

programming carried by Comcast systems should not be viewed as a public interest concession.

Applicants have, in other words, offered no cognizable public benefit to offset the very real public interest harms that would flow from the proposed transaction. Had they wanted to make meaningful commitments with real-world significance, they could easily have done so. For example, Comcast could have committed to make Philadelphia sports programming available to all MVPDs, ending over a decade in which many viewers were disenfranchised and competition suffered. Similarly, NBCU could have committed to offer other MVPDs the same agreement it negotiated with Comcast for free VOD programming, expanding output and making more content available to more viewers nationwide.¹⁸³ In the absence of substantial commitments such as these, the case for substantial conditions is all the stronger.

¹⁸³ Application at 54.

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EXHIBIT A

**ECONOMIC ANALYSIS OF THE IMPACT OF THE PROPOSED
COMCAST/NBCU TRANSACTION ON THE COST TO MVPDS OF
OBTAINING ACCESS TO NBCU PROGRAMMING**

June 21, 2010

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1. I have been asked by Counsel for DIRECTV to consider the likely economic impact on Multichannel Video Programming Distributors (“MVPDs”) of the proposed creation of a joint venture by Comcast Corporation (“Comcast”) and General Electric (“GE”) (collectively, the “Applicants”) to combine the companies’ entertainment businesses. In particular, I have been asked to consider how combining ownership of Comcast’s cable operations – both its distribution (cable systems) and content (cable networks) – with the broadcast and cable programming business of GE’s subsidiary NBC-Universal (“NBCU”) could affect the cost to MVPDs of obtaining access to NBCU programming.

2. I have reviewed the submission to the Federal Communications Commission (“FCC”) by Mark Israel and Michael L. Katz on behalf of the Applicants titled *Application of the Commission Staff Model of Vertical Foreclosure to the Proposed Comcast-NBCU Transaction*. Israel and Katz apply a revised version of the framework previously developed by the FCC “to analyze the issue of vertical foreclosure in the News Corp./DirecTV transaction.”² In their report, Israel and Katz conclude that “[s]trategies involving permanent foreclosure or repeated temporary foreclosure against multiple MVPDs would run a very significant risk of severely damaging the economic value of the NBC broadcast network—a risk that very likely would outweigh any potential benefits of foreclosure.”³ They also conclude that there is “no evidence of any positive effect on Comcast’s penetration rate resulting from the disruptions affecting DISH Network”⁴ when DISH lost retransmission rights for certain broadcast signals.

3. I discuss later several specific concerns about both the framework and implementation of the Israel-Katz analysis. However, the main issue I address in my report is the likely impact of the transaction on the cost of licensing NBCU programming. This is related to, but not the same as, the issue that Israel-Katz address; in particular, it is possible that MVPDs that compete with Comcast will pay higher retransmission rates for NBC stations and other programming after the

² *Application of the Commission Staff Model of Vertical Foreclosure to the Proposed Comcast-NBCU Transaction*, February 26, 2010 (hereafter, “Israel-Katz Report”) ¶ 2.

³ Israel-Katz Report ¶ 10.

⁴ Israel-Katz Report ¶ 102.

joint venture is formed, even if the likelihood of observing temporary or permanent foreclosure were not to have changed meaningfully.

4. I focus in particular on the impact of the proposed transaction on the retransmission rate that NBCU obtains for the right to carry NBC owned and operated stations (“O&Os”), although that same framework also could apply to other programming controlled by the merged firm that, if denied to an MVPD that competes with Comcast, could reduce the MVPD’s subscribership. As I explain, the impact of the proposed transaction on Comcast’s MVPD competitors depends on several factors including: (1) the “departure rate,” or the percentage loss of an MVPD’s subscribers when the MVPD does not carry NBC O&Os; (2) the profitability to the MVPD of each of those lost subscribers; (3) the fraction of the MVPD’s lost subscribers that switches to Comcast; and (4) the advertising revenues (or other benefits) that NBC loses if the MVPD does not carry the NBC programming. These factors affect the parties’ bargaining positions when they negotiate retransmission fees, and thus the terms to which they ultimately agree. Comcast’s vertical integration into ownership of the NBC network and NBC O&Os reduces the loss to the owner of NBC assets from an outcome where a competing MVPD does not carry these stations. This shifts bargaining power to the programming owner and away from competing MVPDs.

