methodological shortcomings, the surveys criticized by Comcast and its economists provide valuable insight into the degree of future substitutability.

27. For example, Drs. Israel and Katz find fault with a Yankee Group survey, which assumed for the purpose of their projections that five percent of its survey respondents who "had not thought about cord cutting" (47 percent of respondents) would in fact cut the cord in the next 12 months and that 50 percent of its respondents who "had not heard about cord cutting but would consider it" (13 percent of respondents) would in fact cut the cord in the next 12 months.[37] Why the five–percent assumption for the first group constitutes an aggressive assumption is not clear; that someone has not thought of cord cutting does not imply zero chance of his doing so when presented with a compelling offer. If the assumption were reduced from five to two percent, the Yankee Group's estimate of likely cord cutters would decline by only 1.4 percentage points. Furthermore, that someone indicates he would consider cutting the cord upon learning of his options implies the probability of doing so is significantly greater than zero. Because the weight given to these respondents was so small (13 percent of respondents), the allegedly aggressive assumption of a 50 percent cord-cutting rate was discounted heavily. Accordingly, the Yankee Group's survey methodology is not obviously biased. Moreover, at least six other surveys reaching a similar conclusion regarding cord cutting accompanied Yankee Group's survey: Pew Internet & American Life Project,[38] comScore,[39] Parks Associates,[40] Convergence

37. *Israel-Katz Reply*, ¶ 203 ("The inclusion of the latter two groups in this statistic is strikingly aggressive. By this methodology, if the entire sample had responded that they had not thought about cord-cutting at all, then the Yankee Group still would have concluded that 5 percent were likely to cut the cord.").

38. Pew Internet and American Life Project, The State of Online Video, June 3, 2010, at 2 (finding that from 2007 to 2009, the number of adults who have watched movies or television shows on the Internet doubled from 16 to 32 percent).

39. *comScore Data Shows 2009 Was a Blistering Year for Online Video*, VIDEO NUZE, *available at* http://www.videonuze.com/blogs/?2010-02-09/comScore-Data-Shows-2009-Was-a-Blistering-Year-for-Online-Video-Slides-Available-/&id=2425 (citing comScore data) (finding that over 2009, the average amount of time among web users spent watching videos online more than doubled to nearly thirteen hours per month)

Consulting Group,[41] the Conference Board,[42] and Consumer Electronics Association.[43] Comcast's economists would have the Commission believe that all of these estimates are biased upwards.

28. In addition to the surveys, a growing chorus of cable analysts who recognize the threat that online video poses to traditional video bolsters the survey results. Comcast's economists criticize a single Piper Jaffray report I cited,[44] which concludes that "Internet delivered video will ultimately prove to be the primary way movies *and TV* are consumed...."[45] But Piper Jaffray is not the only analyst that holds this view. For example, the Yankee Group explains the growing popularity of cord cutting as follows:

> At the most basic level, the decision to cut off pay TV services will be an economic one.... On the consumer end... [b]y purchasing a retail STB [set-top boxes], using a gaming console as the primary video device or consuming only Internet-based content, consumers are freed from monthly cable bills, which in the U.S. average more than $50 per month.... At the other end of the content value chain... the relationship between programmers and U.S. pay TV operators is getting testy. Broadcasters and certain popular networks are demanding significantly higher fees from pay TV operators, which have started calling on regulators to get involved in the fracas.[46]

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40. Parks Associates finds over 25 million U.S. broadband households regularly watch full-length TV shows online, Apr. 20, 2010, *available at* http://www.fiercetelecom.com/press_releases/parks-associates-finds-over-25-million-u-s-broadband-households-regularly-watch-full (finding that the number of U.S. broadband households watching premium online content doubled in 2009; some 900,000 U.S. homes did not pay for television and relied solely on Internet-based television in 2008).

41. Ryan Fleming, New Report Shows More People Dropping Cable TV for Web Broadcasts, Apr. 16, 2010, *available at* http://www.digitaltrends.com/computing/new-report-shows-that-more-and-more-people-are-dropping-cable-tv-in-favor-of-web-broadcasts (finding that from 2008 to 2010, 800,000 U.S. households disconnected their cable television service and watched their television online; that number was also expected to double by 2011).

42. David Colker, *Pulling the plug on television: More people are turning off the TV and turning on their computers to watch their favorite programs via the Internet*, LOS ANGELES TIMES, Oct. 31, 2009 (finding that nearly one quarter of U.S. households have watched television online, and that 20 percent of respondents said they were watching less television delivered through traditional broadcast or paid cable-type providers).

