an estimate of the switching rate for Bloomberg TV. See Marx Report at footnote 36 in the Appendix.

[102] For clarity of interpretation, note that actual or estimated rates that households would switch away from Comcast *below* the thresholds indicate foreclosure would be profitable as in this case the estimated losses to Comcast from dropping Bloomberg would be less than the estimated gains to an integrated CNBC.

[103] As discussed in my original Report (especially paragraph 2 of Table 13), my analysis of Comcast's incentive to deny carriage to Bloomberg TV is conservative in multiple respects, and so it understates Comcast's incentive to foreclose Bloomberg TV. In addition, to the extent that the complete or partial foreclosure of Bloomberg TV would increase CNBC's advertising revenue from international markets, the gains to Comcast associated with completely or partially foreclosing Bloomberg TV would be even higher and so make such foreclosure more likely. Specifically, if one assumes that CNBC's advertising revenue from international markets is 20% of its U.S. advertising revenue, then the longer term threshold rates of switching below which foreclosure of Bloomberg TV would be profitable would increase by approximately 20%. Thus, incorporating this into the analysis makes it even more clear that Comcast would find it profitable to deny carriage to Bloomberg TV.

Comcast provided by Drs. Israel and Katz (Feb 26, 2010, report at p.42) of {{ }}.[104] For the moment, I proceed with these values, although as I discuss below, Comcast's data delivers a different number for Comcast's video profit than the MVPDProfit number stated above used by Drs. Israel and Katz.

116) As in my original Report, I provide threshold switching rates under the assumption that Comcast's decision making is based on a 51% share of CNBC profits as well as under the assumption that Comcast's decision making is based on 100% of CNBC profits.[105]

117) Adjusting these three parameters to use Drs. Israel and Katz's proposed values, the revised analysis shows:

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118) As outlined in my report, focusing on business news viewers who watch Bloomberg TV but not CNBC as the relevant set of viewers who might switch or drop service should Comcast drop Bloomberg TV, the thresholds remain sufficiently large that one would not expect Bloomberg TV only viewers to drop MVPD service in these numbers given the option of continuing to watch substitute programming on other business news networks such as CNBC.

119) I now address the issue of the proper value for Comcast's per-subscriber video profit. Comcast's data show that Comcast's per-subscriber video profit is {{ }},[106] so clearly the number for

[104] In my report, I used a lower publicly available number for the CPM adjustment factor (for conservativeness and so that all results would then rely on publicly available data, although I noted in my report that Drs. Israel and Katz's number could be substituted, reinforcing the existing results).

[105] Comcast will initially have a 51% share in the proposed Joint Venture; however, as noted in Drs. Israel and Katz's filing of March 5, 2010, at p.26, the Joint Venture Agreement contains many mechanisms through which Comcast can become the sole owner of the Joint Venture within seven years of the Transaction.

"average Comcast variable profit per video subscriber" of {{ }}[107] includes some share of broadband and voice profits. If a subscriber choosing to drop his or her video subscription from Comcast would be compelled through tying arrangements, contract provisions, transaction costs, or other reasons to also drop his or her broadband and voice subscriptions from Comcast, then subscribers are presumably much less likely to drop their video subscriptions based on the loss of one network for which there is a close substitute. Thus, the environment in which {{ }} is an appropriate value for this analysis is also one in which the analysis would have to take into account the hassle costs to consumers of securing a new broadband and voice provider and so would be likely to deliver the result that Comcast has the incentive to deny carriage to Bloomberg TV.

120) Thus, the relevant remaining question is whether a subscriber who could drop only his or her video subscription, at a cost to Comcast of {{ }}, would have an incentive to do so following the loss of Bloomberg TV, while the close substitute CNBC remains available.

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121) Thus, using Comcast's reported numbers for video profit and CNBC advertising revenue, as well as Comcast's reported number for the CPM adjustment factor, the analysis shows that Comcast has an incentive to deny carriage to Bloomberg TV.

