

EXHIBIT 1

**The Proposed Comcast–NBCU Transaction:
Response to Comments and Petitions Regarding Competitive Benefits and
Advertising Competition**

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I. Introduction

A. Assignment

1. Counsel for Comcast Corporation (“Comcast”) and General Electric Company (“GE”) have asked us to respond to the comments regarding the competitive benefits of the proposed Comcast–NBCU transaction and the impact of the transaction on the provision of advertising services. Dr. Rosston’s qualifications are described in the economics report he submitted on May 4, 2010, regarding the competitive benefits from the proposed transaction.¹ Dr. Topper’s qualifications and curriculum vitae are included as Appendix 1.

B. Summary of Opinions

2. Several commenters, including DirecTV, Inc. (“DirecTV”), the American Antitrust Institute (“AAI”), and Writers Guild of America, West (“WGAW”), question some of the competitive benefits arising from the proposed transaction that were described in the Rosston Benefits Report. Their arguments, however, fail to account for two principal benefits of the joint venture: the reduction in transaction costs and the acceleration of Comcast’s introduction of future innovative video products and services that require cooperation between content providers and platform providers. A summary of our responses to their comments is as follows:

- A key public interest benefit of the proposed Comcast–NBCU transaction is that it will reduce transactional frictions and ensure more certain, rapid, and efficient access for Comcast to the quality and variety of NBCU content on arm’s length terms. This improved access will make it more attractive for the combined entity to take risks and experiment, leading to greater innovation and investment in the development of new platforms, products, and services that will directly and more rapidly benefit consumers.
- The proposed transaction will give Comcast strong economic incentives to invest in NBCU programming and to disseminate that programming across multiple platforms,

¹ See Gregory L. Rosston, “An Economic Analysis of Competitive Benefits from the Comcast–NBCU Transaction,” *In the Matter of Applications of Comcast Corporation, General Electric Company, and NBC Universal, Inc. For Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56 (May 4, 2010) (“Rosston Benefits Report”).

thus increasing the amount, quality, and availability of programming for consumers. Comcast's track record demonstrates that it significantly increases programming investments in its networks that it controls. Furthermore, Applicants have committed to investing in the NBCU broadcast networks and in NBCU's local owned and operated stations ("O&Os").

- After the proposed transaction, Comcast will obtain NBCU content on arm's length terms, not at "below market rates" as WGAW alleges. Because of the competitiveness of the video marketplace, there will be no adverse competitive effects from these content deals. To the contrary, the ability to access content efficiently on arm's length terms will enhance competition for all of the reasons discussed in the Rosston Benefits Report.
- The analysis of the reduction in double marginalization in the Rosston Benefits Report is based on empirical (i.e., "real-world") evidence and well-established economic principles from the academic literature. In an earlier FCC proceeding, DirecTV conducted a similar analysis of the benefits from a reduction in double marginalization.
- In the dynamic and evolving marketplace for new video products and services, it is not possible to predict with certainty which specific innovations will succeed and increase consumer welfare, or to quantify accurately the benefits to consumers from vertical integration, despite the potentially large magnitude of these benefits. The inherent difficulties associated with enumerating and quantifying each of these transactional benefits from future innovations in no way makes them less tangible or significant to consumers.

3. A few commenters allege that the proposed transaction may lead to competitive problems in advertising markets; however, none of these commenters undertake rigorous antitrust analysis and they all ignore important market realities in hypothesizing competitive harm in the advertising marketplace. In this report, we demonstrate that the proposed transaction presents no competitive concerns related to the provision of advertising services. Our principal findings are:

- The marketplace for advertising is extremely dynamic and competitive, with many options across a variety of media available to advertisers, and with new forms of advertising constantly being developed. Comcast and NBCU each account for only a small share of overall advertising sales, and the proposed transaction will result in only a small increase in concentration. Post-transaction, advertisers will continue to have numerous competitive alternatives from which to choose.
- There is no basis for a competitive concern with respect to advertising sales at the national level. Even if, for argument's sake, one excludes other media—such as radio, newspapers, and the Internet that sell advertising that competes with cable and broadcast television advertising, the new entity's combined share of national cable

and broadcast television advertising is small enough that there would be no ability for it to raise advertising prices.

- There is also no basis for a competitive concern about the effect of the proposed transaction on advertising in “niches” identified by some commenters, such as “women’s programming” or “business news.” Advertisers have a wide variety of ways to reach targeted audiences—networks, shows, and other media provide competitive outlets for reaching targeted audiences.
- There is no basis for a competitive concern with respect to local advertising. Comcast’s local advertising services compete to some extent with advertising sold by broadcast television stations, as do radio, newspaper, Internet, and many other advertising services. However, advertising services available from other broadcast television stations are closer substitutes for the advertising services available from NBC’s O&Os than are Comcast’s local advertising services.
- Finally, as explained in detail in the Rosston Benefits Report, the combination of NBCU and Comcast will likely increase the new entity’s efficiency of delivery of advertising services, improve its targeting of advertising, and accelerate its development of advanced, interactive advertising services.

4. The organization of the remainder of the this report is as follows: Section II of this report addresses commenters’ challenges to the competitive benefits of the proposed transaction that were described in Dr. Rosston’s prior submission. Section II.A explains how the proposed transaction will facilitate the more rapid introduction of new video products and services; Section II.B explains why Comcast will have strong incentives to increase investment in NBCU content and demonstrates that Comcast has historically increased investment in content and successfully increased ratings of networks it controls. Section II.C responds to the WGAW concern that pricing of NBCU content will present competitive problems. Section II.D explains that the benefits from the reduction in double marginalization are based on sound economic analysis and empirical data.

5. Section III of this report addresses issues raised by commenters regarding competition in advertising. Section III.A explains that the proposed transaction will not harm competition in national advertising; Section III.B shows that the concerns raised by some commenters about advertising in niche segments have no antitrust basis; Section III.C explains that the proposed transaction will not harm competition in local advertising; and Section III.D provides a brief summary of the competitive benefits of the proposed transaction for the advertising marketplace.

II. Responses to Comments and Petitions Regarding Competitive Benefits

A. Accelerating the Development of New Ways to Deliver Content

6. A major benefit of the proposed transaction is that it will reduce transactional frictions so that Comcast will be able to introduce new video products and services more rapidly and be able to experiment with new mechanisms to deliver more and better video content. The likely changes by the new entity will increase the amount, quality, and availability of Comcast/NBCU content, which should spur competing programmers and distributors to increase the amount and quality of content they make available, further benefiting consumers.

7. DirecTV claims that the benefits of the proposed transaction in reducing transactional frictions are “speculative and/or not transaction specific, and therefore non-cognizable” because existing distribution methods ultimately achieved some level of acceptance without the proposed transaction.² Similarly, AAI claims that because “Comcast launched these services before the JV, the company presumably anticipated that they would be profitable. This begs the question: Why is a JV the size and scope of Comcast/NBCU necessary to further develop these services?”³

8. In making these claims, DirecTV and AAI miss a critical point made in the Rosston Benefits Report, the Public Interest Statement, and the Pick Declaration.⁴ Specifically, the historical adoption patterns of video on demand (VOD), DVD day-and-date release, Fancast Xfinity TV, and advanced advertising demonstrate that the launch and expansion of these platforms and products took longer than expected or necessary because of limits on the quantity, quality, and variety of content that was available to Comcast.⁵ There is no claim that the launch and delivery of new offerings was not possible without vertical integration; rather, the critical

² See DirecTV Comments, pp. 53–58. Unless otherwise noted, all citations to comments/petitions herein are to comments/petitions filed in MB Docket No. 10-56 on or about June 21, 2010.

³ See American Antitrust Institute (AAI) Comments, p. 22 (internal emphasis removed.)

⁴ See Rosston Benefits Report, ¶¶ 15–47; see also *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56, Applications and Public Interest Statement, Lead Application File Nos. BTCCDT-20100128AAG (MB), SES-ASG-20100201-00148 (IB), and 0004101576 (WTB) (filed Jan. 28, 2010) (“Public Interest Statement”); Public Interest Statement, App. 7, ¶ 4 (Declaration of Robert Pick, Senior Vice President, Corporate Development, Comcast Corporation, Jan. 27, 2010) (“Pick Declaration”).

⁵ *Ibid.*

point is that vertical integration can accelerate the launch and expansion of new products, services, and platforms, and increase experimentation.

9. The fact that some content providers now have an increased interest in earlier VOD release windows or multi-platform distribution after protracted negotiations and delays simply misses the point that transactional frictions hindered and delayed the development and launch of those innovative distribution methods, and more importantly are likely to cause delays in the future as new products, services, and distribution methods are developed.⁶ In fact, DirecTV's example of Comcast gaining access to Sony/MGM content demonstrates this point.⁷ In the case of Sony/MGM, acquisition of an ownership interest by Comcast in a content provider was required to overcome the transactional frictions and reluctance of content providers to give Comcast access to content.⁸ DirecTV fails to note that Comcast was unable to use contractual means alone to overcome these frictions and had to participate in Sony's purchase of MGM to reach an agreement for VOD rights to Sony and MGM content.⁹ This access to content allowed Comcast to create a "Free Movies" category on VOD.¹⁰

⁶ See DirecTV Comments , pp. 55–57.

⁷ Ibid., p. 54.

⁸ Pick Declaration, ¶¶ 10–12.

⁹ In addition, DirecTV's contention that Comcast offered only a subset of content made available to Comcast from its investment in Sony and MGM on VOD ignores the fact that {{

}} See {{
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(Comcast Attachment #1).

¹⁰ When comparing VOD views per month in 2005 and 2009, DirecTV mistakenly makes an apples-to-oranges comparison (See DirecTV Comments, pp. 54–55). The VOD views per month in the Rosston Benefits Report (¶ 28) are not comparable to the VOD views per month DirecTV cites from Comcast's 2005 Annual Report. Dr. Rosston's estimate of 17 VOD views per home per month in 2009 is based on an average across all digital subscribers while the 2005 Annual Report estimate is based on only those digital subscribers that used VOD (per Michael Imbesi, Senior Director, On Demand Promotion and Content Strategy, Comcast, Jul. 20, 2010). Because some digital subscribers do not use VOD, the average number of views per VOD-using household will be higher than the average number of views per VOD-capable (i.e., digital) household. To make an apples-to-apples comparison, the value for 2005 should be average VOD views per digital subscriber. Based on the numbers also cited in the same 2005 Annual Report (1.4. billion VOD views and 8.7–9.8 million digital customers), there were 12–13 VOD views per home per month in 2005, which is less than the 17 VOD views per home per month in 2009 reported in the Rosston Benefits Report (see Comcast Corp., "2005 Annual Report," pp. 11, 16).

10. Negotiation frictions and contracting challenges are particularly acute for new distribution methods and business models. Consumer acceptance of new distribution methods hinges on the quality and variety of video content made available to viewers. As a result, distributors' incentives to invest in new distribution methods, and their ability to experiment, improve, and demonstrate the effectiveness of new platforms to content providers depend critically on the quality and variety of content. Demonstrated success with a new distribution method in turn encourages content providers to make additional content available. In the absence of vertical integration, the development of new services and distribution methods can be delayed. For example, while Comcast had the technical ability to implement DVD day-and-date VOD offerings as early as 2001, movie studio testing of DVD day-and-date release did not begin until 2006, and it was not until 2009 that Comcast released over 100 DVD day-and-date movie titles for VOD in one year.¹¹

11. As explained in the Rosston Benefits Report, negotiation frictions arise for several reasons.¹² Whatever their cause, negotiation frictions can prevent or delay some agreements between content providers and distributors that would be beneficial to content providers, distributors, and consumers.¹³ The economics literature demonstrates that, as complexity and uncertainty increase, the advantages of vertical integration over reliance on contracts between independent parties also increase.¹⁴ By reducing negotiation frictions, the proposed transaction will accelerate the development and launch of new products, platforms, and services, expanding output and benefiting consumers.

12. The proposed transaction will ensure that Comcast has more certain, rapid, and efficient access to the quality and variety of NBCU programming on arm's length terms.¹⁵ As discussed

¹¹ See Rosston Benefits Report, ¶¶ 25, 31–34.

¹² *Ibid.*, ¶ 15.

¹³ WGAW claims that “‘negotiation friction’ between two independent parties is what determines the fair market value of the content the parties negotiate over.” See WGAW Comments, p. 10. This claim does not make economic sense because negotiation frictions prevent firms from agreeing upon a fair market value. Indeed, a large economic literature addresses the efficiency benefits that arise from reducing transactional frictions. For a discussion of this literature and its relevance to the proposed transaction, see Rosston Benefits Report, ¶¶ 51–54.

¹⁴ See Rosston Benefits Report, ¶¶ 52, 54.