43. *Id.* (finding that 15 percent of viewers would consider cutting out traditional means of watching television altogether).

44. *Israel-Katz Reply*, ¶ 199 ("As support for this claim, he cites to a report in which analysts at Piper Jaffray state that in '3-5 years we expect internet delivery will start to rival the physical distribution models.' In fact, the statement in the Piper Jaffray report refers to online rental options' rivaling bricks-and-mortar movie rental stores, and it is unrelated to traditional MVPD services.").

45. *See* Piper Jaffray, Internet Video: Field of Dreams or Nightmare on Elm Street?, Nov. 2009, at 1 (emphasis added). This quote makes clear that Comcast's economists have too narrowly interpreted the "physical distribution model."

46. Yankee Group, Consumers Consider Axing the Coax, Apr. 2010, at 5.

The Yankee Group also notes that "the continued escalation of these fees will push more consumers to consider coax-cutting," especially among non-sports fans who "are effectively subsidizing channels in which they hold no interest."[47] Indeed, Blair Levin, a former analyst with Stifel Nicolaus and now Omnibus Broadband Initiative Executive Director, commented in April 2010 that "Over-the-Top Video will eventually emerge as a challenge to the current model of multi-channel distribution of large and increasingly expensive bundles of linear programming."[48]

29. Finally, Comcast itself has argued that online video presents a significant threat to its cable video franchise. In comments filed with the Commission in November 2006, Comcast argued that Internet video is "providing consumers with an interactive *alternative* to traditional TV-set viewing,"[49] which "*compete*[s] with traditional and not-so-traditional video distribution technologies for time, attention, and dollars."[50] Despite the overwhelming evidence of the competitive threat online video poses to cable television, Comcast's economists argue that I have failed to provide any "reliable evidence" that a meaningful number of cable subscribers have cut or will cut the cord in favor of online video services.[51] It appears that nothing would satisfy their requirements.

B. Comcast's Economists Fail to Demonstrate That Online Video Is a Complement to Traditional Cable Television

30. Two services are complements if the demand for one increases *in response to* a decrease in the price of the other. Accordingly, online video is a complement to traditional cable television if the demand for cable television increases with a decrease in the price of online video. That traditional television consumption and online video consumption have increased in

47. *Id.* at 6.

48. Remarks by Omnibus Broadband Initiative Executive Director Blair Levin, Owning the Inevitable, American Cable Association's 17th Summit, April 20, 2010.

49. Comcast Comments in Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, MB Dkt No. 06-189, at 30-31 (rel. Nov. 29, 2006) (emphasis added).

50. *Id.* at 59 (emphasis added).

51. Israel-Katz Reply, ¶ 90.

tandem does not inform the economic test for complementarity, as Comcast[52] and its economists[53] now admit. Without offering any evidence of a change in the quality of online video, Drs. Israel and Katz simply assert that the quality-adjusted price of online video has decreased over the recent past.[54] In their view, this is "proof" that online video is a complement to cable television. To believe this "proof," one must also believe that the alleged decrease in the quality-adjusted price of online video *spurred* the demand for cable television, but that two variables move in the same direction does not imply that one caused the movement of the other. Setting aside this confusion of causation for correlation, the quality-adjusted price of traditional cable television has arguably decreased over the last few years, as well, with the advent of high-definition services and a larger library of on-demand movies. Thus, even if Drs. Israel and Katz are right about the price of online video, that the *relative* quality-adjusted price of online video has declined is not even clear. Until this assertion about relative quality-adjusted price is proven, Drs. Israel's and Katz's "proof" of complementarity is merely a conjecture. Moreover, the Commission must weigh that conjecture against the mountain of evidence from surveys, cable analysts, and cable operators, including Comcast, recognizing the threat to traditional cable television that online video poses.

C. Comcast and Its Economists Conclude Incorrectly That the Anticompetitive Effects Vanish if Traditional Cable Television and Online Video Are Distinct Product Markets

31. Comcast and its economists argue incorrectly that I have placed online video service in the same product market as traditional MVPD services.[55] Whether online video

52. *Opposition* at 90 n. 281.

53. *Israel-Katz Reply*, ¶ 195 ("We agree with Dr. Singer's definition of complementarity.").