[106] {{

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[107] {{ }}

122) Drs. Israel and Katz propose two other modifications to the analysis. First, they propose that the analysis should allow the possibility that Bloomberg TV could agree to lower its affiliate fee or pay Comcast in order to avoid being dropped. {{

}} The notion that the Transaction does not pose a harm to Bloomberg TV because even though Comcast would have an incentive to drop carriage on Bloomberg TV in order to favor its affiliated network CNBC, Bloomberg TV could pay Comcast not to drop it is counter to the foundations for merger review.

123) Second, Drs. Israel and Katz propose relaxing the assumption that Bloomberg TV viewers would switch to CNBC as the next best option if Bloomberg TV were no longer available, and instead assuming that 92% of Bloomberg TV viewers would switch to CNBC, based on CNBC's market share in business news.[109] Making this adjustment but retaining the parameter values as in the table above, the analysis continues to show that Comcast has an incentive to deny carriage to Bloomberg TV.

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124) Drs. Israel and Katz argue that my analysis does not appropriately account for the fact that viewers that drop all MVPD subscriptions as a result of the loss of Bloomberg TV would no longer be available to view CNBC. First, I view this effect as minimal because I view it as unlikely that a subscriber who is a substantial CNBC viewer would drop his or her MVPD subscription as a result of losing Bloomberg TV. It is the Bloomberg TV only viewers who I view as the most likely

[108] James Cofer, Head of US Distribution, Bloomberg TV, interview, April 12, 2010.

[109] They also suggest other alternatives on an ad hoc basis or based on a larger news market, but I view it as unreasonable to think that a business news viewers would switch in large numbers to general news, such as Headline News or Fox News.

candidates to drop their MVPD subscriptions as a result of losing Bloomberg TV. Second, as noted by Drs. Israel and Katz, my approach to taking this effect into account is correct under the assumption that, in the relevant range, the percentage change in CNBC viewership affects the benefits to foreclosure in a linear fashion. There is no reason to believe any non-linearity involved would be so extreme on the relevant range as to meaningfully affect the results.

125) Drs. Israel and Katz argue that it is not relevant to consider the possibility that Comcast's denial of carriage of Bloomberg TV would result in the elimination of Bloomberg TV. As I argue in my original Report and in Sections B and C above, that is a relevant consideration. In fact, as shown in Section C, Drs. Israel and Katz's own analyses show that Comcast engages in strategic foreclosure, favoring its affiliated networks and at least partially foreclosing rival networks to its affiliated networks. As discussed in my original Report and in Section B above, given the economics of programming networks in general, and the importance of Comcast distribution for Bloomberg TV in particular, it is relevant to consider the possibility that Comcast's denial of carriage of Bloomberg TV could result in the elimination of Bloomberg TV.

126) The longer-term thresholds I provide in my original Report and above consider the possibility that CNBC's advertising revenues would be enhanced on all systems on which it is carried because of the elimination of Bloomberg TV, with the only loss to Comcast being the loss of subscribers associated with its initial denial of carriage to Bloomberg TV. Even with any of the adjustments considered above, the thresholds in this case remain sufficiently high that it is not credible that switching rates for Bloomberg TV viewers might be above these levels.

127) As described above, analysis of Comcast's incentive to deny carriage to Bloomberg TV suggests such denial of carriage would be profitable for Comcast, and thus the denial of carriage on the most advantageous tier or the denial of advantageous channel position for Bloomberg TV would also be profitable for Comcast.

D.3. The effects of channel position and bundling create relevant potential harms from the Transaction

128) Drs. Israel and Katz criticize the results in my original Report that are based on Tables 11 and 12. They argue that Table 11 is not reliable because it does not control for the availability ("carriage rates") of networks. However, controlling for availability is exactly what is done in Table 12. As shown in Table 12, controlling for factors like the identity of the distributor and the availability of Bloomberg TV and CNBC yield qualitatively similar results to the unadjusted viewership patterns shown in Table 11.