5. My analysis follows as a matter of economic logic from the observation that NBC currently chooses to negotiate retransmission fees with MVPDs for O&Os, rather than invoke “must carry” status and force them to carry these stations.⁵ DIRECTV and other MVPDs currently compensate NBC for the right to carry NBC’s O&Os.⁶ This fact alone implies that the “departure rate” cannot be zero or extremely low – MVPDs would only pay NBC for the right to retransmit NBC broadcast stations if they would lose a non-negligible share of their subscribers (or equivalently have to reduce subscriber fees) if they did not carry NBC stations.⁷ If the

⁵ See 47 C.F.R. § 76.64 (describing interaction of must-carry and retransmission consent regimes); 47 C.F.R. § 76.66 (same for satellite)

⁶ As Israel-Katz note, “[i]t is important to be clear ... that the empirical analysis reported in this section is not testing whether broadcast stations’ retransmission rights are valuable to MVPDs and their subscribers. They clearly are.” (Israel-Katz Report at ¶ 92).

⁷ The Congressional Research Service reported a 72.8 percent average weekly cumulative market reach for NBC in the first quarter of 2007 (CRS Report for Congress, “Retransmission Consent and Other Federal Rules Affecting

“departure rate” were zero, meaning that MVPDs would lose no subscribers if they did not carry NBC stations, then economics predicts that negotiated retransmission fees (absent a must-carry option) would be *negative*: NBC would pay MVPDs to carry NBC stations (otherwise, NBC would not earn the associated advertising revenue). In this case, NBC would invoke “must carry” status to force MVPDs to carry its O&O stations for free. The economic framework developed below allows me to infer the departure rate associated with NBC stations, using values from Israel and Katz’ analysis. I conclude that observed retransmission fees are consistent with a departure rate of about {{ }} percent.⁸

6. Using this same framework, I then estimate the potential impact of the proposed transaction on negotiated retransmission rates for NBC O&Os. Using the Israel-Katz estimates as inputs, I find that in the seven DMAs where NBC has O&Os and Comcast has a cable system, retransmission fees (if unrestrained by other forces) could increase by between {{ }}. Post-transaction, retransmission fees for NBC owned and operated stations in these markets may be higher than the license fees that MVPDs pay for all but the most expensive cable networks.

7. The rest of my report is organized as follows. First, I present the economic framework and theory that forms the basis of my analysis. Second, I use data observed in the marketplace to quantify the expected impact of the proposed transaction on fees for retransmission rights to NBC programming. Third, I explain why the Israel-Katz framework and resulting conclusions are inconsistent with observed marketplace outcomes.

I. The General Approach

8. My general approach is to use real-world evidence on the outcomes of negotiations over retransmission rights, combined with other economic evidence such as NBC advertising

Programmer-Distributor Negotiations: Issues for Congress” (Order Code RL34078), July 9, 2007). This suggests the importance of NBC programming to MVPD subscribers.

⁸ I estimate that a loss of NBC’s O&Os would result in a {{ }} percent decline in subscriber demand for an individual MVPD. I estimate that this would result in a loss of {{ }} percent of its subscribers, with the remaining demand loss absorbed by a decline in the prices charged to its remaining subscribers.

revenues and MVPD margins, to infer how retransmission rates could change with the proposed transaction. I do this by combining empirical evidence with an economic model where NBC and MVPDs bargain over retransmission fees.

9. My approach is motivated by several observations about the economic context. One observation is that NBC stations and MVPDs’ distribution-related assets are complementary, and thus there are gains from trade when the MVPD carries an NBC station. More viewers have access to an NBC station when it is carried by MVPDs than when it is not, and an MVPD’s subscribers’ willingness to pay for subscriptions is higher when the MVPD carries the NBC station than when it does not. Evidence regarding the gains from trade in this context is that DIRECTV has offered an NBC broadcast station in every DMA where it has found it economical to offer “Local-Into-Local” (“LIL”), or to make local broadcast stations available to subscribers.

10. A second observation is that retransmission rates are determined through bilateral negotiations between NBC and MVPDs, which suggests that neither NBC nor MVPDs are price-takers. Rather, each has some degree of power to negotiate price. On the programming side, this is true for affiliates of the other major networks, and even for stations affiliated with minor networks. At the same time, the ability to negotiate terms is likely to vary across owners of programming and across MVPDs – for example, smaller MVPDs may have less ability to negotiate favorable terms.

11. Third, the joint gains from trade between NBC and MVPDs are manifested in two revenue streams: advertising revenues and MVPD subscription revenues. NBC collects the former from advertisers, while MVPDs collect the latter from subscribers.⁹

12. Fourth, retransmission fees are transfers between MVPDs and NBC. These fees allocate the joint gains from trade, relative to a split where NBC and the MVPD each keeps what it collects itself from advertisers and subscribers. In principle, these transfers could flow in either direction; an MVPD could pay NBC for the right to carry NBC stations or NBC could pay an MVPD to carry NBC stations. In other words, negotiated retransmission fees could be either

⁹ MVPDs also collect some advertising revenue, but I ignore that revenue stream here.

positive or negative, with a large potential range bounded by a fee structure under which NBC pays the MVPD all the incremental broadcast revenues it collects from advertisers associated with access to the MVPD's subscribers and a fee structure under which the MVPD pays NBC all of the incremental profit it gains from carrying NBC programming.