54. *Id.*

55. *Opposition* at 91 ("In light of the evidence discussed above, defining a single product market that encompasses both MVPD services and online video distribution would be inconsistent with, among other things, the Commission's prior determination that MVPD services and local broadcast television services are not part of the same product market.").

belongs in the same product market as cable television service *today* turns on this question: Would a hypothetical monopoly provider of traditional cable television service *today* need to control the supply of online video to raise cable television prices significantly above competitive levels? The answer is likely no given the nascent state of online video. Despite the growing evidence of cord cutting, no empirical estimates of the online-video cross-price elasticity of demand for cable television yet exist. However, even if traditional cable television service represents a distinct product market from online video *today*, Comcast would still have an incentive to slow the development of online video so long as it perceived online video to be a threat to its cable-video franchise *in the future*. And Comcast's prior statements, alongside similar statements of other cable operators,[56] reveal that Comcast perceives online video to be a competitive threat to its cable-video franchise in the near future. Because Comcast's exclusionary tie-in of Fancast Xfinity TV to its digital cable television service could increase Comcast's degree of tying market power, Comcast's conduct could generate anticompetitive effects.[57] As I demonstrate below, because access to Hulu and NBCU's other online content are vital to the success of OTT providers, the proposed merger would strengthen the anticompetitive impact of Comcast's tying strategy.

D. Hulu and NBCU's Other Online Properties Are "Must-Have" Content for OTT Providers

32. As Comcast tried to do with NBC's local broadcast programming, it[58] and its economists[59] again seek to diminish the importance of Hulu and NBCU's other online properties.

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56. As Glenn Brit, CEO of Time Warner Cable, acknowledged in May 2009: "The reality is, we're starting to see the beginnings of cord cutting where people, particularly young people, are saying all I need is broadband." *See* Christopher Lawton, *More Households Cut the Cord on Cable*, WALL STREET JOURNAL, May 28, 2009, *available at* http://online.wsj.com/article/SB124347195274260829.html.

57. Einer Elhauge, Tying, *Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARVARD LAW REVIEW 399, 417 (2009).

58. *Opposition* at 114 ("Even if NBCU controlled Hulu - which it does not - these are only two of the hundreds of websites on which video programming is viewed online.").

For example, they argue that the must-have nature of NBCU's online content should be measured by the merged firm's (low) market share of national broadcast and basic cable television viewing, or its (low) market share of basic cable television viewing.[60] Because broadcast networks constitute must-haves in the traditional video space, it follows that Hulu's aggregation of online broadcast programming constitutes must-have programming for OTT providers. Once again, it makes no sense to count Hulu's shares of some relevant antitrust market to impute how must-have it is.

33. Despite the FCC's designation of local broadcast content as must-have, Comcast insists that Hulu is not that special:

> Even if NBCU controlled Hulu - which it does not - these are only two of the hundreds of websites on which video programming is viewed online. Each of the broadcast networks (e.g., ABC.com and TV.com (CBS)) has its own site on which video programming can be viewed. There are a variety of other sites on which content from various sources is aggregated, such as yahoo.com, youtube.com, netflix.com, iTunes, and veoh.com.[61]

By the same logic, NBC is only one of hundreds of networks on which video programming is viewed on cable television. So is a local NBC affiliate not must-have? Other online portals cited by Comcast simply do not carry the same must-have content as Hulu and NBC.com. Accordingly, OTT providers need access to Hulu and NBCU's other online content (at a positive price) to compete effectively. (More precisely, the *customers* of OTT providers need access to this content.)

34. To diminish further the import of Hulu, Comcast points out that NBC.com could post the same NBC content as Hulu.com posts.[62] Consider a world in which the merged firm

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59. *Israel-Katz Reply* ¶ 216.

60. *Opposition* at 182-83 ("As discussed in Section IV.B. 1, however, the joint venture would account for only 13.7 percent of national broadcast and basic cable television viewing, and only 12.8 percent of basic cable television viewing. Similarly, the transaction will only increase NBCU's share of overall national cable network advertising and affiliate revenues to 12 percent from approximately percent.")

61. *Opposition* at 114.