129) Drs. Israel and Katz offer two criticisms of Table 12. First, they state that "the coefficient on whether CNBC is available in column 4 implies that the *availability* of CNBC *reduces* the number of hours spent watching CNBC."[110] (emphasis in original) In response, note first that column (3) of Table 12 shows that the availability of CNBC significantly increases the likelihood of watching CNBC, as would accord with intuition, and second that the coefficient that Drs. Israel and Katz identify from column (4) of Table 12 is not statistically significantly negative.[111]

130) Second, Drs. Israel and Katz state that "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."[112] In making this criticism, Drs. Israel and Katz are suggesting that my results could be affected by endogeneity effects whereby individuals with a preference for business news select into cable programming packages that carry business news channels, in which case the coefficients on the availability of Bloomberg TV and CNBC are likely to be positively biased. Such a possible bias is not relevant for my conclusions, however, as my conclusions rely on the channel neighborhood coefficient. The neighborhood coefficient is unlikely to be biased based on the selection argument raised by Drs. Israel and Katz because consumers are unlikely to choose their cable programming tier of service based on the relative channel location of CNBC and Bloomberg TV.[113]

131) Table 15 in my original Report shows that networks owned by major multi-network owners tend to have greater penetration, even controlling for network-specific effects, such as the quality of the network. In addition, the effect of ownership by Comcast is increasing in the number of networks owned by Comcast. Drs. Israel and Katz argue that harm related to the bundling of networks would arise only if "(a) the additional 'leverage' created by the Comcast networks … would give NBCU the power to 'force' MVPDs that did not previously want CNBC … and (b) carrying CNBC led the MVPD to choose to drop Bloomberg TV."[114] To see that the dynamic leading to

[110] Israel and Katz at paragraph 182.

[111] The large standard error implies that one could not reject the hypothesis that the true effect of CNBC availability on hours per week watching CNBC is as large as positive 0.05 at conventional (95%) confidence levels.

[112] Israel and Katz at paragraph 182.

[113] Drs. Israel and Katz raise an additional concern in their footnote 243 that bias on the availability coefficients could be transmitted to the neighborhood coefficient. Although this is theoretically possible, it does not appear to be true in practice. To see this, I re-estimate the regressions of columns (3) and (4) in Table 12 omitting the availability variables In this regression, the coefficient on adjacency is likely to be biased, but the bias should be positive because the sign of the bias depends on the product of (1) the sign of the causal effect of availability and (2) the (conditional) correlation between availability and neighborhooding (William H. Greene, *Econometric Analysis*, 3rd Edition, Prentice Hall: New Jersey, 1997, Section 8.4.2). The effect of availability on viewing is likely to be positive and the unconditional and conditional correlations between the two availability variables and the neighborhood variable are both positive and significant. The revised regressions show, as expected, that the neighborhood variable is "less negative" when the availability variables are omitted, but that variable is still negative and significant as in the original regressions. (For (3), the coefficient is -0.030, with standard error 0.015, and for (4) the coefficient is -0.118 with standard error 0.064.) This suggests that the true effects of neighborhooding on viewing are likely to be represented by the regressions in my original Report and are not the spurious effects of endogeneity bias.

[114] Israel and Katz at paragraph 184.

harm can arise, consider a multi-network owner's ability to adjust affiliate fees across channels it owns in order to foreclose competition. Suppose a cable operator only wants to carry one business news channel, and suppose Bloomberg TV is the network with the lowest affiliate fee, so it is carried. Now suppose Comcast and NBCU merge, combining CNBC with The Golf Channel, which attracts a somewhat demographically similar audience for the purposes of some advertisers. If The Golf Channel and CNBC are able to serve these advertisers, but Bloomberg TV or other business news programming networks are not, then The Golf Channel and CNBC could engage in price discrimination to impose supracompetitive rates upon such advertisers. Thus, Comcast could offer CNBC at a lower affiliate fee, undercutting Bloomberg TV, because it internalizes potential advertising gains. The cable operator then chooses to carry only CNBC and drops Bloomberg TV. Although Comcast could have lowered its affiliate fee on The Golf Channel, by instead doing so on CNBC, it is able to induce the distributor to drop Bloomberg TV.