¹⁵ We address the WGAW claims regarding the pricing for NBCU programming in Section III.C below.

in the Rosston Benefits Report, there can be substantial negotiating friction between unaffiliated firms that can hinder or even block efficient transactions. Differing views about the future, disagreements about how to divide potential future profits, and fears of *ex post* opportunism are all reasons why the transaction can help accelerate agreements that will benefit consumers and the companies. Both NBCU and Comcast will benefit from the more efficient transactions; more efficient access to NBCU content in turn will give Comcast greater ability to develop successful new programming delivery platforms, as well as greater incentive to invest in them.¹⁶ As explained in the Rosston Benefits Report:

While it is unclear what the next innovative platform or distribution mechanism will be, it will surely involve coordination between distribution and content. Minimizing contracting difficulties and aligning incentives between providers of content and distribution can lead to greater experimentation with different models and provide better information about what new methods will be successful at serving consumer demand. Because of its ability to increase consumer welfare directly through increased output and innovation, and indirectly through other efficiencies, this transaction will benefit consumers.¹⁷

13. Neither commenter disputes this analysis. DirecTV and AAI instead focus on the fact that video products have ultimately become available. They ignore the important fact that delays in the introduction of new products and services deny consumers substantial benefits. In fact, DirecTV's economist, Professor Kevin Murphy, in his academic research, has recognized that a vertically integrated firm can have lower transactional frictions than independent firms.¹⁸

¹⁶ AAI claims that transactional frictions are procompetitive and a decrease in transactional frictions between Comcast and NBCU after the transaction is anticompetitive. See AAI Comments, pp. 6–7, 22–23. This makes no economic sense—transactional frictions generally harm competition and reduce consumer welfare.

¹⁷ See Rosston Benefits Report, ¶ 92.

¹⁸ Professor Murphy and his co-author explain that “vertical integration can make it unnecessary to control either [of the merging parties’] behavior contractually” and “vertical integration may increase flexibility by reducing the degree of contractual specification.” See Benjamin Klein and Kevin M. Murphy (1997), “Vertical Integration as a Self-Enforcing Contractual Arrangement,” *The American Economic Review*, Vol. 87, No. 2, Papers and Proceedings of the Hundred and Fourth Annual Meeting of the American Economic Association (May, 1997), pp. 415–420 at 419–420. See also, Oliver Williamson (1979), “Transaction-Cost Economics: The Governance of Contractual Relations,” *Journal of Law and Economics*, Vol. 22, No. 2, pp. 233–261; Oliver Williamson (1971), “The Vertical Integration of Production: Market Failure Considerations,” *The American Economic Review*, Vol. 61, No. 2, pp. 112–123; Francine Lafontaine and Margaret Slade (2007), “Vertical Integration and Firm Boundaries: The Evidence,” *Journal of Economic Literature*, Vol. 45, No. 3, pp. 629–685, at Tables 13, 14.

Economists have also shown that vertical integration can help innovation and development of new products and services in a variety of industries.¹⁹

B. Increased Investment in NBCU Programming

14. The Rosston Benefits Report describes Comcast's plans to make substantial investments in NBCU's programming and highlights Comcast's previous substantial investments to launch, acquire, and improve cable networks.²⁰ DirecTV claims that there is no evidence that Comcast's investments in its networks kept up with large industry-wide increases in expenditures due to large increases in rights fees.²¹ This claim is belied by the data. Comcast significantly increased programming expenditures in the cable networks it controls.²² Between 2005 and 2009, the average increase in Comcast's programming expenditures was [[]], whereas the average increase in programming expenditures for all cable networks not owned by Comcast was [[]].²³ The average increase in programming expenditures for all "Sports," "Arts & Entertainment," and "Niche" cable networks not owned by Comcast was [[]]. See Exhibit

¹⁹ For example, see Joseph Farrell and Philip J. Weiser (2003), "Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age," *Harvard Journal of Law & Technology*, Vol. 17, No. 1, pp. 85–134 at 98 ("By separating its operations vertically, Palm lost control of some important aspects of its product deployment. For instance, Palm's reliance on outsiders and 'an inability to crack the whip on its far-flung programmers' contributes (according to some observers) to its 'slow pace of innovation' in applications. By contrast, Sega developed the operating system, equipment, and leading games (such as Sonic the Hedgehog) for its Sega Genesis system all in-house, presumably in order to control its product offerings, and drive consumer demand for its system"); see also David J. Teece (1996), "Firm Organization, Industrial Structure, and Technological Innovation," *Journal of Economic Behavior and Organization*, Vol. 31, No. 2, pp. 193–224 at 204 ("Economic historians have long suggested that there may be links between vertical structures and the rate and direction of innovation."). The positive impact of vertical integration on R&D spending in the petroleum industry has also been noted. See Henry O. Armour and David J. Teece (1980), "Vertical Integration and Technological Innovation," *The Review of Economics and Statistics*, Vol. 62, No. 3, pp. 470–474.

²⁰ See Rosston Benefits Report, ¶¶ 10–14. Applicants have committed to investing in the NBCU broadcast networks and NBCU's local O&Os. See Public Interest Statement, pp. 36, 38. In addition, Applicants have made specific commitments to increase the amount of local news and information programming provided by the NBCU O&Os, to make local news and other local programming available to consumers at more times and on more platforms (e.g., on demand, online, and on Comcast's regional networks), and to increase the amount of Spanish-language programming available to the public. See Public Interest Statement, pp. 40–42, 48.

²¹ See DirecTV Comments, p. 58.

²² See Rosston Benefits Report, ¶ 11.

²³ Expenditure figures are based on SNL Kagan estimates. To perform an apples-to-apples comparison between the Comcast-owned networks and the scores of other, non-Comcast-owned networks, it was necessary to use a uniform source of data. Although SNL Kagan estimates may in some cases overstate and in other cases understate the actual data, we are not aware of any systematic biases in the SNL Kagan expenditure estimates.

1. Contrary to DirecTV's claims, the data demonstrate that Comcast has more than kept up with industry-wide increases in expenditures.

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**Exhibit 1: Growth in
Programming Expenditures
2005 – 2009**

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15. Moreover, Comcast has a demonstrated history of improving the performance of the cable networks that it controls relative to the industry as a whole. As shown in Exhibit 2, between 2005 and 2009, the average 24-hour (or household total day) ratings for Comcast's cable networks grew an average of [[]], whereas the overall ratings for all cable networks (not owned by Comcast) fell, on average, by [[]].²⁴ The ratings for all "Sports," "Arts & Entertainment," and "Niche" cable networks not owned by Comcast increased, on average, by [[]].

²⁴ Ratings are Nielsen's live coverage ratings and are based on the network's subscriber universe.

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Exhibit 2

Growth in Average 24-Hour Ratings

2005 – 2009

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16. DirecTV also claims that there is no evidence that the NBCU networks have been underperforming.²⁵ In making this claim, DirecTV ignores the fact that the NBC broadcast network has been underperforming in comparison to other broadcast networks and could benefit from Comcast's investments. Specifically, between 2000 and 2009, NBC's ratings fell by [[]] compared to an average drop of [[]] for the other three major broadcast networks.²⁶ See Exhibit 3.

²⁵ See DirecTV Comments, pp. 58–59.

²⁶ See, for example, Meg James and Joe Flint, "\$30 Billion Deal Shows Cable's Growing Power," Tribune Newspapers, Dec. 4, 2009 ("[GE] no longer appear[s] to have the wherewithal to navigate the rapidly changing media landscape or the will to make the financial investment to revive [NBC].").

Exhibit 3

17. DirecTV further claims that there is no evidence that Comcast will increase investments in NBCU programming to improve the performance of these networks.²⁷ DirecTV ignores the economic incentives for Comcast that will drive investment in NBCU networks after the transaction.²⁸ Comcast executives expect that they will increase investment in the NBCU programming that will be part of the new entity.²⁹ As described in the Rosston Benefits Report, Comcast will have the incentive and ability to invest to increase the quantity and quality of

²⁷ See DirecTV Comments, pp. 58–60.

²⁸ DirecTV also ignores the commitments that Applicants have made to invest in the NBCU broadcast networks.

²⁹ Per David L. Cohen, Executive Vice President, Comcast Corp., Nov. 19, 2009, Mar. 27, 2010, Apr. 09, 2010, Apr. 28, 2010; see also Testimony of Brian L. Roberts, “Consumers, Competition, and Consolidation in the Video and Broadband Market,” Subcommittee on Communications, Technology, and the Internet, Committee on Commerce, Science and Transportation, United States Senate, Mar. 11, 2010, pp. 93, 118 (“[O]ur motivation is to try to make these channels better, more relevant. Invest in them, be more focused on them than their current situation, and that we think they are good businesses, as you describe, as the next generation wants them on more platforms”); Cynthia Littleton, “Comcast chief high on NBC U deal: Roberts, Chernin speak at Cable Show confab,” *Variety*, May 12, 2010 (“Comcast stands ready to invest big bucks in rehabilitating the mothership NBC broadcast network.... [Running NBCU] is ‘going to require some risk, some investment and some patience. We signed up for that.... We are coming into the business with an expectation to invest.’”).

content because of its ability to distribute the content on a wider array of distribution platforms.³⁰ After the consummation of the proposed transaction, NBCU and Comcast will have greater certainty that they will be able to reach agreements for Comcast to distribute NBCU content and do so more efficiently, leading to higher returns to investing in content creation. The joint entity therefore will have a greater incentive to invest in content.³¹ NBCU's cable networks, many of which are currently highly rated, would benefit from the reduction in transactional frictions and the increased incentives for the new entity to invest in content, which in turn, could allow them to achieve even higher ratings.

18. The proposed transaction will also allow Comcast and NBCU to share resources and to increase the frequency and scale of the cross-promotions, which can be important for expanding audiences and ratings of shows and networks, and for improving brand identities.³² DirecTV ignores these important synergies from the transaction that will help NBCU and Comcast networks.

19. In summary, Comcast's past successes in investing to increase its cable networks' ratings, its incentives to increase investment in NBCU cable and broadcast networks after the proposed transaction, and the commitments that Applicants have made to invest in the NBCU broadcast networks provide a persuasive basis on which to conclude that the transaction will lead to greater investment in those networks.

20. DirecTV also argues that the Rosston Benefits Report and the Public Interest Statement do not explain how this transaction will allow the new entity to increase programming by competing more effectively in purchasing rights for additional sports programming.³³ In making this claim, DirecTV ignores the explanation provided in the Rosston Benefits Report:

The proposed transaction will enable the joint venture to make more attractive bids to distribute sports content on a multitude of platforms, including broadcast networks, national cable sports networks, regional

³⁰ See Rosston Benefits Report, ¶ 14.

³¹ Ibid., ¶¶ 15–70.

³² Ibid., ¶¶ 71–79.

³³ See DirecTV Comments, p. 59.

sports networks, and digital and mobile platforms, thus expanding the availability of sports programming to consumers.³⁴

21. DirecTV points to the recent agreement between CBS and Turner Broadcasting to carry the NCAA men's basketball tournament as evidence that sports rights can be obtained through contractual arrangements between third parties. We do not dispute that independent parties can enter into contractual agreements to acquire sports rights; our point is that Comcast's and NBCU's experience demonstrates conclusively that, because of negotiation frictions, independent parties sometimes will not reach—either as quickly or at all—efficient agreements that would yield benefits for consumers. For example, Comcast in the past has approached broadcasters, but was unable to convince them to bid jointly for sports rights. In such circumstances, the proposed transaction could reduce transactional frictions and facilitate bidding for sports rights.

22. Just as the reduction in transactional frictions in a vertical relationship between a content owner and a delivery platform produces significant economic benefits, horizontal relationships between firms with complementary channels make it easier to come to a mutually beneficial agreement when there is uncertainty about the future. It is particularly difficult for a contractual joint venture to secure sports rights for multiple events in a dynamic evolving marketplace because the parties are likely to diverge on the overall value of the rights package and the values they assign to specific events. Hence, contractual means are not likely to be an efficient way for Comcast to devise and implement a long-term strategy for competing effectively with Disney/ESPN/ABC for rights across a range of sporting events.³⁵ Ultimately, consumers would

³⁴ See Rosston Benefits Report, ¶ 12 and footnote 16.

³⁵ See “NBA Signs New Six-Year TV Deal,” NBA.com, Jan. 23, 2002, available at http://www.nba.com/news/tv_contract_020122.html, accessed on Jul. 15, 2010 (“‘This agreement goes to the strength of our company,’ Michael Eisner, Chairman of the Walt Disney Company, said. ‘Disney is about delivering great programming through a wide range of platforms. There is no question the NBA represents great, exciting, fast-paced competitive sports for over-the-air free broadcasting, for cable television, and for the Internet. Whether the content is sports, entertainment or news, people across America and around the world look to us for the best.’”); see also Richard Sandomir, “ESPN Eyes Rights to Games in 2014 and 2016,” The New York Times, Aug. 19, 2008 (“Skipper [ESPN's executive vice president for content] said that ESPN was well-positioned with ABC as its broadcast outlet, multiple ESPN cable networks, espn.com and extensive video streaming capabilities. ‘There's nothing that NBC has that we don't have the assets to replicate and do better,’ he said.”).

bear the costs of this inefficiency by foregoing the innovation in programming content and services that such competition fosters.

23. Furthermore, DirecTV ignores the fact that the CBS and Turner Broadcasting situation is not representative of how unaffiliated networks collaborate for sports rights. Recently, the NCAA expressed interest in expanding its 65-team tournament field. CBS, which has had a long relationship with the NCAA, was interested in finding additional networks/outlets to show NCAA tournament games and share expenses. In Turner, it found a partner with multiple cable networks, a good reputation for sports programming, and a willingness to pay the bulk of the rights fee.³⁶ Other negotiations for sports rights are likely to have different characteristics that may not lend themselves as easily to joint bidding between unaffiliated entities.