62. *Id.*

blocked OTT providers' access to Hulu.com—either directly via technological means or indirectly by requiring the user to authenticate her Comcast cable television subscription or both. Were it to deny access to Hulu, then the merged firm would likely block an OTT provider's access to NBC.com as well; the existence of a separate NBC.com is no consolation to a foreclosed OTT provider. Indeed, as I described in my initial report, NBC has already shown a propensity to exclude OTT providers. According to the *New York Times*, NBCOlympics.com required that Internet users verify a subscription to participating cable or satellite providers.[63]

E. Comcast Incorrectly Argues That Time Warner's Footprint and Online Content Portfolio Should Be Ignored

35. TV Everywhere would not exist today but for the collaboration between Time Warner and Comcast. As I described in my initial report, Time Warner needed an MVPD partner to exert the maximum pressure on independent content providers.[64] Accordingly, the success of TV Everywhere's tying strategy (as measured by the retardation of online video) depends on the combined MVPD footprint of Time Warner and Comcast and the quality of the firms' combined online content portfolio. The footprint is important because OTT providers might achieve the requisite economies of scale to compete against Comcast by serving Time Warner's cable customers only; if all TV Everywhere's members coordinated a refusal to deal with OTT providers, then OTT providers likely could not achieve the requisite economies of scale. The importance of the quality of the combined online content portfolio is precisely why the proposed merger exacerbates the harm associated with this strategy: To compete effectively against traditional video offerings, OTT providers will need access to the online content locked behind

63. Brian Stelter, *A trickle of life streams on the web*, NEW YORK TIMES, Feb. 18, 2010, at 15.
64. *TV Everywhere*, BUSINESSWEEK, Mar. 10, 2010, *available at* http://www.businessweek.com/magazine/content/10_12/b4171041598366.htm.

TV Everywhere's walled garden. And Comcast's acquisition of NBCU's online properties enhances the value of TV Everywhere's content portfolio.

36. Despite the critical role Time Warner played in formulating Comcast's tying strategy, Comcast argues that Time Warner's profits associated with TV Everywhere should not enter the foreclosure calculus here:

> Conceding the absence of significant premium content controlled by NBCU, Dr. Singer claims that Drs. Israel and Katz should also have considered Time Warner's video content. This reflects a misunderstanding of the model, which considers costs to NBCU and gains to Comcast. Time Warner's profits do not enter the analysis.[65]

If Time Warner's unilateral refusal to deal with OTT providers were not profitable, but Comcast's and Time Warner's coordinated refusal to deal were profitable, then asking whether Time Warner benefits when Comcast acquires online content is reasonable. But I never argued that Time Warner's incremental profits should enter the foreclosure calculus. Rather, I explained that the Commission should consider Time Warner's *footprint* when measuring the likely anticompetitive impact on OTT providers associated with Comcast's decision to acquire NBCU's online content and then place it behind the Xfinity walled garden.

37. Finally, Comcast's economists argue that Time Warner's video content should not inform the foreclosure analysis.

> Dr. Singer claims that one should also consider Time Warner Cable's video content in a foreclosure analysis. He offers no evidence that Time Warner Cable and Comcast are somehow colluding, and he ignores the fact that Time Warner Cable no longer has a significant interest in programming networks, since its 2009 separation from Time Warner Inc.[66]

On the contrary, my initial report recounted at least three instances of collusion against content providers: establishing iN DEMAND's pay-per-view service, establishing TV Everywhere, and collectively punishing the NFL Network. Furthermore, even if Time Warner Cable has shed its

65. *Opposition* at 185.
66. *Israel & Katz Reply*, ¶216.

programming networks, it still holds significant rights to distribute video programming on the Internet. By refusing to grant OTT providers access to its online portal, Time Warner can mitigate the risk of online video's evolving into a rival platform for video customers. Moreover, Time Warner's exclusionary conduct indirectly benefits Comcast: With access to Time Warner's online content portfolio, OTT providers operating in Comcast's territory could provide a more compelling offering to Comcast's cable television subscribers. Accordingly, it is reasonable to "consider Time Warner Cable's video content in a foreclosure analysis" relating to Comcast-NBCU.

F. Comcast Fails to Defend Its Online Authentication/Tying Policy

38. Comcast's authentication policy for online video amounts to a tie-in: A broadband user cannot gain access to online video content without verifying her subscription to Comcast's cable television service.[67] Stated differently, Comcast ties access to its online content to its digital cable television service. In a traditional tie-in, a firm with market power in product *A* refuses to supply *A* unless the customer also buys product *B* from the firm. A variation of this policy is that the firm also refuses to supply *B* unless the customer buys product *A*—in other words, neither product can be purchased separately. Here, Comcast has significant market power in the supply of cable television service within the regions it serves; Comcast's market shares in four DMAs implicated by the proposed transactions are as high as 60 percent.[68] In the form of a traditional tie-in, Comcast refuses to supply digital cable television service (the *A* product) unless