132) Drs. Israel and Katz give the owner coefficients in Table 15 the interpretation of being about "anticompetitive leverage held by different owners."[115] Instead, the coefficients are, as I state, the "incremental number of subscribers reached by a network above its network-specific, age-adjusted average as a result of being majority owned by a major multi-network owner."[116]

133) Lastly, in the analysis of Table 15, Drs. Israel and Katz mistakenly assume the estimates for Cox are due to their partial ownership in the Discovery Networks. In fact, they are due instead to Cox's exchanging their ownership interests in Discovery Networks for sole ownership of the Travel Channel in early 2007.[117]

E. Conditions to prevent the denial by Comcast of channel position for Bloomberg TV in a business news neighborhood would remedy identified potential harms associated with the Transaction

134) A condition requiring that Comcast align its channels so that all existing business news channels, including Bloomberg TV, are carried on contiguous and adjacent channels on all tiers where CNBC is carried would remedy some of the potential harms associated with the Transaction. The costs of such a condition are likely to both be small and borne in the normal course of business

[115] Israel and Katz at paragraph 186.

[116] Marx Report at Table 15, paragraph 2. Related to Drs. Israel and Katz's footnote 246, the relevant result is not that Cox has more leverage or that Walt Disney or Viacom has less leverage, but rather that the channels that Walt Disney and Viacom own have benefited less from having a major multi-network owner than channels owned by others.

[117] Cox's sale of 65% of the Travel Channel to Scripps in late 2009 is outside the time period of the data used.

operations in the coming years.[118] However, the condition is necessary because the direct benefit to Comcast in terms of increased viewership of CNBC associated with placing CNBC's rivals in a channel position far from CNBC would be expected to exceed the minor reduction in the user friendliness of a channel lineup associated with having networks organized by genre with the exception of business news channels. As evidence of the importance of channel position, especially for business news networks, *Multichannel News* reports in a 2007 article related to NBCU networks receiving "upgraded channel positions" as part of channel lineup changes by Time Warner Cable in four New York City boroughs that: "Sources familiar with the moves indicate that NBCU paid up to 'several million dollars' for the enhanced channel positioning and to ensure separation on the dial for Fox Business Network from CNBC."[119]

135) Drs. Israel and Katz argue I provide no evidence or analysis to indicate that the gain to CNBC from keeping Bloomberg TV out of a CNBC neighborhood would outweigh the benefits from a less viewer-friendly channel lineup. To the contrary, Table 12 in my original Report quantifies the significant negative effects on CNBC viewership from proximity to Bloomberg TV. In contrast, one would expect that essentially all of the benefits from a viewer-friendly channel lineup could be obtained by arranging all the channels except Bloomberg TV according to genre. Excluding Bloomberg TV from a business news neighborhood would be at minimal cost, but would benefit Comcast's affiliated network CNBC.

136) To get a better understanding of the frequency of channel rearrangement, I use 2007 and 2010 TMS Data to analyze the frequency with which Comcast changes the channel positions of the channels in its lineups.[120] I identify headends that were owned by Comcast in both 2007 and 2010. I refer to these as the "Comcast headends in the sample." I start with the list of current basic cable networks from SNL Kagan (175 networks)[121] and identify those networks in both the 2007 and 2010 channel lineups. I consider only channel positions for Comcast headends in the sample where one of the current basic cable networks is in that channel position in both 2007 and 2010. I refer to these as the Comcast channel positions in the sample. For the Comcast channel positions in the sample, 5.9% of those channel positions contain different basic cable networks in 2007 and 2010.[122] In addition, 69.6% of Comcast headends show a change in the location of at least one

[118] As discussed in my original Report at paragraphs 94 and 97, the industry trend is toward channel organization by genre.