24. DirecTV also points to NBCU's Olympics strategy as evidence that there would be no benefit to the new entity in the acquisition of sports rights from combining national sports networks, regional sports networks, and local over-the-air broadcast stations. According to DirecTV, because NBCU already has cable and broadcast networks to spread costs, there is no benefit of having additional Comcast sports networks. This claim ignores the fact that NBCU's non-sports cable networks, including USA and MSNBC, have different audiences (both with regard to general demographics and interest in sports) than do Comcast's national sports cable network, Versus, and Comcast's regional sports networks.³⁷

25. Moreover, the Olympics take place for only a short time period every two years, and NBCU specifically contracts with MVPDs to allow Olympic programming on some of its cable

³⁶ See John Ourand and Michael Smith, "NCAA's money-making matchup," Sports Business Journal, Apr. 26, 2010 ("Turner was among the networks to first show an interest in the tournament...and CBS, knowing it had to have another network to share in the expenses, saw Turner as a viable partner.... The agreement keeps a significant amount of games on CBS, while benefiting from Turner's dual revenue stream of advertising and cable subscriber fees. Turner will pay the bulk of the rights fee..."); see also Richard Sandomir, "CBS Considered Paying ESPN to Take Tourney," The New York Times, May 5, 2010 ("An extraordinary idea was broached last fall when CBS was trying to shave the huge losses it anticipated over the remaining years of its contract to televise the NCAA men's basketball tournament. CBS talked with ESPN about paying it to take the 2010 to 2013 tournament off its hands.... Instead of making a deal with ESPN, CBS decided it would be more profitable to share the tournament with Turner Sports.").

³⁷ Coverage of the 2008 Beijing Olympics was provided on the NBC and Telemundo broadcast networks and five non-sports-oriented NBCU cable networks: USA, MSNBC, CNBC, Oxygen, and Universal HD. See "NBC Universal Announces Unprecedented Coverage of the 2008 Beijing Olympics; Most Olympic Coverage in History: 3,600 Hours on NBC, USA, MSNBC, CNBC, Oxygen, Telemundo, Universal HD and NBCOlympics.com; Nearly 2,900 Hours of Live Coverage - Most Ever," PR Newswire, Jul. 8, 2008.

networks. Consequently, the fact that NBCU was able to interrupt the normal non-sports programming of CNBC, MSNBC, USA, and Oxygen to provide Olympics coverage does not imply that these non-sports networks could be used for ongoing sporting events.³⁸ Hence, having Versus and the Golf Channel in the same family of networks would provide NBCU greater flexibility in bidding for other sports rights. In addition, NBCU's contracts with MVPDs include content descriptions for the different NBCU services that limit its ability to change materially the nature and genre of a network's programming.³⁹ In conclusion, the proposed transaction will give NBCU the ability to distribute sports programming on Comcast's dedicated sports networks, allow for better monetization of sports programming, and provide NBCU and Comcast with increased options in their future bids for sports rights.

C. Prices that Comcast Will Pay for NBCU's Content

26. WGAW claims that the proposed transaction will enable Comcast to acquire NBCU's content at "below market rates" and that this will "give it a competitive advantage over other multichannel video programming distributors."⁴⁰ WGAW provides no economic analysis or evidence to support its claim, and in fact there is no theoretical or factual basis for the claim.

27. WGAW's claim ignores the fact that the video marketplace is highly competitive; there are many content providers and distributors. Neither party to the transaction has market power nor will the transaction give them market power or result in the exclusion of any buyer or seller from the marketplace.

28. In addition, WGAW's claim is contrary to the terms of the executed transaction documents. Pricing terms for transactions between Comcast and the new entity are defined in the joint venture agreement as "terms that are no less favorable to the Company [the joint venture]...than those that would have been obtained in a comparable transaction by the

³⁸ Per Ken Schanzer, President, NBC Sports, NBCU and Jodi Brenner, Senior Vice President, Business & Legal Affairs, TV Networks Distribution, NBCU, Jul. 17, 2010.

³⁹ Per Jodi Brenner, Senior Vice President, Business & Legal Affairs, TV Networks Distribution, NBCU, Jul. 12, 2010.

⁴⁰ See WGAW Comments, p. 10.

Company...with an unrelated Person.”⁴¹ Because the joint venture agreement requires that the prices that Comcast pays for NBCU content cannot be less favorable to the joint venture than those the joint venture would obtain from comparable transactions with unaffiliated, third parties, NBCU is protected against the risk that the price of any transaction with Comcast will be at “below market rates.”

29. WGAW also speculates that if NBCU’s and Comcast’s incentives are better aligned, then NBCU’s interests will be subordinated to Comcast’s objectives.⁴² This is incorrect. A better alignment of incentives does not imply that NBCU’s interests will not be considered. Rather, a key component of the alignment of the incentives of NBCU and Comcast is that they will be able jointly to explore new platforms and distribution methods that maximize the value of NBCU’s content to the joint venture and consumers. By giving Comcast assured access to NBCU content on arm’s length terms, the proposed transaction can increase Comcast’s distribution across multiple platforms while assuring that NBCU receives appropriate compensation. Furthermore, the terms of the joint venture agreement ensure that Comcast will not have unlimited control over NBCU’s content and that Comcast’s designated officers and directors of the joint venture have a fiduciary duty to the joint venture and GE. As a result, both Comcast and NBCU can benefit from the deals made possible by the proposed transaction.

D. Benefits from Reduction in Double Marginalization

30. The Rosston Benefits Report analyzes the procompetitive benefits of the proposed transaction in reducing double marginalization. Economists have long recognized the procompetitive benefits of vertical integration in eliminating or reducing double marginalization.⁴³ In its Comments, DirecTV claims that the Rosston Benefits Report fails to

⁴¹ See Public Interest Statement, App. 4, p. 93 (LLC Agreement Section 10.02(a)).

⁴² See WGAW Comments, p. 14.

⁴³ See Rosston Benefits Report, ¶¶ 80–81; see also the recent testimony of Scott Wallsten, former economics director of the FCC’s Broadband Task Force; Scott Wallsten (2010), “An Economic Overview of the Implications for Online Video of the Proposed Comcast–NBCU Transaction,” presented at FCC Public Forum to Discuss Proposed Comcast–NBCU–GE Joint Venture, Chicago, IL, Jul. 13, 2010 (“The merger will also eliminate inefficient double-marginalization, which occurs because for each additional subscriber an independent NBC will charge a fee above marginal cost for each additional subscriber for the rights to carry its programming. As a merged entity, Comcast would internalize the extra fee and its marginal cost would become the true marginal cost of an

substantiate with “real-world evidence” that the benefits of a reduction in double marginalization will be passed on to consumers in the form of higher-quality packages or lower prices for cable subscribers.⁴⁴ Neither DirecTV nor any other commenter contested that Comcast’s marginal costs for the [[]] NBCU-owned cable networks add up to [[]] per year and that the proposed transaction would lead to an approximate annual aggregate marginal cost reduction of 51% of [[]] per year in the short term, which is equal to [[]]

per year.⁴⁵ DirecTV’s criticism is that the report does not provide any support for the claim that at least some of these savings are likely to be passed on to consumers in the form of higher-quality packages or lower prices for cable subscribers.⁴⁶ This criticism is without merit. As explained in the Rosston Benefits Report, “previous economic literature has found changes in programming costs are passed through to MVPD subscribers at a rate of about 50 percent.”⁴⁷ Specifically, Ford and Jackson (1997) estimate a pass-through rate of 50% for MVPDs.⁴⁸ Moreover, in connection with the 2003 News Corp.–DirecTV transaction, Professors Salop and Shapiro, and their co-authors, working on behalf of the merging parties, calculated consumer benefits from a reduction in double marginalization based on assumed pass-through rates as high as 90%.⁴⁹

additional subscriber to NBC. This effect is a standard benefit of vertical mergers, and economists generally recognize that it yields consumer benefits.”) (internal footnote omitted).

⁴⁴ See DirecTV Comments, p. 60.

⁴⁵ The cost reduction will be greater if additional NBCU cable networks are considered. In addition, the cost reduction will be greater if Comcast increases its ownership interest in NBCU.

⁴⁶ Ibid., p. 60.

⁴⁷ See Rosston Benefits Report, ¶ 86.

⁴⁸ See George Ford and John Jackson (1997), “Horizontal Concentration and Vertical Integration in the Cable Television Industry,” *Review of Industrial Organization*, Vol. 12, No. 4, pp. 501–518 at 513–514. Note that 50% is also the value of the pass-through rate for a monopolist facing linear demand curve. For many models that are commonly used in merger simulations—in which competitors react to one another’s price cuts by lowering their own prices and in which demand takes alternative functional forms such as logit or AIDS—pass-through rates are substantially higher than 50%, so this may be a conservative estimate of the actual benefits from eliminating double marginalization.

⁴⁹ See Ex Parte of News Corp., General Motors Corp., and Hughes Electronics Corp., *Application of General Motors Corporation and Hughes Electronics Corporation, Transferors, And The News Corporation Limited, Transferee, For Authority to Transfer Control*, MB Docket No. 03-124 (Sept. 8, 2003) (“CRA Second Expert Report”), ¶¶ 41–43, Table 1, which provides estimates of the benefits using a range of pass-through rates from 10% to a high of 90%.

31. In addition, in his analysis of the 2002 AT&T–Comcast transaction, Professor Howard Shelanski, currently Deputy Director of the Bureau of Economics at the Federal Trade Commission and a former Chief Economist at the FCC stated:

The case for pass-through of efficiencies is compelling for a firm that faces competition, particularly competition as vigorous as that in the MVPD market.... Reductions in the direct costs of procuring programs will result in both a lower cost per-program for subscribers and in an increased number of programs being made available to subscribers.... Efficiency gains from the merger may also be passed through to consumers in a less direct way through increased investment in network upgrades and the development and deployment of innovative services.⁵⁰

32. Hence, the 50% pass-through rate used for illustrative purposes in the Rosston Benefits Report is consistent with both empirical (i.e. “real-world”) and well-established economic principles as well as the values relied on by DirecTV in that earlier Commission proceeding.

33. DirecTV also claims that the double marginalization analysis in the Rosston Benefits Report does not provide information regarding the marginal costs of producing programming. It is not clear what DirecTV means by “the marginal costs of producing programming.” It is well recognized that the production of video programming can involve significant upfront fixed costs, but that the marginal costs of serving an additional subscriber are negligible.⁵¹ As discussed in the Rosston Benefits Report, as a result of the transaction, the marginal cost to Comcast of distributing NBCU content to additional subscribers will include 49% rather than 100% of the variable margin earned by NBCU on sales to Comcast. Even though the proposed transaction would not change the price Comcast pays to NBCU for content, this ability to internalize a

⁵⁰ See Reply to Comments and Petitions to Deny Applications for Consent to Transfer Control of AT&T Corp. and Comcast Corp., *In the Matter of Applications for Consent to the Transfer of Control of Licenses, Comcast Corporation and AT&T Corp., Transferors, To AT&T Comcast Corporation, Transferee*, MB Docket No. 02-70 (May 21, 2002), App. 4 (“Howard Shelanski Declaration”), ¶¶ 41, 43–44.

⁵¹ See Howard Shelanski Declaration, ¶¶ 41–42 (“Video programming is a good for which marginal costs of distribution are negligible but the fixed costs of distribution are very high.... Economists generally accept that any firm, even a monopolist, maximizes profits by passing through a portion of marginal cost savings to consumers”); see also David Waterman and Andrew A. Weiss (1997), *Vertical Integration in Cable Television*, The MIT Press, p. 17 (“There is a high ‘first copy’ cost of creating a television program, but the marginal cost of distributing it to additional viewers through broadcast, cable, or other media are very low”); Bruce M. Owen and Steven Wildman (1992), *Video Economics*, Harvard University Press, pp. 24, 93 (“The cost of producing a television program is independent of the number of people who will eventually see it.... Once a program is created, the marginal cost of having an additional person receive it is limited to the transmission expense of reaching that extra person.”).

portion of the payments made to NBCU will provide Comcast an incentive to increase output and provide a more attractive package to consumers.⁵²

34. DirecTV also criticizes the double marginalization analysis for not presenting sufficient information concerning “the relevant demand elasticities for different types of programming.”⁵³ However, the elasticity of demand is used to calculate the pass-through rate. With an empirical estimate of the pass-through rate, it is not necessary to estimate the demand elasticity.

35. DirecTV also asserts that there is no evidence that Comcast’s prior acquisitions of programming entities, and the resulting reduction in double marginalization, were associated with increased programming investments and ratings.⁵⁴ This assertion is contradicted by real-world evidence. See Exhibit 1 above, which shows that between 2005 and 2009 Comcast significantly increased investments in the cable networks that it controls. Moreover, as shown in Exhibit 2 above, Comcast’s ratings increased in recent years.

36. DirecTV speculates that the reduction in double marginalization would somehow enhance Comcast’s incentives to engage in foreclosure.⁵⁵ Dr. Mark Israel and Professor Michael Katz’s empirical analysis shows that Comcast will not have an incentive to attempt either temporary or permanent foreclosure after the proposed transaction.⁵⁶

37. Therefore, no part of DirecTV’s criticism of the double marginalization calculation withstands analysis: the double marginalization analysis is based on sound economic analysis, supported by empirical estimates, and substantiated by Comcast’s demonstrated investments and achievements regarding networks it controls.

38. The Rosston Benefits Report relied on SNL Kagan and Media Business Corp. data to estimate Comcast’s marginal costs for NBCU’s [[

⁵² Rosston Benefits Report, ¶¶ 80–83.

⁵³ See DirecTV Comments, p. 61.

⁵⁴ *Ibid.*, p. 60.

⁵⁵ *Ibid.*, p. 61.