67. This discussion focuses on Comcast's exclusionary policies vis-à-vis end users. Comcast also engages in exclusionary conduct vis-à-vis independent content owners. In particular, Comcast conditions access to its cable television platform on a content provider's agreement not to distribute its content online. A complete remedy would address Comcast's exclusionary conduct on this side of the market by preventing Comcast from conditioning carriage in this way

68. According to SNL Kagan, Comcast's MVPD market share in Chicago, Philadelphia, San Francisco, and Miami are 61.6 percent, 63.4 percent, 57.8 percent, and 59.3 percent, respectively.

its customers also obtain (for free) access to its On Demand library online (the *B* product).[69] On its website, Comcast explains: "More entertainment access. An On Demand library approaching 20,000 titles is yours to enjoy wherever you want. Best of all, many of your favorite programs are *available online anytime—for no additional charge*."[70] In addition, Comcast refuses to supply access to its online portal unless a customer can authenticate that she subscribes to Comcast's cable television service. Neither product may be purchased separately.

39. The objective of Comcast's tie-in is to prevent any development of online video as an alternative mechanism for watching cable programming. Comcast has commented to the FCC that it considers online video to be a viable threat to its cable television franchise.[71] This tie-in is likely aimed at impairing rivals that aggregate online video content in one portal and ride over the top of a broadband connection, called over-the-top or OTT providers, from evolving into rival MVPD suppliers in the future. (Although the tie-in could impair other online video providers in similar ways, we focus on the competitive impact on OTT rivals here.) By including Xfinity at no additional charge, Comcast has effectively set the imputed price of Xfinity at zero. Thus, customers loyal to Comcast's cable television service would not likely pay a positive price for a rival's online video service; they get a similar service for "free." Because of Comcast's authentication policy, which requires broadband users to verify a subscription to Comcast cable television, if a Comcast cable television subscriber were to cancel her cable television subscription, then she would be prevented from accessing Comcast's video library online.

69. According to its website, every *digital* cable television package that Comcast sells includes access to its On Demand library. In contrast, a subscriber can get *basic* cable service for $15 per month (in certain areas) without access to Comcast's On Demand library.

70. *See* Xfinity Where You Want, *available at* http://www.xfinity.com/choice-and-control/where-you-want/. Comcast's economists also admit that Comcast's cable television "[c]onsumers do not pay extra for Fancast Xfinity TV beyond the cost of their cable service. . . ." *Israel-Katz Reply*, ¶ 207.

71. Comcast Comments in Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, MB Dkt No. 06-189, at 30-31 (rel. Nov. 29, 2006) ("Many networks have jumped head-first into Internet video, providing consumers with an interactive *alternative* to traditional TV-set viewing.") (emphasis added).

Moreover, if a Comcast customer were to drop her cable television subscription, the standalone price of the cable modem service would increase to a "penalty price" as a result of Comcast's bundled-pricing scheme, further squeezing the available margins of OTT providers (assuming the OTT provider were to compensate the subscriber for her forgone "rebate" on broadband service).[72] Assuming generously that the customer could replace Comcast's cable Internet service with a competitively priced broadband offering, an OTT provider would still be impaired in its ability to compete effectively with Comcast to the extent that non-loyal customers perceive the online content behind Xfinity—which, after the transaction, would include NBCU's online content, including Hulu—to be must-have programming; if switching to an OTT provider meant losing access to that must-have programming, then most customers would stick with Comcast. Thus, the proposed transaction would retard both cord-cutting activity among Comcast customers and innovation in online video generally.

40. Comcast defends its authentication policy by noting that authentication "is a concept that is being pursued by an array of content owners and distributors looking to appropriately monetize their content as Internet delivery becomes a more significant factor, and Comcast is an early adopter of the concept."[73] That other cable operators who belong to TV Everywhere—a collaboration among cable operators to facilitate their dealings with content providers—require authentication does not make Comcast's authentication policy procompetitive, especially given that this authentication policy was designed in a coordinated fashion. In the absence of the coordination between Time Warner and Comcast, it is possible that

72. Based on an August 3, 2010 interview with a Comcast service representative, the standalone price of 12 Mbps cable modem service in Washington, D.C. was $59.95 per month. A bundle that included the same cable modem service and cable television service was $101.90 per month. Because the comparable cable television service was priced at $56.95 per month, the imputed price of the cable modem service in the bundle was $44.95 (equal to $101.90 less $56.95) Thus, Comcast imposes a $15.00 penalty per month on customers who purchase cable modem service only.