[119] http://www.multichannel.com/article/130309-NBCU_Nets_Dial_Up_In_New_York_City.php (accessed August 12, 2010)

[120] I match cable headends between the 2007 and 2010 TMS data using community names. I was able to match approximately half of Comcast's headends. The TMS data for 2007 and 2010 are drawn from different databases with different headend identifiers, making it difficult to match all headends. However, I do not expect there is any particular selection issue that would misguide the analysis.

[121] SNL Kagan's Economics of Basic Cable Networks, 2009.

[122] There are 31765 total matched channel positions in the sample, that is, there are 31765 channel positions in matched Comcast headends (owned by Comcast in both 2007 and 2010) for which the networks in that channel position in 2007 and 2010 are both current networks listed by SNL Kagan as a basic cable network. Of these, 1885 had different networks in 2007 and 2010.

basic cable network.[123] For 12.4% of Comcast headends in the sample, Bloomberg TV was carried in both 2007 and 2010, but was carried in a different channel position. For comparison, CNBC was not in the same channel position for 5.1% of Comcast headends in the sample, ESPN was not in the same channel position for 3.0% of Comcast headends in the sample, and MTV was not in the same channel position for 3.1% of Comcast headends in the sample.

137) Based on a limited number of natural experiments, I find no evidence that channel rearrangement has any lasting effect on subscribership. I was provided by attorneys for Bloomberg with eight examples of major one-day channel rearrangements on Comcast systems during the period for which I have data. For five of these, I had observations on subscribership in the data. As shown in the table below, in four of these cases the channel lineup change did not result in any statistically significant change in cable subscribers. In the final case, there was a statistically significant decrease in the period following the channel lineup change, but in the next time period, there was a statistically significant increase in subscribers relative to the benchmark period before the channel lineup change. Thus, decreases in the period following the channel lineup change were more than made up for in the next time period. For satellite subscribers, there was no statistically significant change in any of the locations except Houston, where there was a statistically significant decrease in satellite subscribers.

Table 8: Change in Cable Subscribership Following Channel Lineup Changes

Location	Date of Channel Lineup Change	Subscriber Change in Time Period Following Channel Lineup Change
Palm Beach County and Treasure Coast, FL	16-Jan-07	-
Houston, TX	16-Oct-07	-
Albuquerque, NM	27-Aug-05	-
Richmond and Henrico County, VA	30-Jul-05	-
Dallas, including Garland, Sunnyvale, TX	22-Sep-04	↓*

"-" indicates no statistically significant increase or decrease

"↓*" indicates a temporary statistically significant decrease followed by a statistically significant increase (relative to the base period) in the next period

Source: MRI Data

[123] Weighting the results by households, I obtain similar results. Matching headends with population data resulted in 31 Comcast headends being dropped from the sample. In this truncated sample, the percentage of channel positions that changed is 6.0%, and 68.1% of all Comcast headends in the sample had at least 1 change in channel position. Weighting channel positions in a given headend by the number of households served by that headend, 5.5% of channel positions changed, and for 79.1% of household-weighted headends, there was at least one change in channel position. Thus, weighting by households indicates that a greater share of Comcast headends changed at least one channel position than in the unweighted analysis.