⁵⁶ See Mark Israel and Michael L. Katz, “Application of the Commission Staff Model of Vertical Foreclosure to the Proposed Comcast–NBCU Transaction,” *In the Matter of Applications of Comcast Corporation, General Electric Company, and NBC Universal, Inc. For Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56 (Mar. 5, 2010), ¶ 4.

]], which added up to approximately [[]] per month or [[]] per year. Dr. Rosston estimated that the proposed transaction would lead to an approximate annual aggregate marginal cost reduction of 51% of [[]] per year, which is equal to [[]] per year. Using an assumed pass-through rate of 50%, the benefits to Comcast subscribers from the reduction of double marginalization for NBCU's [[]] could be [[]] per year.

39. Since the Rosston Benefits Report was submitted, we have updated this analysis using the actual affiliate fees that Comcast paid for NBCU networks along with actual counts of Comcast subscribers per NBCU network. Comcast's actual data on affiliate fees and subscribers are slightly different from those reported by SNL Kagan and Media Business Corp. The consumer benefit estimates based on Comcast's accurate data are higher than the estimates in the Rosston Benefits Report. As shown in Exhibit 4, Comcast's payments for the {{ }} NBCU cable networks generate marginal costs equal to approximately {{ }} per subscriber per month compared to [[]] using the SNL Kagan data. Comcast's marginal costs for these [[]] add up to approximately {{ }} per month or {{ }} per year. Therefore, while the proposed transaction would not change the price that Comcast pays to NBCU for content, Comcast's annual aggregate marginal cost reduction would be {{ }} per year (51% of {{ }} per year). With an assumed pass-through rate of 50%, the benefits to Comcast subscribers from the reduction of double marginalization for NBCU's {{ }} networks would be {{ }} per year (that is, 50% of the {{ }}), a slightly larger efficiency gain than the [[]] per year computed using the SNL Kagan data.

Exhibit 4

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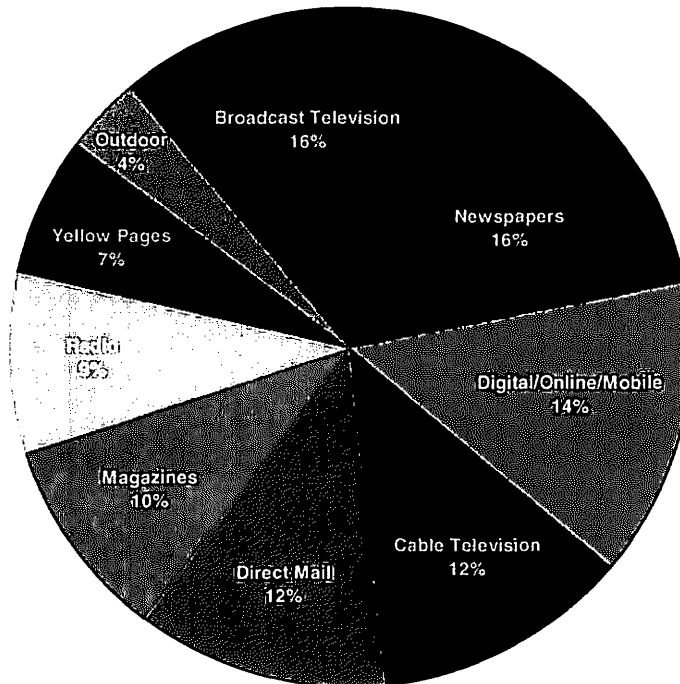
40. As discussed in the Rosston Benefits Report, these calculations do not include all of the benefits from reducing double marginalization. They include only benefits to existing Comcast subscribers for these [[]. One effect of Comcast’s improved packages will be to attract more subscribers, thus increasing welfare for those consumers who find the post-transaction Comcast offering attractive enough to purchase. In addition, basic economic principles and experience with markets suggest that other MVPDs—particularly the Direct Broadcast Satellite (“DBS”) and telco providers who compete directly with Comcast—are likely to react to Comcast’s more attractive service packages by improving their service offerings. Consumers will benefit from these competitive responses.

III. Responses to Comments and Petitions Regarding Advertising Competition

41. A few commenters have speculated that the proposed transaction may have an adverse competitive effect on the provision of advertising services at the national, niche or local level. In making their assertions, these commenters have largely ignored the nature of competition in the extremely dynamic and competitive advertising industry. Advertisers employ a diverse array of media to reach potential customers, and as technologies such as the Internet and mobile smartphones develop, new forms of advertising have emerged and will continue to emerge. A wide variety of different media—including broadcast television, cable television, radio,

newspapers, magazines, online, mobile devices, yellow pages, direct mail, and outdoor/out-of-home⁵⁷—compete for advertising dollars.⁵⁸ See Exhibit 5.

Exhibit 5
2009 U.S. Advertising Revenue by Sector



Source: Universal McCann Magna Global, "Estimated Annual U.S. Advertising Expenditures," obtained from Television Bureau of Advertising, available at http://www.tvb.org/rcentral/adrevenue/track/Trends_In_Advertising_Volume.asp

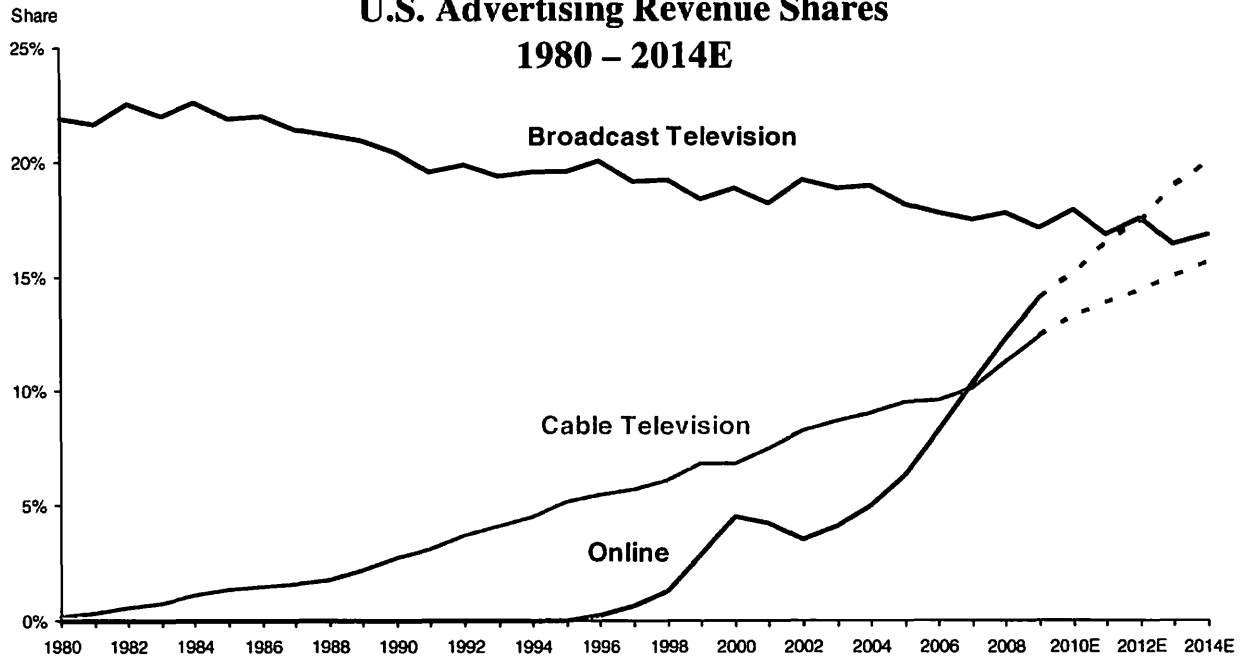
42. The biggest change in the advertising marketplace over the last decade has been the rapid growth of Internet advertising. Industry sources estimate that online spending accounted for over 14% of total U.S. advertising expenditures in 2009 and project that this will increase to 20% by 2014.⁵⁹ See Exhibit 6.

⁵⁷ Outdoor (or out-of-home) advertising consists of any type of advertising that reaches the consumer while he or she is outside the home, including billboards and advertising associated with venues such as movie theaters and gas stations.

⁵⁸ The academic literature on advertising substitutability finds that, while different media are not perfect substitutes for one another, advertising buyers perceive some degree of interchangeability among different media. See, for example, Leonard N. Reid and Karen W. King (2000), "A Demand-Side View of Media Substitutability in National Advertising: A Study of Advertiser Opinions about Traditional Media Options," *Journalism & Mass Communication Quarterly*, Vol. 77, No. 2, pp. 292–307.

⁵⁹ See Universal McCann Magna Global, "Estimated Annual U.S. Advertising Expenditures," obtained from Television Bureau of Advertising, available at http://www.tvb.org/rcentral/adrevenue/track/Trends_In_Advertising_Volume.asp, accessed on Jun. 25, 2010; see

Exhibit 6
U.S. Advertising Revenue Shares
1980 – 2014E



Source: Universal McCann Magna Global, "Estimated Annual U.S. Advertising Expenditures," obtained from Television Bureau of Advertising, available at http://www.tvb.org/rcentral/adrevenue/track/Trends_In_Advertising_Volume.as
Note: Broadcast television includes both broadcast network and television station advertising. Cable television includes both cable network and local system advertising. Online includes both national and local online advertising.

43. The rise of online advertising has increased choice and competition in the advertising marketplace and online advertising is expected to grow.⁶⁰ Broadcast and cable networks will be challenged to keep pace with Internet advertising's measurability, precise targeting, and interactivity.⁶¹ More recently, mobile advertising on smartphones and other mobile devices has emerged as a new vehicle for advertisers.⁶²

also David Hallerman, "US Online Advertising: Resilient in a Rough Economy," eMarketer, Mar. 2008, available at <http://www.emarketer.com/Reports/Viewer.aspx?R=2000488>, accessed on Jun. 25, 2010; SNL Kagan, "Advertising Forecasts: U.S. Market Trends & Data for All Major Media," 2008 Edition, p. 22 (Third Party Attachment #5).

⁶⁰ See, for example, Universal McCann Magna Global, "Estimated Annual U.S. Advertising Expenditures, 2012E–2014E," obtained from Television Bureau of Advertising, available at http://www.tvb.org/rcentral/adrevenue/track/crossmedia/2012_2014.asp, accessed on Jun. 25, 2010.

⁶¹ Internet advertising often relies on performance-based pricing models, where an advertiser only pays when a particular action is taken, such as a consumer clicking on a search or display ad. According to the Interactive Advertising Bureau, performance-based pricing accounted for 59% of Internet advertising revenues in 2009, while CPM-based pricing based on the number of impressions accounted for 37%. The remaining 4% used "hybrid pricing". See IAB, "Internet Advertising Revenue Report," Apr. 2010, pp. 12–13, available at <http://www.iab.net/media/file/IAB-Ad-Revenue-Full-Year-2009.pdf>, accessed on Jun. 25, 2010. In contrast, television advertising is sold predominantly using CPM-based pricing. Broadcast television generally does not

A. Competition in National Advertising

44. Some commenters claim that the combination of Comcast's and NBCU's cable and broadcast networks, Comcast's MVPD business, and the parties' online properties would give the combined entity the incentive and ability to harm competition in the advertising marketplace.⁶³ In their Petitions to Deny, Consumer Federation of America, et al. and Dish Network claim that Comcast-NBCU would offer package deals and volume discounts across multiple media platforms and lead advertisers away from competitors.⁶⁴

45. In arguing that these practices harm competition, commenters ignore the fact that this transaction will not lead to market power in the advertising marketplace. As demonstrated below, neither NBCU nor Comcast currently has a large share in the broad, dynamic marketplace for advertising, and the proposed transaction will result in only a very small increase in concentration in that broad marketplace. Moreover, the practices of offering customers the option of purchasing complementary products in packages and/or offering volume discounts are common in many markets, including markets where there is no market power, and are generally (and in competitive markets certainly) procompetitive because they result in consumers getting a better deal. Rather than creating any anticompetitive effects, the ability to offer package deals and volume discounts is a competitive benefit of the transaction.

46. Contrary to commenters' speculations about the anticompetitive effects of the proposed transaction, several advertising and marketing agencies have submitted comments supporting the

currently have the ability to provide performance-based pricing or advanced, interactive advertising, and development of these services on cable has been slow. See Rosston Benefits Report, ¶¶ 44–46.

⁶² See Giselle Tsirulnik, "Apple's iAd to significantly contribute to mobile advertising growth," Mobile Marketer, Jul. 1, 2010, available at <http://www.mobilemarketer.com/cms/news/advertising/6702.html>, accessed on Jul. 15, 2010; see also "BIA's The Kelsey Group Forecasts U.S. Mobile Local Search Advertising Revenues to Reach \$1.3B in 2013," BIA/Kelsey, Feb. 24, 2009, available at <http://www.kelseygroup.com/press/pr090224.asp>, accessed on Jul. 15, 2010.

⁶³ See DISH and EchoStar Petition to Deny, p. 22 and attached Declaration of Mark Jackson ("Mark Jackson Declaration"), ¶ 24; AOL Comments, pp. 2, 4, 9; Consumer Federation of America, Consumers Union, Free Press, and Media Access Project Joint Petition to Deny ("Consumer Federation of America, et al. Joint Petition to Deny"), pp. 50–51; Bloomberg Petition to Deny, pp. 28, 45–46 and attached Economic Report on the Proposed Comcast–NBC Universal Transaction by Leslie M. Marx (Jun. 21, 2010) ("Marx Report"), ¶¶ 14, 80–83, 131–137.