73. *Opposition* at 205 n. 704.

the TV Everywhere model would not even exist. Moreover, conduct permitted for certain cable operators might be anticompetitive when practiced by others. For example, the non-discrimination provisions in the Cable Act pertain to vertically integrated cable operators only; a standalone cable operator is not subject to the same duties in its dealings with cable networks. The size of the cable operator's footprint also warrants different treatment under the law: If a cable operator with five percent of the nationwide MVPD market tied its online portal to a cable television subscription, the associated market-wide foreclosure would not likely be sufficient to impair an OTT provider. Because Comcast is the largest MVPD, its practices cannot be defended by citing similar conduct among smaller cable operators, which indeed also increases the collective foreclosure of OTT providers.

41. Next, Comcast argues that its conduct regarding Xfinity does not constitute an anticompetitive tying arrangement under *Jefferson Parish*[74] because Comcast's cable television and online video service constitute a single, finished product, and because the associated foreclosure share is too small.[75] To ascertain whether Comcast's Xfinity and its cable television service are not separate products (and therefore not subject to tying law), we refer to Professor Elhauge's 2009 *Harvard Law Review* article on tying.[76] Professor Elhauge defines the criteria by which courts are instructed to evaluate two offerings by a firm: "Thus, two items are a finished product limited to the law on refusals to deal and price squeezes only if the defendant's buyers would not buy the items separately even without the conduct, and the rival seeks to compel the defendant to sell an item to the rival so that it can make the same finished product. *If the defendant's buyers would buy the items separately absent the conduct, then the items are*

74. Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 9–11, 13–15 (1984) ("Jefferson Parish").

75. *Opposition* at 205.

76. Einer Elhauge, Tying, *Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARVARD LAW REVIEW 399 (2009) (emphasis added).

separate products subject to the law on tying and bundled discounts."[77] Accordingly, the relevant inquiry here is whether, in the absence of Comcast's Xfinity bundle, consumers would purchase online video and cable television separately. Given the significant inroads online video services have made—a near doubling in the consumption of online video from 2008 to 2009[78]—it is reasonable to believe that consumers do in fact buy online video and cable television service separately. Because consumers would purchase online video and cable television separately, and because OTT providers are not seeking access to Comcast's online portal with the intent of reselling that service at the retail level, the proper lens through which to assess Comcast's authentication policy is tying.

42. Comcast misinterprets *Jefferson Parish* in its assertion that the foreclosure share associated with Comcast's authentication policy is too small to be harmful. According to Professor Elhauge, *Jefferson Parish* upheld a "quasi-*per se* rule" that bases liability in a tying case on tying power—and not on the associated foreclosure share—except in cases involving products that have a fixed ratio and lack separate utility.[79] Thus, Comcast is incorrect to cite *Jefferson Parish* as the basis for a requirement of substantial tied market foreclosure.[80] Even if tying law required a significant foreclosure share in all tying matters, such a condition would appear to be satisfied here. By requiring online users to purchase a cable television subscription,

77. *Id.* at 466-67.

78. *comScore data shows 2009 was a blistering year for online video*, VIDEO NUZE, *available at* http://www.videonuze.com/blogs/?2010-02-09/comScore-Data-Shows-2009-Was-a-Blistering-Year-for-Online-Video-Slides-Available-/&id=2425 (citing comScore data).

79. *Elhauge, supra.* at 402. Professor Elhauge summarizes the ruling as follows: "In *Jefferson Parish*, the Supreme Court considered and rejected the argument that it should overrule the quasi-per se rule and require a substantial tied foreclosure share. It justified the fact that the quasi-per se rule required tying market power rather than a substantial tied foreclosure share by quoting extensively from the above *Fortner* dissent, including the above proposition that part of the rationale was that, separate from any anticompetitive effects in the tied market, tying could create price discrimination or extract individual consumer surplus on the tying product." *Id.* at 422-23 (citing Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 9-11, 13-15 (1984).).

80. *Opposition* at 214 n. 729 ("As the Supreme Court explained, plaintiffs must show that the challenged restraint 'foreclosed so much of the market from penetration by [the defendants'] competitors as to unreasonably restrain competition in the affected market.' *Jefferson Parish*, 466 U.S. at 3 1 11.51.).

and by pricing its bundle such that the imputed price of its online video portal is zero, Comcast forecloses rival OTT providers from roughly one quarter of all potential video subscribers—that is, Comcast's national MVPD share. That foreclosure share alone would be presumptively anticompetitive under antitrust law.[81] Finally, because Comcast has coordinated its TV Everywhere model with other cable television providers, including Time Warner, the associated foreclosure share exceeds Comcast's MVPD share.