F. The Transaction creates potential harms related to online distribution

138) Comcast notes that commenters have criticized TV Everywhere and Comcast's Fancast Xfinity TV on a variety of grounds, including that these initiatives restrict online distribution of programming, constitute collusion, and prevent the emergence of potential over-the-top competitors.[124]

139) Comcast argues that harms related to authenticated content initiatives are not specific to the Transaction, "except perhaps to facilitate and expand the online distribution of NBCU content by Comcast and other MVPDs."[125] However, this is not credible because, as I describe in my original Report, the Transaction is likely to accelerate current movements towards making certain online content available only to MVPD subscribers for two reasons. First, the Transaction brings under Comcast's influence NBCU's on-line video hub Hulu, which currently controls most of the professionally produced material being made available on the Internet, and which provides a viable option for programmers to provide unrestricted access to their programming.[126] Second, the Transaction allows Comcast to add NBCU's high-value video content to its existing subscription-only offerings at Fancast XFINITY TV and to other subscription-only sites envisioned as part of the TV Everywhere initiative. Comcast's incentive to limit online distribution of NBCU programming to limited-access sites is likely to be intensified by the network effects that the presence of NBCU's programming would likely generate.

140) Comcast argues that "Authentication, however, enables *more* content to be available online than would otherwise be economically feasible,"[127] (emphasis in original) using the 2010 Vancouver Olympics as an example, despite the fact that NBCU's restrictions on access to its online Olympics coverage were raised as a concern by Senator Herb Kohl, Chairman of the Senate Subcommittee on Antitrust, Competition Policy, and Consumer Rights.[128] Having more content available to a restricted set of MVPD subscribers, while less content is available without authentication is not clearly "pro-consumer, pro-competitive, and nonexclusive" as Comcast argues.[129] Furthermore, Comcast's economists argue that online video is currently complementary to traditional television viewing and MVPD services,[130] which suggests Comcast would benefit from increased demand for MVPD services if there were less restrictive online distribution.

[124] Opposition at pp.204-205

[125] Opposition at p.205.

[126] Marx Report at paragraph 109.

[127] Opposition at p.206.

[128] Marx Report at paragraph 119.

[129] Opposition at p.205.

[130] Israel and Katz at Section VII.A.

141) Comcast argues that suggestions in my original Report that the TV Everywhere initiative may be properly viewed as collusive lack merit. As stated in Judge Richard Posner's book *Antitrust Law*, "In some cases, however, it may be possible to demonstrate through economic evidence the existence of collusive pricing even though no overt acts of collusion are detected."[131] Judge Posner then lists 14 relevant types of economic evidence,[132] where number 14 is "exclusionary practices": "If exclusionary practices are committed in a market with more than one significant firm, therefore, this is an indication that the market is cartelized. … What is novel is the suggestion that the existence of a cartel might be inferred from proof of exclusionary practices plus the fact that the market was *not* monopolized by a single firm."[133]

142) The TV Everywhere principles are unlikely to be something that could be implemented profitably by a single MVPD because participating programmers would then have to limit the online distribution of their content to only the subscribers to that single MVPD. A common agreement to the TV Everywhere principles by major MVPDs could allow participating programmers to reach sufficiently many consumers that it is in their interest to participate rather than risk being disadvantaged in carriage terms with those MVPDs. Thus, it remains a relevant question, as posed in my original Report, whether competition authorities would be concerned if a (hypothetical) monopolist MVPD in the U.S. market imposed the restrictions on on-line distribution embodied by the TV Everywhere principles.[134]

143) As stated in my original Report, concerns about anticompetitive effects resulting from restricting online distribution are most compelling for news and information programming, including business news programming.[135] 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.[136]

G. Conclusion

144) In conclusion, the arguments by Comcast and its economists that Comcast would have no ability or incentive to pursue anti-competitive foreclosure strategies, either partial or complete, against

[131] Richard A. Posner (2001), *Antitrust Law*, Second Edition, University of Chicago Press, at p.79.

[132] Posner (2001) at pp.79-93.

[133] Posner (2001) at p.93. Emphasis in the original.

[134] Marx Report at paragraph 117.

[135] Marx Report at paragraph 120.

[136] Marx Report at paragraph 120.

Bloomberg TV in the event of the closing of the proposed merger contain numerous errors and unsubstantiated claims. As my analysis of these reports has made clear, far from undermining my earlier conclusions regarding the significant threats of competitive harms, particularly related to TV business news programming, these reports and declarations reinforce those conclusions.