⁶⁴ See Consumer Federation of America, et al. Joint Petition to Deny, pp. 50–51; DISH and EchoStar Petition to Deny, p. 22 and attached Mark Jackson Declaration, ¶ 24.

proposed transaction.⁶⁵ For example, Starcom MediaVest Group, on behalf of numerous advertising clients, states its “belief that the partnership will increase the efficiency and effectiveness of advertising and encourage additional spending and investment in the sector.”⁶⁶

Similarly, Naked Communications notes:

By bringing their respective strengths and assets together, Comcast and NBC Universal will be able [to] connect advertisers, content producers and viewers in ways neither company could accomplish alone.... With this combination of production and delivery, not only will such targeting become possible, it will swiftly emerge as the “new norm.” ...I have no doubt that Comcast’s competitors will also soon be forced to innovate and that we’ll rapidly see the emergence of an unprecedented array of options throughout the information economy.⁶⁷

47. AOL claims that Comcast and NBCU could tie advertising on multiple media platforms or require exclusivity from advertisers.⁶⁸ A necessary but not sufficient condition for tying or exclusivity to harm advertisers is that the parties have significant market power in the sale of advertising, which Comcast and NBCU do not have.⁶⁹ Commenters raising these claims do not demonstrate the existence of market power in any plausibly defined relevant market. In fact, advertisers have many options to reach potential customers and the new company’s share of advertising sales will be small.

48. Commenters’ assertions about the alleged “advertising domination” of NBCU and Comcast ignore the realities of competition in the sale of advertising. Neither NBCU nor Comcast currently has a large share in the broad, dynamic marketplace for advertising, and the proposed transaction will result in only a very small increase in concentration in that broad

⁶⁵ See Comment of Curt Hecht; See also Comment of Steve Farella; Comment of Laura Desmond; Comment of Paul Woolmington; Comment of Phil Cowdell; Comment of Mark Petrosky.

⁶⁶ See Comment of Laura Desmond.

⁶⁷ See Comment of Paul Woolmington.

⁶⁸ See AOL Comments, pp. 2, 4, 9.

⁶⁹ See *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 461–62 (1992) (“A tying arrangement...violates § 1 of the Sherman Act if the seller has ‘appreciable economic power’ in the tying product market....”); see also Phillip E. Areeda and Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application*, Vol. IX, 2nd edition, ¶ 1728d. (“With zero power in the market for the tying product, a tie-in cannot be a vehicle for distorting competition in a second market.”).

marketplace. According to Universal McCann estimates of spending on national advertising, broadcast television accounts for only [[]] of national advertising spending and the NBCU broadcast and cable networks account for only [[]] of national advertising spending. Comcast's cable networks account for just [[]] of national advertising spending.⁷⁰

49. Even within a hypothetical "broadcast and cable television network advertising segment" narrowly defined to include broadcast and cable networks, but to exclude all the other media that in reality compete with broadcast and cable networks for advertising dollars, the proposed transaction results in only a small increase in share and HHI. In such a hypothetical cable/broadcast "market," the proposed transaction would increase the parties' combined share of 2009 national advertising revenues by [[]] and increases the HHI by 65, well below levels that might indicate antitrust concerns.⁷¹ See Exhibit 7 and Appendix 2.⁷²

⁷⁰ See Universal McCann Magna Global, "Estimated Annual U.S. Advertising Expenditures," obtained from Television Bureau of Advertising, available at http://www.tvb.org/rcentral/adrevenue/track/Trends_In_Advertising_Volume.asp, accessed on Jun. 25, 2010; SNL Kagan, "TV Network Summary: Basic Cable Networks by Net Advertising Revenue" (Third Party Attachment #6); SNL Kagan, "TV Network Summary: Broadcast Networks by Net Advertising Revenue" (Third Party Attachment #7), see also SNL Kagan, "Economics of Basic Cable Networks," 2009 Edition (Third Party Attachment #8).

⁷¹ The Draft Revised Horizontal Merger Guidelines classify markets with a post-merger HHI below 1500 as unconcentrated and state that "[m]ergers resulting in unconcentrated markets are unlikely to have adverse competitive effects and ordinarily require no further analysis." Additionally, "[m]ergers involving an increase in the HHI of less than 100 points are unlikely to have adverse competitive effects and ordinarily require no further analysis." See "Horizontal Merger Guidelines for Public Comment, Apr. 20, 2010, available at <http://www.ftc.gov/os/2010/04/100420hmg.pdf> Draft Revised Horizontal Merger Guidelines, p. 19 ("Draft Revised Horizontal Merger Guidelines."). The Draft Revised Horizontal Merger Guidelines "reflect the ongoing accumulation of experience at the Agencies." See Draft Revised Horizontal Merger Guidelines, footnote 1.

⁷² Limiting the analysis to only cable networks results in a post-transaction HHI of 1,222 and a change in HHI of 79. Including RSNs results in a post-transaction HHI of 1,247 and a change in HHI of 74.

[[

Exhibit 7

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50. Commenters also claim that Comcast-NBCU's "advertising dominance will be further augmented by the combined power of both local and national broadcast and cable properties,"⁷³ and with the addition of Comcast's and NBCU's online properties "they would be able to wield incredible power in the ad market"⁷⁴ and could "require advertisers to run ads on both Comcast cable services and online."⁷⁵ Neither of these claims is supported by the data. If local television advertising and online advertising revenues were added to national television advertising revenues, the parties' combined share would be even lower than the [[] in Exhibit 7. For example, Comcast's and NBCU's websites account for only a small fraction of online viewing and advertising revenues.⁷⁶ Adding the parties' lower online video shares to the market shares in Exhibit 7 would only serve to reduce the calculated HHI and reduce the increase in the HHI due

⁷³ See Consumer Federation of America, et al. Joint Petition to Deny, p. 50.

⁷⁴ See DISH and EchoStar Petition to Deny, attached Mark Jackson Declaration, ¶ 24.

⁷⁵ See AOL Comments, p. 9.

⁷⁶ Even in the extremely limited segment of "professional" online video content, Comcast accounts for just 0.8% and NBCU for just 1.8% of online views. See Public Interest Statement, p. 96. Excludes adult video. NBCU also owns a non-controlling minority interest in Hulu, a joint venture between Disney, Fox, and NBCU. However, Hulu's 10.1% share of online views should not be attributed to NBCU because it is a non-controlling, minority interest and Hulu operates and sells its advertising independently of and in competition with NBCU. Moreover, advertisers can also purchase online advertising from a large number of other websites that are not in the "professional" online video segment. In the broader online advertising segment the shares of the parties are miniscule.

to the proposed transaction. With or without this transaction, there are and will be many suppliers of advertising. The new entity would not find it profitable to bundle or tie advertising in ways that would make buyers worse off because, if it did so, many of its advertising customers would easily switch to other sellers of advertising.

B. Advertising on “Niche” Channels

51. Dr. Mark Cooper and Mr. Adam Lynn claim the proposed transaction would create market power over advertisers in niches such as “women’s programming,”⁷⁷ and Bloomberg and its expert, Professor Leslie Marx, raise competitive concerns with respect to a purported advertising market for “TV business news programming.”⁷⁸ In this section, we address the hypothesized competition concerns raised by the Cooper/Lynn and Marx reports regarding purported advertising markets for “women’s programming” and “TV business news programming.”⁷⁹

52. 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. As we discuss below, there is no empirical support for use of such narrow advertising market segments because there are many close substitutes for advertisers to reach the audiences that interest them. As a result, Comcast would not have an increased ability to raise advertising prices after the proposed transaction, and the allegations raised in the Cooper/Lynn and Marx reports regarding harm to competition in niche segments are without merit.

⁷⁷ See Consumer Federation of America, et al. Joint Petition to Deny, App. A, Declaration of Mark Cooper and Adam Lynn (“Cooper/Lynn Report”), pp. 42–44.

⁷⁸ See Bloomberg Petition to Deny, pp. 28, 45–46; see also Marx Report, ¶¶ 14, 80–83, 131–137.

⁷⁹ Dr. Israel and Professor Katz address the issues raised in the Cooper/Lynn Report and Marx Report regarding competition in programming. See Mark Israel and Michael L. Katz, “Economic Analysis of the Proposed Comcast-NBCU-GE Transaction,” *In the Matter of Applications of Comcast Corporation, General Electric Company, and NBC Universal, Inc. For Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56 (Jul. 21, 2010), ¶¶ 116–120, 149–186.

1. “Women’s Programming”

53. Dr. Cooper and Mr. Lynn assert, without analysis or factual support, that “the merged entity will retain the ability to exercise market power over advertisers of women’s programming.”⁸⁰ Advertising on “women’s programming” cable networks is not a relevant antitrust product market because there are many close substitutes outside the narrow “women programming” niche available for advertisers to reach adult women. Exhibit 8 shows that the audiences of a large number of cable networks are skewed toward women. Advertisers can also target particular cable shows that are heavily skewed towards women. For example, cable network shows such as Project Runway on Lifetime Television, House Hunters on HGTV, Bones on TNT, and Say Yes to the Dress on TLC all skew heavily female.⁸¹ Moreover, advertisers can buy slots on broadcast network shows that skew toward women. For example, Grey’s Anatomy on ABC, Glee on Fox, America’s Next Top Model on the CW, and The Oprah Winfrey Show are all popular shows with a high proportion of women in the audience.⁸² In addition, advertisements on many radio, Internet websites, magazines, and other media can be used to reach adult women audiences.

⁸⁰ See Cooper/Lynn Report, p. 44. Cooper and Lynn never define the set of networks they consider “women’s programming.”

⁸¹ Nielsen Media Research Audience Estimates (Third Party Attachment #9).

⁸² Ibid.

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Exhibit 8

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54. Any attempt by a hypothetical monopolist to raise prices for advertising on “women’s programming” cable networks would be unprofitable because advertisers would be able to respond to a price increase for this form of advertising by switching their purchases to other types of advertising, rendering the price increase unprofitable. Thus, the relevant product market in which sellers of advertising on “women’s programming” compete includes a large number of shows on many different networks and many other types of advertising that can reach women.⁸³ In conclusion, Cooper and Lynn’s unsupported assertion about the combined entity retaining market power over advertisers on women’s programming is without merit.

⁸³ In claiming that iVillage and Daily Candy extend the Applicants’ reach online, Cooper and Lynn implicitly acknowledge the fact that other media can be used to reach women. See Cooper/Lynn Report, p. 44. As we noted above, the parties’ tiny shares of online advertising revenue make any ability to exercise market power over advertisers on women’s programming even less plausible in a market broader than “women’s programming” cable networks.

2. “TV Business News”

55. The claims by Bloomberg and its expert Professor Marx with respect to “TV business news” programming suffer from similar flaws. Professor Marx asserts a purported market for “TV business news programming”⁸⁴ and concludes that “the advertising side of the market for TV business news programming is an antitrust market.”⁸⁵

56. Professor Marx’s definition of a business news market for advertising is so narrow that only three cable networks—CNBC, Bloomberg TV (“BTV”), and Fox Business Network—comprise the purported “market.” In defining this “market,” Marx does not carry out the type of analysis required by the Horizontal Merger Guidelines. Specifically, she does not evaluate the extent to which companies that purchase advertising on business news cable networks would switch their purchases to advertising on other types of channels, other programs, and other media in response to a price increase for advertising on business news cable channels.

57. Professor Marx claims that “[t]he business news audience can be characterized as affluent adults, predominantly males” and that “[o]ther than business news, few other networks, such as Comcast’s the Golf Channel and to a lesser extent ESPN, serve a similar viewer demographic.”⁸⁶ In addition, Marx claims that {{

}}.⁸⁷

58. These assertions, even if they were accurate, which as we show below is not the case, are not an appropriate approach to market definition. It is critical to show that a hypothetical monopolist of the candidate relevant market would pass the SSNIP test,⁸⁸ not simply that networks in the candidate market have similar demographics. To implement the SSNIP test to support her conclusion, Professor Marx would need to demonstrate that a hypothetical common owner of the three networks in question would implement a small but significant and non-

⁸⁴ See Marx Report, ¶¶ 52–83.

⁸⁵ Ibid., ¶ 83. As noted above, Dr. Israel and Professor Katz address Bloomberg’s concerns with programming.

⁸⁶ Ibid., ¶ 80 (internal footnote omitted).