III. COMCAST AND ITS ECONOMISTS ARE SILENT ON MY PREFERRED REMEDIES

43. In my initial report, I offered a host of remedies that would address Comcast's likely foreclosure of must-have cable network programming, including the soon-to-be acquired NBCU programming. The most important contribution is my opt-out remedy. Non-discrimination provisions have proven ineffective at forcing Comcast to price its affiliated networks in a way that approximates the prices charged by independent programming networks. Under an opt-out remedy, Comcast's subscribers would be able to opt out of a Comcast bundle of networks at a rebate equal to the wholesale price charged by Comcast for the affiliated network. Ideally, the opt-out remedy would apply to all of Comcast's must-have programming, including its RSN networks and any channels bundled with them. At a minimum, it should apply to the NBCU's must-have programming, including the ten O&O broadcast affiliates. Comcast's economists failed to address this remedy in their reply.

44. With respect to online remedies, the most important contribution I offered was the requirement that Comcast end its authentication scheme for affiliated online video content and sell Xfinity on a standalone basis. Online video service, from Apple's iTunes Store to Netflix, free certain consumers, including those who only watch a few shows throughout a year, from a

81. *See* PHILLIP AREEDA, IX ANTITRUST LAW 375, 377, 387 (Aspen 1991) (indicating that 20 percent foreclosure is presumptively anticompetitive); *See also* HERBERT HOVENKAMP, XI ANTITRUST LAW 152, 160 (indicating that 20 percent foreclosure and an HHI of 1800 is presumptively anticompetitive).

cable television subscription. Before explaining our preferred remedy, it is worth noting that we are agnostic about the technologies and business models that will ultimately constrain Comcast's market power. Accordingly, we intend our recommendations here to be neutral toward whatever procompetitive business practices companies use to help consumers cut the cord. As the late economist Joseph Schumpeter reminds us, "…it is not [price or even quality] competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organization… which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives."[82] Irrespective of *how* firms end up supplying video, without access to the *must-have programming* Comcast seeks to acquire, even its most innovative video-distribution rivals will not be able to constrain its cable prices. Consequently, the DOJ should design its remedy without a distribution channel in mind—even Comcast's distribution channel—so that the market may choose the best video distribution methods from among the competitors.

45. With that caveat in mind, the DOJ should compel Comcast to sell Xfinity to all broadband users à la carte regardless of whether they subscribe to Comcast cable television. Moreover, Comcast must be required to end its authentication requirement for accessing its online video library regardless of where such video resides. For example, should a post-merger Comcast move its NBCU must-have programming to a different online channel—say, NBC.com or even an iTunes-like application—Comcast must be required to sell its affiliated online content to all broadband users without any authentication requirement. These two measures would break the tie-in and thereby allow non-Comcast cable television televisions to access NBCU's must-have online content. It would also encourage non-Comcast broadband providers to invest more in their networks, as access to must-have programming is critical to their business plans.

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82 JOSEPH SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 84 (Harper & Bros. 1942).

46. A reasonable limitation to this requirement is that Comcast offer Xfinity by itself within its cable television footprint only, otherwise Comcast would be competing directly with out-of-region cable operators in the supply of MVPD service. In addition, Comcast cable television subscribers should be able to opt out of Xfinity from their cable television package at a rebate equal to the standalone retail price of Xfinity. With access to Xfinity at a *positive* price, customers subscribing to an OTT or some other online video provider could "cut the cord" to Comcast's cable television service and still be able to watch *Xfinity* content. Moreover, with access to Xfinity at a *reasonable* price, OTT providers could put forward a compelling offer to Comcast cable television subscribers.

47. Because regulating the retail price for Xfinity is anathema to economists, we would prefer to induce Comcast to price its online portal at a reasonable level by requiring Comcast to allow its cable customers to opt out of Xfinity for a rebate equal to Xfinity's standalone price. To understand why the opt-out provision is important, consider what might happen if Comcast were constrained to provide Xfinity by itself with no opt-out provision. Assume a Comcast customer subscribes to a bundle of cable television and Internet with Xfinity (the "Xfinity bundle") for $100 per month. If the customer drops her cable television service but is allowed to access Xfinity pursuant to the à-la-carte requirement, then her new monthly charge is equal to the standalone (penalty) price of cable modem service ($60 per month) and the standalone price of Xfinity (to be set by Comcast). Accordingly, an OTT provider inducing an Xfinity bundle customer to cut the TV cord has a monthly margin of $40 less the standalone price of Xfinity less the marginal cost of supplying online video service. If Comcast sets the standalone price of Xfinity at $40 per month, then the margin for the OTT provider vanishes. However, if Comcast customers may opt out of Xfinity at a rebate equal to the standalone price