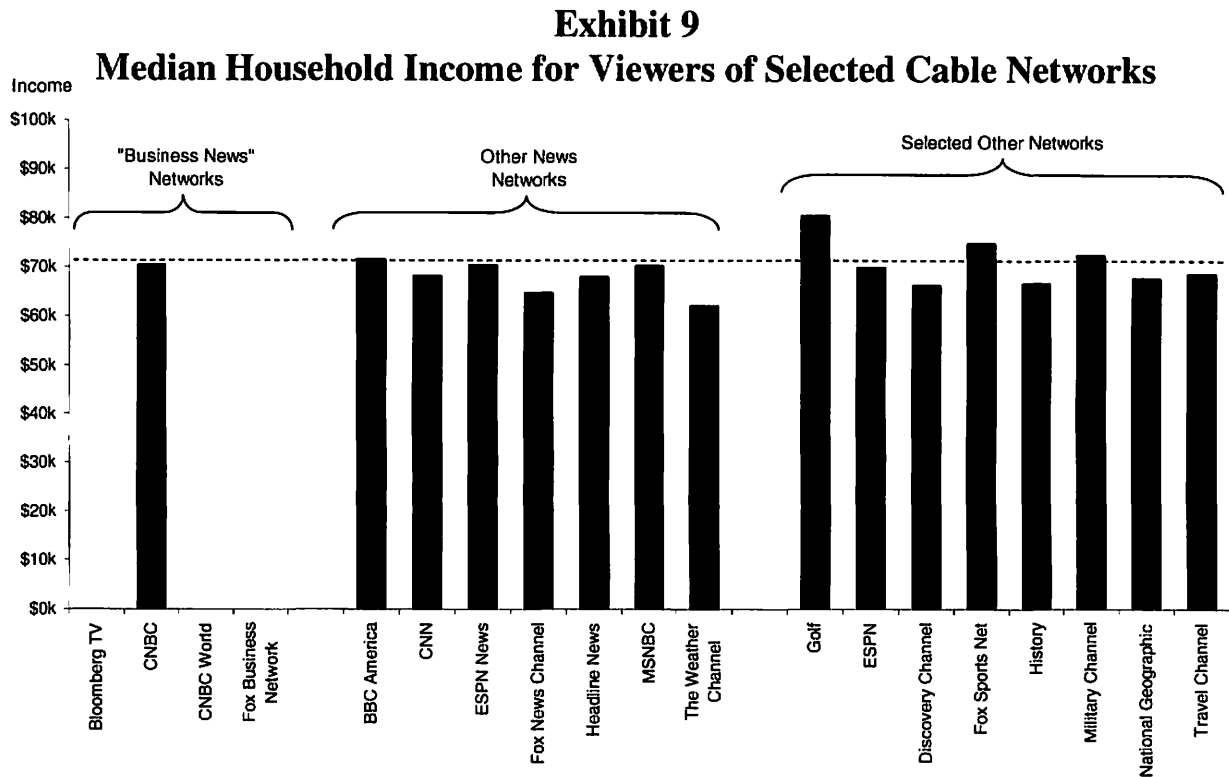
⁸⁷ Ibid., ¶ 82.

⁸⁸ SSNIP stands for a small but significant and non-transitory increase in prices. See Draft Revised Horizontal Merger Guidelines, pp. 9–10.

transitory increase in its advertising prices without losing a sufficient share of its advertising sales to other sellers of advertising, including but not limited to broadcast and cable networks and programs with similar demographics and other media targeted toward similar demographics, so that the hypothetical common owner's price increase would be unprofitable. Marx has not provided any such evidence.

59. Professor Marx's assertion that very few other networks reach audiences similar to those reached by cable news networks is not supported by the facts. In Table 7 of her report, Marx shows median household income for different cable networks, but limits her analysis to viewers in New York. The use of income data restricted to New York is misleading for analyzing the proposed transaction. First, New York may be a unique area for financial news. The networks in question have national audiences for their advertising. Second, Comcast has only a small presence in New York. [[

]] Exhibit 9 below shows that the median income for CNBC (the only "business news network" with available data) viewers nationwide appears to be very close to the median income for viewers of other news channels and a number of other channels.



Source: ScarboroughUSA+ Aug08-Sep09, obtained from Comcast Spotlight, available at <http://www.comcastspotlight.com/networks>
Note: Demographic data for Bloomberg TV, CNBC World, and Fox Business Network are not available.

60. Professor Marx's assertion about business news channels having a uniquely male audience is also incorrect. In Table 8 of her report, Marx compares audience research data provided by Bloomberg for BTV with data for the other networks that are restricted to the New York Designated Market Area ("DMA"). However, New York accounts for only a minority of viewers of these channels. Nationwide, the male percentage of viewers of cable networks is substantially different than the New York data on which Marx relies. Exhibit 10 below shows the percentage of male viewers Marx reports for BTV, but uses appropriate nationwide data for CNBC and other cable networks. With the nationwide data, the male percentage of CNBC viewers is different than BTV and similar to several other news networks.

[[

Exhibit 10

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61. Hence, the basis for Professor Marx’s conclusions—that business news networks are similar to each other and appeal to a unique audience—is not supported by any evidence. Further, many of the same points we discussed above to show why advertising on “women’s programming” is not a relevant antitrust product market apply here as well. 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 the business news cable networks identified by Marx.⁸⁹

62. Exhibit 11 shows that the audiences of a large number of cable networks other than CNBC are skewed toward men.

⁸⁹ We note that even Marx does not appear to believe her own purported relevant market definition. In the competitive harm section of her report that follows the market definition, Marx includes the Golf Channel as a substitute for advertisers even though the Golf Channel is not a “business news network.” See Marx Report at Table 19.

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Exhibit 11

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Moreover, advertisers can buy slots on specific broadcast or cable programs that skew toward men on many broadcast and cable networks. For example, The Simpsons and Family Guy on Fox, SportsCenter on ESPN, The O'Reilly Factor on Fox News Channel, and the Colbert Report on Comedy Central are popular shows with a high proportion of men in the audience.⁹⁰ As shown in Exhibit 12 below, there are a number of networks with a male skewed audience whose viewers have a comparable household income to CNBC.

⁹⁰ Nielsen Media Research Audience Estimates (Third Party Attachment #9).

[[

Exhibit 12

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Thus, the relevant product market in which sellers of advertising on “TV business news programming” compete includes a large number of shows on many different networks and many other types of advertising that can reach affluent men.

63. {{

}} Having a particular type of firm account for a large percentage of advertising does not establish that there is a narrow relevant antitrust market for advertising on business news cable networks—financial firms have close substitutes for advertising on business news cable networks that would frustrate any attempt to increase prices anticompetitively. Cable network advertising accounts for only [[]] of the advertising spend by financial services and insurance firms.⁹¹ Financial firms are heavy advertisers with a wide

⁹¹ Advertising Age, “Total U.S. Measured Advertising Spending by Category,” 2010 Edition (Third Party Attachment #10).

variety of other media, including direct mail, the Internet, broadcast television, newspapers, magazines, and radio.⁹² Even within the cable network segment, financial firms advertise on a wide variety of networks and programs. Given CNBC's share of cable network advertising revenues of [[]]⁹³ and Marx's assertion that CNBC comprises 85% of the business news market,⁹⁴ financial advertisers allocate at most [[]] of their advertising budget to business news cable networks.⁹⁵ {{

}} does not

warrant a conclusion that advertising on this group of networks is a relevant antitrust product market.

64. In summary, Professor Marx has failed to provide any reliable evidence that advertising on business news cable television networks constitutes a relevant antitrust product market. To the contrary, sellers of advertising on business news cable networks compete with a wide variety of other networks, shows, and other media for advertising dollars.

65. We next turn to the Bloomberg/Marx theory of competitive harm to advertisers in the cable television "business news" segment. Bloomberg claims that Comcast could bundle CNBC with its local advertising availabilities on BTV at heavily discounted prices to "foreclose competitors like BTV from access to advertisers...."⁹⁶ Marx's bundling claim makes no economic sense since discounted prices are good for consumers. The rare exception is

⁹² Ibid. In fact, following its acquisition of BusinessWeek in October 2009, Bloomberg now owns one of the country's top print and online business publications, the retitled Bloomberg Business Week. According to the chairman of Bloomberg, "The acquisition of BusinessWeek will strengthen Bloomberg's online, television and mobile products...Together, the BusinessWeek.com and the Bloomberg.com Web sites will have more unique visitors than any non-portal business and financial site." See David B. Wilkerson, "Bloomberg to acquire BusinessWeek magazine," MarketWatch, Oct. 14, 2009, available at <http://www.marketwatch.com/story/bloomberg-to-acquire-businessweek-magazine-2009-10-14>, accessed on Jul. 16, 2010.

⁹³ SNL Kagan, "TV Network Summary: Basic Cable Networks by Net Advertising Revenue" (Third Party Attachment #6).

⁹⁴ See Marx Report, ¶ 9.

⁹⁵ {{

}}. See Marx Report, ¶ 81 and Table 9.

⁹⁶ See Bloomberg Petition to Deny, p. 45 and Marx Report, ¶¶ 14, 131-133.

successful predation.⁹⁷ There is no possibility that this transaction would give Comcast the incentive or ability to use bundling to drive BTV out of the market for advertising.

66. First, Comcast does not have the incentive to engage in predation because it would have no ability to raise prices even if it were successful in driving BTV out of business. The Supreme Court (in *Brooke Group*) decided that pricing below cost is a necessary, but not a sufficient condition for a finding of predation.⁹⁸ Another necessary condition is that the predator must be able to raise prices sufficiently after driving competitors out of business so that it would more than recoup losses from pricing below cost. As we discussed above, advertisers have many ways of reaching older, affluent males. Even if Comcast could heavily discount prices on BTV local availabilities, and even if this drove BTV out of business, Comcast would not be able to sufficiently raise advertising prices on CNBC to recoup its investment in predation because of the substantial competition CNBC would continue to face. In such an environment, raising prices to recoup costs would divert advertisers to the many alternatives available to reach older, affluent males, thus rendering a predation strategy unsuccessful.

67. Second, Comcast does not have the ability to execute a predation strategy. Comcast does not have sufficient inventory of “spot” availabilities to impact BTV significantly by offering heavily discounted advertising slots. As Bloomberg and Marx note, BTV reaches only 23% of its viewers via Comcast’s cable systems—the vast majority, 77%, of Bloomberg’s subscribers are on other MVPDs.⁹⁹ {{

⁹⁷ See *Atlantic Richfield Co. v. USA Petroleum Co.*, 495 U.S. 340 (1990) (“Low prices benefit consumers regardless of how those prices are set, and, so long as they are above predatory levels, they do not threaten competition.... We have adhered to this principle regardless of the type of antitrust claim involved”); Supreme Court statement in *Matsushita v. Zenith Radio* that “there is a consensus among commentators that predatory pricing schemes are rarely tried, and even more rarely successful” (*Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 589 (1986)).

⁹⁸ See *Brooke Group Ltd. V. Brown & Williamson Tobacco Corp.*, 509 U.S. 222, 224 (1993) (“First, a plaintiff seeking to establish competitive injury resulting from a rival’s low prices must prove that the prices complained of are below an appropriate measure of its rival’s costs.... The second prerequisite to holding a competitor liable under the antitrust laws for charging low prices is a demonstration that the competitor had a reasonable prospect, or, under § 2 of the Sherman Act, a dangerous probability, of recouping its investment in below-cost prices.”).

⁹⁹ See Bloomberg Petition to Deny, p. 37.

}}¹⁰⁰ {{

}}¹⁰¹ Control of [[]] of the viewer impressions of advertisements on BTV does not give Comcast the market power necessary to affect BTV adversely through a predation strategy.

68. Without market power or the ability to drive Bloomberg from the market, any bundling that might hypothetically be used by Comcast would be procompetitive and efficiency enhancing, as discussed above. [[

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C. Competition in Local Advertising

69. In their Joint Petition to Deny, the Consumer Federation of America and other groups raised concerns that the proposed transaction would harm advertising competition in certain local DMAs where Comcast Spotlight, the local advertising division of Comcast Cable, and an NBC O&O both offer advertising services.¹⁰³ Dr. Cooper and Mr. Lynn calculate HHIs in six DMAs. They include all TV broadcast station and cable advertising revenue, but exclude all other local media and all national media. They claim that “[i]n every case the increase in the market concentration exceeds the threshold that is a cause of concern under the Merger Guidelines by a

¹⁰⁰ See SNL Kagan, “Economics of Basic Cable Networks,” 2009 Edition, p. 141 (Third Party Attachment #8).

¹⁰¹ See Bloomberg Petition to Deny, p. 45. {{

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¹⁰² [[

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¹⁰³ See Consumer Federation of America, et al. Joint Petition to Deny, pp. iv, 48–50 and Cooper/Lynn Report, pp. 45–47, 50–51; see also Ex Parte of Susan Crawford, *In the Matter of Applications of Comcast Corporation, General Electric Company, and NBC Universal, Inc. For Consent to Assign Licenses or Transfer Control of Licensees*, MB Docket No. 10-56 (Jun. 11, 2010).

wide margin.”¹⁰⁴ These HHI calculations are fundamentally flawed and should not be relied on for a number of reasons:

- Dr. Cooper and Mr. Lynn’s market definition, share, and concentration analysis ignores other media that compete with television in the sale of local advertising.
- Dr. Cooper and Mr. Lynn’s HHI calculations do not account for the fact that the advertising services of other broadcast stations are closer substitutes for the advertising services of NBC’s O&Os than are Comcast Spotlight’s advertising services. As a result, even within Cooper and Lynn’s excessively narrow local advertising “markets,” the shares they attribute to Comcast greatly exaggerate Comcast’s relative competitive significance.
- Dr. Cooper and Mr. Lynn fail to recognize that HHIs are not an appropriate tool for evaluating the likely competitive effects of a merger under a unilateral effects theory in an industry with differentiated products. Rather, two key issues are whether, absent the transaction (1) advertising purchased from Comcast Spotlight would be one of the closest substitutes for a substantial share of the NBC O&O’s advertisers, which obviously is not the case, and (2) advertising on the NBC O&O would be one of the closest substitutes for a substantial share of Spotlight’s customers, which seems unlikely.

70. Dr. Cooper and Mr. Lynn base their conclusion that the proposed transaction would reduce competition for local advertising services solely on their misleading HHIs, which do not capture the relevant features of the local advertising marketplace. Our analysis shows that after accounting for the competitive alternatives available to advertisers the proposed transaction will not diminish competition in local advertising sales.

1. Advertisers Have Many Competitive Alternatives for Purchasing Advertising

71. Whatever the usefulness of concentration measures may be, they clearly do not provide a basis for any useful inferences when they are not calculated for appropriately defined relevant markets. Dr. Cooper and Mr. Lynn present no analysis to support the definitions of the purported relevant antitrust market they use. They focus on six “overlap DMAs” where Comcast Spotlight offers local advertising services and where an NBC O&O station offers advertising

¹⁰⁴ See Cooper/Lynn Report, p. 51.

services on a DMA-wide basis.¹⁰⁵ In each of these overlap DMAs, there are many alternatives to advertising on NBC's O&Os and Comcast Spotlight, including other broadcast television stations and a variety of other local advertising media including online, mobile, radio, newspaper, magazine, direct mail, and out-of-home advertising.¹⁰⁶ The rapid growth of online advertising discussed above illustrates the emergence of a significant new competitor, since the Internet can be used for local advertising purposes. For example, there has been tremendous growth in online search, online "classified," and other online advertising that can be used by local advertisers. Moreover, new forms of advertising can be expected as technology evolves.

72. Combining estimates by BIA/Kelsey on local advertising spending on radio, newspaper, out-of-home, and online with the data used by Dr. Cooper and Mr. Lynn, broadcast television overall accounts for [[]] and the NBCU O&Os account for only [[]] of local advertising spending in the overlap DMAs.¹⁰⁷ Cable television accounts for [[]] of local advertising spending, all of which Cooper and Lynn attribute to Comcast by assumption.¹⁰⁸

¹⁰⁵ There are seven DMAs where Comcast Spotlight overlaps with an NBC O&O (Chicago, Hartford, Miami, New York, Philadelphia, San Francisco/Bay Area, and Washington, D.C.), but the Comcast system in New York only covers about 10% of the DMA and is a minor participant in the sale of local advertising. Cooper and Lynn's analysis excludes the New York DMA from consideration, as does this report. Comcast also own cable systems in nine DMAs where a Telemundo O&O operates: Boston, Chicago, Denver, Fresno, Houston, Miami, New York, San Francisco, and Tucson. However, Comcast Spotlight does not operate in Tucson, and sells very little Spanish-language advertising in the other overlap DMAs. In addition, Telemundo does not sell advertising in Boston. The proposed transaction raises no competitive concerns regarding Spanish-language advertising in any of these nine DMAs.

¹⁰⁶ See Owen and Wildman (1992), *Video Economics*, Harvard University Press, p. 14 ("The television industry, broadcast as well as cable, competes for advertising with other media, notably radio broadcasting, newspaper, and magazines.... [M]ost advertisers can substitute one medium for another in response to changes in prices of advertising time or space. Competition between television stations or networks and other media for advertising dollars may be nearly as fierce as competition among television outlets.").

¹⁰⁷ See BIA/Kelsey, "Media Ad View Market Scan," 2008, and National Association of Broadcasters, *The Television Industry: A Market-by-Market Review 2010*. The shares of broadcast television and NBCU O&Os, respectively, are [[]]

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In each market-share calculation, the denominator includes broadcast and cable television, radio, newspaper, out-of-home, and online advertising. Newspaper revenues have been scaled down to exclude classified advertising by multiplying total newspaper advertising revenues for each DMA by the 2008 nationwide fraction of newspaper print advertising revenue that is not from classifieds. Revenues from online advertising exclude online Yellow Pages.

¹⁰⁸ The share of cable television is [[]]

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73. NBC O&O station documents and NBC personnel indicate that in selling local advertising, broadcast television stations compete vigorously with all other local media, including the Internet, and not just with each other and local cable television, as assumed by Cooper and Lynn.¹⁰⁹ NBC O&O stations try to persuade advertisers to purchase their services rather than local advertising services sold by other broadcast stations, cable television, newspapers, radio, magazines, out-of-home advertising, direct mail, the Internet, and other media.¹¹⁰ Their marketing materials demonstrate that NBC O&Os compete directly against these other advertising media, in particular by stressing the “unmatched market reach” of broadcast stations.¹¹¹

74. Similarly, Comcast Spotlight personnel and documents indicate that it competes directly with other media.¹¹² Spotlight marketing materials also emphasize the unparalleled geographic and demographic targeting of advertising on cable,¹¹³ including the ability to provide “razor-sharp targeting”¹¹⁴ and “pinpoint accuracy.”¹¹⁵

75. Local advertising availabilities on broadcast and cable television are often used by national advertisers that want to supplement national advertising campaigns with additional coverage in certain larger DMAs. In addition, local advertising availabilities purchased across larger DMAs can substitute for advertising on national broadcast or cable networks. An

¹⁰⁹ Per Frank Comerford, President, Platform Development & Commercial Operations, NBCU and Pat Notley, Vice President of Sales, WRC [NBC O&O in Washington D.C.], Jul. 9, 2010.

¹¹⁰ Ibid; See also [[[REDACTED]] (NBCU Attachment #1).

¹¹¹ See [[[REDACTED]] (NBCU Attachment #2)

¹¹² Per Charlie Thurston, President, Comcast Spotlight, Hank Oster, Senior Vice President & General Manager, Comcast Spotlight and John Tierney, Vice President, Regional/National Sales, Comcast Spotlight, Jul. 16, 2010; see also [[[REDACTED]] (Comcast Attachment #3); [[[REDACTED]] (Comcast Attachment #4).

¹¹³ See [[[REDACTED]] (Comcast Attachment #5)
[[[REDACTED]]

]]]; see also [[[REDACTED]]
]] (Comcast Attachment #6).

¹¹⁴ See [[[REDACTED]] (Comcast Attachment #7).

¹¹⁵ See [[[REDACTED]] (Comcast Attachment #6).

implication of the latter practice is that local advertising sold by broadcast stations and cable operators competes with national television advertising sold by broadcast and cable networks. Because of this, prices for local broadcast and cable advertising spots are constrained not only by other forms of local advertising but also by national advertising sold by broadcast and cable networks.¹¹⁶

76. Dr. Cooper and Mr. Lynn do not offer any economic justification for delineating a narrow purported relevant market that includes only local cable and broadcast television advertising, and that excludes all the other media that compete with local television advertising. As a result, they artificially inflate the post-transaction HHI and the increase in the HHI. In a more reasonably delineated broader market that includes the additional media that compete with local television for advertising dollars, the increase in the HHI that would result from the proposed transaction would be much lower. For example, as shown in Exhibit 13, if one simply adds local radio and newspaper advertising to Cooper and Lynn's purported relevant market, the increase in the HHI is reduced dramatically to a range of 90 to 138, and if one also adds local Internet and out-of-home advertising, both fast growing segments of local advertising,¹¹⁷ the increase in the HHI is further reduced to a range of 59 to 92.¹¹⁸ These changes in HHIs are far below the level that would raise any potential competitive concern.

¹¹⁶ Per Frank Comerford, President, Platform Development & Commercial Operations, NBCU and Pat Notley, Vice President of Sales, WRC [NBC O&O in Washington D.C.], Jul. 9, 2010; see also Owen and Wildman (1992), p. 13 ("[N]etwork sales and national spot sales are best regarded as differentiated products in the same market. Advertisers generally use both, with the proportion of their expenditures adjusted to reflect, among other things, the relative prices of these two means of advertising.").

¹¹⁷ Per Frank Comerford, President, Platform Development & Commercial Operations, NBCU, Jul. 20, 2010.

¹¹⁸ These calculations use BIA/Kelsey, "Media Ad View Market Scan," 2008 (Third Party Attachment #11), and National Association of Broadcasters, *The Television Industry: A Market-by-Market Review 2010* (Third Party Attachment #12) and the assumptions described above. Including advertising revenue on other forms of local media would further reduce the change in HHIs. We only report changes in HHIs in Exhibit 13 because the detailed, company-specific data necessary to calculate HHI levels are not available. To calculate changes in HHIs, it is sufficient to have only the shares of the merging parties.

Exhibit 13

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2. Comcast Spotlight and the NBC O&Os Sell Different Advertising Services

77. There is a second fundamental flaw in Dr. Cooper and Mr. Lynn's conclusions about the consequences of the proposed transaction for local advertising competition. Even if, contrary to fact, relevant markets were as narrow as Cooper and Lynn assert, market share and HHI calculations are only a starting point in an antitrust analysis. Before reaching conclusions about competitive effects, one must analyze the nature of competition among the firms in the defined market. As we discuss below, Cooper and Lynn's market shares and HHIs fail to account for important differences between local cable advertising sold by Comcast Spotlight, on the one hand, and local broadcast advertising sold by the NBC O&Os and other broadcast stations, on the other. By failing to account for these differences, Cooper and Lynn's market shares and HHIs significantly overstate the potential for the proposed transaction to harm consumers, even if those shares and HHIs were computed for a correctly delineated market.

78. There is, in fact, a third fundamental flaw in Dr. Cooper and Mr. Lynn's analysis of local advertising. Cooper and Lynn's concerns about the effect of the proposed transaction on local advertising markets appear to be based on a theory of unilateral effects. Market shares and HHIs are not particularly useful for evaluating unilateral effects theories in markets for differentiated

products.¹¹⁹ HHIs traditionally are used as a screen to help decide whether to investigate a merger based on a coordinated effects (or collusion) theory. But successful coordination is highly unlikely in the market for advertising services, where products are differentiated, complex, and dynamic, and prices are not transparent. Rather, the relevant issues are whether, absent the proposed transaction, (1) advertising sold by Comcast Spotlight would be one of the closest substitutes for a substantial share of the advertisers that would buy from an NBC O&O, and (2) advertising sold by an NBC O&O would be one of the closest substitutes for a substantial share of the advertisers that would buy from Comcast Spotlight.¹²⁰ As discussed below, there is simply no evidence for either (1) or (2).

79. Local cable operators and local broadcast stations differ in important ways in the inventory, reach, targeting, and demographics they offer to advertisers. One important difference between Comcast Spotlight and the NBC O&Os relates to geographic targeting. In the overlap DMAs, Comcast Spotlight generates {{ of its revenues from “local-zoned” advertising that is delivered to subscribers in only certain portions of a DMA.¹²¹ NBC O&Os do not sell such geographically targeted advertising. For example, a candidate running for city council may want to buy advertising only in the portion of a DMA where his or her constituents are located. Similarly, an auto dealer may want to buy advertising only in the portion of a DMA near his or her dealership. Several advertising platforms in addition to cable, including the Internet, out-of-home, direct mail, radio, and newspapers, sell advertising that is delivered only to specific portions of a DMA. In contrast, all the advertising spots sold by NBC’s O&Os and other broadcast stations reach an entire DMA.

¹¹⁹ See Draft Revised Horizontal Merger Guidelines, p. 21 (“Diagnosing unilateral price effects based on the value of diverted sales need not rely on market definition or the calculation of market shares and concentration. The Agencies rely much more on the value of diverted sales than on the level of the HHI for diagnosing unilateral price effects in markets with differentiated products.”).

¹²⁰ Ibid., p. 20 (“The extent of direct competition between the products sold by the merging parties is central to the evaluation of unilateral price effects. Unilateral price effects are greater, the more the buyers of products sold by one merging firm consider products sold by the other merging firm to be their next choice.”).

¹²¹ {{

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80. The buyers of Comcast Spotlight’s “local-zoned” advertising services are generally different from the buyers of advertising from NBC’s O&Os or other broadcast stations. As shown in Exhibit 14 below, in 2009 fewer than {{ }} of Comcast’s top 100 local-zoned customers purchased significant amounts of advertising on NBC O&Os. And fewer than {{ }} of each NBC O&O’s top 100 advertisers purchased any local-zoned advertising from Comcast.¹²²

{{

Exhibit 14
Level of Customer Overlap (2009)

	Chicago	Hartford	Miami	Philadelphia	San Francisco	Washington, DC
Top 100 Comcast Spotlight Local Advertisers That Purchased More Than \$25,000 of NBC O&O Station Advertising						-
Top 100 NBC O&O Station Advertisers That Purchased ANY Comcast Spotlight Local Advertising						

Source: NBCU, “Advertiser Billing by Market” (NBCU Attachment #3); Comcast Spotlight, “Advertiser Billing by Market” (Comcast Attachment #8)

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81. There is an inconsistency in Dr. Cooper and Mr. Lynn’s definition of a narrow relevant market for advertising that includes all “sub-national” television advertising but does not include any other media and also does not include national advertising (because that would provide too broad a reach and serves a different group of advertisers). Using the same logic about geographic coverage, Cooper and Lynn should not include the local-zoned advertising sold by Comcast in the same market with DMA-wide coverage sold by broadcast stations. If Comcast Spotlight’s “local-zoned” cable television advertising were excluded from Cooper and Lynn’s shares and HHIs in their narrowly defined markets, Comcast’s shares, the HHIs, and the increases in the HHIs attributed to the transaction would all be substantially lower than those reported by Cooper and Lynn.

¹²² See {{ }} (NBCU Attachment #3); see also {{ }} (Comcast Attachment #8).

82. Dr. Cooper and Mr. Lynn’s calculations fail to account for differences in the advertising services that Comcast Spotlight, on the one hand, and NBC O&Os and other television broadcast stations, on the other hand, provide to customers that wish to purchase DMA-wide advertising. Spotlight’s sales cannot reach over-the-air households or satellite households.¹²³ In contrast, major broadcast stations can reach nearly all television households in a DMA. As shown in Exhibit 15, Comcast Spotlight has the potential to reach from {{ of television households in the overlap DMAs while over-the-air stations reach over 99% of the television households in a DMA.