of Xfinity, then Comcast's incentive to squeeze OTT providers will be tempered. Continuing this example, if Comcast charges $40 per month for Xfinity, then a Comcast customer paying $100 per month for the Xfinity bundle who opts out of Xfinity would save $40, reducing her bill from $100 to $60 per month for a bundle of cable television and cable Internet service.

48. I understand that one remedy under consideration is to compel Comcast to unbundle its Xfinity service from its digital cable television service for Comcast's cable television customers only. In our option, this remedy would not effectively promote the development of online video. Such a limited requirement would leave customers no motivation to cut the cord and leave OTT providers no entrée into the MVPD market. Supposing the à-la-carte remedy were limited to existing Comcast television customers, a Comcast Internet-only subscriber could not access Xfinity—nor could a Verizon DSL or FiOS customer. Without access to Xfinity, customers would be disinclined to cut the TV cord and transition to an online video service; cutting the cord would mean loss of access to the must-have online content in Xfinity, including the soon-to-be-affiliated NBCU must-have online content likes sports and news that currently resides on Hulu and NBC.com. With little prospect for competition from OTT providers, the price of Comcast's cable television service would remain stubbornly high. In contrast, when Comcast is compelled to sell Xfinity to all comers on a standalone basis, OTT providers could thrive and thereby impose significant price disciple on Comcast's cable television service. Limiting the à-la-carte remedy to Comcast's cable television customers would be merely reinforcing Comcast's anticompetitive tie-in; no one could access Xfinity without authenticating a subscription to Comcast cable television. In sum, if Comcast is not compelled to sell Xfinity on an à-la-carte basis to all comers, then Comcast customers would not likely switch to an OTT provider because they would lose access to the must-have content that is exclusive to

Xfinity. This argument presumes that customers of an OTT provider could not access NBCU's online properties via alternative sites such as Hulu and NBC.com.

49. To be fair, a limited à-la-carte requirement might allow Comcast customers to purchase a rival online video service with the rebate from opting out of Xfinity. However, depending on how Comcast priced its standalone cable television service (that is, without Xfinity), this opportunity could be severely limited. For example, if Comcast offered its cable television customers a $5 per month rebate for opting out of Xfinity, the OTT providers would have $5 of margin (before considering their costs) within which to lure Comcast customers to their online portals. Even if OTT providers could earn a profit at $5 per month in revenues, there is still no assurance they would thrive without access to the must-have online programming behind the Xfinity portal. In sum, OTT providers can only benefit consumers if OTT providers can add as much value as consumers lose by cutting the cord. By linking Xfinity access—which would include NBCU's must-have online content if the transaction were approved—to a Comcast cable television subscription, the value OTT providers add is largely attenuated.

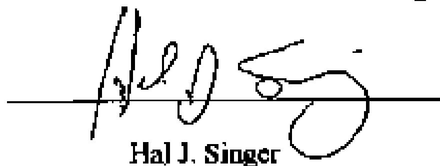
CONCLUSION

50. Having fully considered the reply by Comcast and its economists, I continue to believe that the proposed transaction would reduce competition in the supply of MVPD services. NBCU's broadcast programming is must-have content, and as the Commission recognized in its 2007 *Sunset Order*, "a competitive MVPD's lack of access to popular *non-RSN networks* would not have a materially different impact on the MVPD's subscribership than would lack of access to an RSN." The best way for the Commission to preserve competition from Comcast's traditional MVPD rivals and from nascent OTT providers is to ensure that non-Comcast customers have access to NBCU's must-have content. Comcast has proven routinely that the non-discrimination provisions in the Cable Act are gameable. Comcast will not efficiently price

its affiliated, must-have content—that is, price the content as if it were an independent network—until it is exposed to the possibility that a Comcast subscriber may opt out of a network from Comcast's digital tier at a rebate equal to the wholesale price. Similarly, OTT providers will not get their legs under them until Comcast is barred from requiring authentication to access Fancast Xfinity TV or its other must-have online programming.

* * *

I declare under penalty of perjury that, to the best of my knowledge and belief, the foregoing is true and correct. Executed on August 19, 2010.



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