Exhibit 15
Comcast Spotlight Potential Reach in Overlap DMAs

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83. As a consequence of these differences between Spotlight’s advertising services and the advertising services offered by NBCU and other broadcast stations, advertising services sold by Spotlight are not as close a substitute for NBCU O&O advertising services as are the advertising services offered by the many other over-the-air broadcast stations operating in the overlap DMAs.¹²⁴ These broadcast stations offer advertising services that are closer substitutes in reach

¹²³ In some DMAs, Spotlight inserts ads on RSNs for Dish and DirecTV.

¹²⁴ In addition to NBC’s O&O stations, there are seven distinct owners of English-language broadcast stations in Chicago, four in Hartford, four in Miami, ten in Philadelphia, ten in San Francisco, and six in Washington, D.C. News Corp., CBS Corp., LIN Television Corporation, and the Tribune Company own more than one station in certain DMAs. News Corp. owns both Fox and My Network TV stations in Chicago, New York, and Washington,

and programming than Comcast Spotlight local cable advertising, and this will continue to be the case after the proposed transaction.¹²⁵

84. Dr. Cooper and Mr. Lynn do not account for the fact that advertising services sold by other over-the-air broadcasters are closer substitutes for advertising services sold by NBC O&Os than are advertising services sold by Comcast Spotlight, particularly, but not only, in the case of Spotlight's local-zoned advertising services.¹²⁶ Their failure to take into account this product differentiation leads them to calculate shares that exaggerate the competitive significance of Spotlight's advertising services for the advertising services sold by NBC O&Os and other over-the-air broadcasters.

D. Advertising Benefits and Synergies from the Proposed Transaction

85. While the proposed transaction raises little risk of harm to competition in advertising services, it creates substantial procompetitive benefits and synergies in advertising sales. As discussed in the Rosston Benefits Report, the transaction will provide efficiencies and benefits in a variety of dimensions, including advertising services.¹²⁷ In particular, as related to advertising services, the proposed transaction will allow the new entity to accelerate better tailoring and targeting of its advertising for consumers, including offering advanced, interactive advertising; offering more attractive packages and streamlined negotiations for advertisers; and enabling increased efficiency for Comcast and NBCU through economies of scale and scope in advertising sales.

86. Several large purchasers of advertising have filed comments validating the procompetitive benefits and synergies described in the Rosston Benefits Report and detailing the

D.C. CBS Corp. owns both CBS and The CW stations in Philadelphia and San Francisco, and CBS and My Network TV stations in Miami. LIN Television Corporation owns ABC and My Network TV stations in Hartford. The Tribune Company owns Fox and The CW stations in Hartford.

¹²⁵ The Department Of Justice Antitrust Division argued in *United States v. Raycom Media* that cable advertising is not a meaningful substitute for a significant number of broadcast television advertisers. See Complaint, ¶ 10, *United States v. Raycom Media, Inc.*, No. 1:08-cv-01510 (2008).

¹²⁶ Per Frank Comerford, President, Platform Development & Commercial Operations, NBCU and Pat Notley, Vice President of Sales, WRC, Washington D.C., Jul. 9, 2010.

¹²⁷ See Rosston Benefits Report, ¶¶ 67, 76–77.

benefits of the transaction for both advertisers and consumers.¹²⁸ In its comments, Mindshare notes: “Put simply, Comcast ‘gets it.’ By injecting NBC’s content into Comcast’s unparalleled distribution system, we’re confident this deal will offer advertisers an explosion of new outlets which will in turn fuel opportunities for new content production. This is precisely the sort of positive ‘feedback loop’ our industry needs—particularly during the present period of slow economic recovery.”¹²⁹

IV. Conclusions

87. There are substantial consumer benefits from the proposed transaction—including, among others, faster and more efficient contracting leading to more rapid introduction of new services. Commenters questioning the competitive benefits of the proposed transaction fail to account for two principal benefits of the joint venture: the reduction in transaction costs and the acceleration of the introduction of future innovative video products and services that require cooperation between content providers and platform providers.

88. Because of these new opportunities, Comcast will have strong economic incentives to invest in NBCU programming and to provide that programming across multiple platforms, thus increasing the amount, quality, and availability of programming for consumers. These incentives, Comcast’s binding commitments to invest in NBCU’s broadcast networks, and Comcast’s proven track record in investing in its networks provide persuasive evidence that Comcast will increase the amount, quality, and variety of content produced by NBCU and delivered by Comcast.

89. Comcast will obtain NBCU content on arm’s length terms, not at “below market rates” as WGAW alleges. For this reason, and also because the marketplace for video programming and distribution is highly competitive, there will be no adverse competitive effects. In addition, the

¹²⁸ See Comment of Curt Hecht; Comment of Steve Farella; Comment of Laura Desmond; Comment of Paul Woolmington; Comment of Phil Cowdell; Comment of Mark Petrosky.

¹²⁹ See Comment of Phil Cowdell.

proposed transaction will reduce double marginalization, leading to substantial efficiencies that will benefit consumers.

90. The proposed transaction raises no competitive concerns related to the provision of advertising services. Comcast and NBCU each account for only a small share of overall sales in the dynamic, competitive advertising marketplace, and the transaction will result in only a small increase in concentration. Post-transaction, advertisers will continue to have numerous competitive alternatives from which to choose.

91. There is no basis for a competitive concern arising from the proposed transaction with respect to advertising on cable and broadcast television at the national level. There is also no basis for a competitive concern about the effect of the transaction on advertising in “niches” such as “women’s programming” or “business news.”

92. Finally, there is no basis for a competitive concern with respect to local advertising. Local advertisers have many competitive alternatives, and the advertising services of other broadcast television stations provide closer substitutes for the advertising services of NBC’s O&Os than do the advertising services of Comcast Spotlight.

Appendix 1

Appendix 1: Qualifications of Dr. Michael D. Topper

1. Dr. Topper is a Vice President and Head of the Antitrust & Competition Practice at Cornerstone Research, where he has worked since 1994. Previously, he was an Assistant Professor in the Department of Economics at the College of William & Mary, and a Lecturer in the Department of Economics at Stanford University. He received his Ph.D. and M.A. in Economics from Stanford University. He has also received an M.S. in Engineering Economic Systems from Stanford University and a B.S. in Systems Engineering from the University of Virginia.
2. While at William & Mary and Stanford, Dr. Topper taught courses in microeconomics, econometrics, and antitrust economics. Before receiving his doctorate in economics, he worked as an engineering economist at Bell Laboratories and Bell Communications Research.
3. Dr. Topper's consulting work over the last sixteen years has focused on the application of microeconomics, econometrics, and quantitative analysis to litigation and regulation in a range of industries, including merger review, antitrust and competition matters, telecommunications policy, and matters involving antitrust, intellectual property, class certification, discrimination and contractual issues. His consulting work has included analyzing the potential effects of mergers, joint ventures, and certain types of collaborations between competitors with regards to both government regulatory inquiries and private litigation. He has submitted expert reports and testimony in competition matters, including testimony submitted to the Copyright Royalty Board regarding the allocation of cable distant signal copyright royalties. His curriculum vitae is attached.

MICHAEL D. TOPPER
Vice President

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ACADEMIC BACKGROUND

1991	Stanford University <i>Ph.D., Economics, 1991; M.A., Economics, 1989</i> Specialized in labor economics, public finance, industrial organization and econometrics.	Stanford, California
1982	Stanford University <i>M.S., Engineering-Economic Systems</i>	Stanford, California
1981	University of Virginia <i>B.S., Systems Engineering, with Highest Distinction</i> Member, Tau Beta Pi	Charlottesville, Virginia

PROFESSIONAL EXPERIENCE

1994 – Present	Cornerstone Research, Inc. <i>Vice President (Partner)</i> <i>Head, Antitrust & Competition Practice</i> Manage and conduct economic analysis for complex business litigation, regulatory and public policy matters, with specialization in antitrust, intellectual property, class certification and breach of contract. Industry expertise includes telecommunications, media, Internet, information technology, energy, transportation, and financial services. Expertise includes econometrics, analysis of large datasets and consumer survey design and analysis. Services to clients include expert testimony, identifying experts, clarifying economic and financial issues, identifying and analyzing data, supporting experts in the preparation of expert reports and testimony, and analyzing opposing expert reports and testimony.	Menlo Park, California
1993 – 2003	Stanford University <i>Lecturer in Economics</i> Taught courses in microeconomics and antitrust policy for the Department of Economics.	Stanford, California
1991 – 1994	College of William and Mary <i>Assistant Professor of Economics</i> Conducted academic research on the economics of education and training programs. Developed new courses in labor and development economics. Helped launch the new graduate program in public policy. Taught core courses in economics and statistics. Supervised graduate and undergraduate students.	Williamsburg, Virginia

PROFESSIONAL EXPERIENCE (CONT.)

- Summer 1986 **Rand Corporation** Santa Monica, California
Summer Research Intern, Telecommunications Policy Group
Developed models for estimating the demand for telecommunications services.
- Summer 1985 **International Institute for Applied Systems Analysis (IIASA)** Vienna, Austria
Summer Research Intern, Systems Modeling Group
Programming and analysis for dynamic simulation models.
- 1981 – 1984 **Bell Laboratories/Bell Communications Research** Holmdel, New Jersey
Systems Engineer
Conducted cost/benefit, technical feasibility and economic cost analyses for advanced switching services based on caller ID.

PUBLICATIONS

- “An Antitrust Analysis of the Case for Wireless Network Neutrality,” with Gregory L. Rosston, *Information Economics and Policy*, 22 (1), pp. 103-119, 2010.
- “3G Standards Policy: Government Shouldn’t Intervene in Debate,” *Wireless Week*, December 21, 1998.
- “Student Loans, Debt Burdens, and Choice of Major,” *New Directions for Higher Education*, 85, pp. 115–124, 1994.
- “The Impact of the Demographic Transition on Government Spending,” with John Shoven and David Wise, In David Wise, ed., *Economics of Aging*, University of Chicago Press, 1994.
- “The Cost of Capital in Canada, the U.S. and Japan,” with John Shoven, In John Shoven and John Whalley, eds. *Canada-U.S. Tax Policy Issues*, University of Chicago Press, 1992.

WORKING PAPERS

- “Economic White Paper on National Third Generation Wireless Standards,” with Joseph Farrell, *Mimeo*, November, 1998.

CONFERENCE PARTICIPATION, PANEL PARTICIPATION AND INVITED TALKS

- “Modernization of Antitrust Law,” Stanford University Conference, May 29–30, 2008, Panelist/Discussant.
- “Third Generation Wireless Standards Policy,” Presentations in Washington D.C., December 1998.
- “Higher Education and the American Worker,” Christopher Wren Society, Williamsburg, VA, April 1993.
- “The Impact of the Demographic Transition on Government Spending on Individuals,” with John Shoven and David Wise, NBER Conference on the Economics of Aging, July 1992.

CONFERENCE PARTICIPATION, PANEL PARTICIPATION AND INVITED TALKS (CONT.)

- “Ethnic Differences in Schooling Attainment in Malaysia—A Difference in Differences Approach,” Paper presented at Southeast Asian Educators Workshop, Stanford University, July 1991.

“The Cost of Capital in Canada, the U.S. and Japan,” with John Shoven, NBER Conference on Canada–U.S. Tax Comparisons, July 1990.

EXPERT TESTIMONY

In the Matter of Preserving the Open Internet, Federal Communications Commission, GN Docket 09-191, Reply Declaration on behalf of Verizon and Verizon Wireless, April 2010.

In the Matter of Special Access Rates for Price Cap Local Exchange Carrier, Federal Communications Commission, WC Docket No. 05-25, RM 10593, Reply Declaration on behalf of Verizon, February 2010.

In the Matter of Special Access Rates for Price Cap Local Exchange Carrier, Federal Communications Commission, WC Docket No. 05-25, RM 10593, Declaration on behalf of Verizon, January 2010.

In the Matter of Preserving the Open Internet, Federal Communications Commission, GN Docket 09-191, Declaration on behalf of Verizon and Verizon Wireless, January 2010.

In the Matter of Distribution of the 2004 and 2005 Cable Royalty Funds, Copyright Royalty Board, Docket No. 2007-3 CRB CD 2004-2005. Filed Testimony on behalf of National Association of Broadcasters, December 2009.

Mobile Wireless Competition Notice of Inquiry, Federal Communications Commission, WT Docket No. 09-66, Declaration on behalf of Verizon Wireless, September 2009.

FELLOWSHIP AND AWARDS

Center for Economic Policy Research, Stanford University
Visiting Scholar, 1993–1994

Department of Economics, Stanford University
Distinguished Teaching Award, 1989

Rand Corporation
Graduate Student Summer Fellowship, 1986

International Institute for Applied Systems Analysis
American Academy of Sciences Young Scientists' Summer Program Fellowship, 1985

Bell Laboratories
Graduate Fellowship, 1981–1982

Appendix 2

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Appendix 2: Shares and HHI for

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

Executed on this 21st day of July, 2010.

A handwritten signature in black ink, appearing to read "Greg L. Rosston", written over a horizontal line.

Gregory L. Rosston, Ph.D.

A handwritten signature in black ink, appearing to read "Michael D. Topper", written over a horizontal line.

Michael D. Topper, Ph.D.