13. Fifth, whether NBC chooses to negotiate retransmission fees or chooses "must carry" provides important evidence: NBC would only choose to negotiate retransmission fees in circumstances where it expects these fees to be positive, flowing from an MVPD to NBC. This is useful because the terms upon which NBC and MVPDs agree are sometimes complicated, involving for example agreements to carry cable networks on specific tiers in lieu of a cash fee. In such cases, it can be hard to assess the value of these or other non-pecuniary provisions. However, the fact that NBC chooses to negotiate retransmission fees indicates that, whatever the terms of the agreement, value is flowing from the MVPD to NBC – the retransmission fee is effectively at least zero.

14. These observations lead me to use an economic model of bargaining to help interpret current economic outcomes in this market with respect to retransmission, and what they imply for how the proposed transaction might affect the fees that MVPDs pay for the right to carry NBC stations.

II. Nash Bargaining

15. Retransmission consent negotiations are an example of a situation where two parties benefit from transacting with each other relative to their next best alternative. In such situations, the terms of trade tend to be determined through bilateral negotiation. Economists use bargaining models to analyze what terms of trade result in such situations. These terms of trade (e.g., a price or license fee) determine how the joint benefits from the transaction are split between the two parties. Bargaining models have been used to explain outcomes in recent retransmission fee negotiations.¹⁰ The best-known is the "Nash bargaining model."¹¹

¹⁰ William P. Rogerson, "An Economic Analysis of the Competitive Effects of the Takeover of DIRECTV by News Corp." MB Docket No. 03-124 (June 13, 2003) (e.g., pp. 17-21).; Katz, Michael L. et. al. "An Economic Analysis

16. The basic idea of bargaining models is that the two parties in a bilateral negotiation split the joint benefits from their transaction such that each obtains what it could get in its next best alternative (e.g., buying from or selling to another party), plus some share of the incremental gain that the two parties jointly generate from the transaction. A common assumption is that the parties split the incremental surplus equally, with each getting one half.¹² A key feature of these models is that a party receives a greater share of the overall value, the better its “bargaining position” or “fallback payoff” – what it would receive in its next best alternative (i.e., without the transaction) – relative to the other party. This provides the economic logic, which I explain below, for why a merger with Comcast would lead NBCU to do better when negotiating retransmission fees with Comcast’s MVPD competitors than when NBCU was not owned by an MVPD. NBCU likely will improve its bargaining position through the merger, because a breakdown of negotiations that resulted in NBCU stations becoming unavailable on Comcast’s MVPD competitors would lead benefits to flow to the owner of NBCU-Comcast if it resulted in subscribers of other MVPDs switching to Comcast. Before the merger, these benefits would not accrue to the owner of NBCU, because its financial interests were separate from Comcast’s.

17. Below I describe and apply a bargaining model to estimate how much retransmission fees for NBC’s owned and operated stations could increase after an NBCU-Comcast merger. I begin by describing the economics underlying a Nash bargaining model, and then apply the framework to evaluate the impact of the proposed transaction.

18. Assume that a transaction between two companies can generate gains from trade, meaning that each party can do better than its fallback position. I assume that the joint value generated by an agreement between the two parties is T (i.e., that there is some price at which the parties would jointly benefit from reaching an agreement). The firms then negotiate how to split

of Consumer Harm from the Current Retransmission Consent Regime,” GN Docket Nos. 09-47, 09-51 and 09-137 (November 12, 2009) (hereafter, “Katz 2009 RTC Report”) (e.g., ¶¶ 16-29).

¹¹ In economic jargon, the Nash bargaining solution has several attractive properties: it is the unique solution that is Pareto efficient, satisfies independence of irrelevant alternatives, and where the agents’ payoffs are invariant to affine transformations.

¹² The assumption that each party receives half of the incremental surplus may not hold for all transactions. In particular, smaller MVPDs may be more like price takers and receive a smaller fraction of the surplus.

these gains from trade. Each firm knows its “fallback payoff” – the profits that the firm would earn if trade did not occur. I refer to this fallback payoff for the first party as F_A , and the fallback payoff of the second party as F_B . The Nash bargaining solution (when the firms split the gains equally) implies that the firms receive payoffs P_A and P_B , which can be represented as:

$$(1) \text{ Payoff}_A = F_A + \frac{1}{2}*(T - F_A - F_B)$$

$$(2) \text{ Payoff}_B = F_B + \frac{1}{2}*(T - F_A - F_B).$$

19. Firm A’s realized payoff equals its fallback payoff plus half of the gains from trade, $(T - F_A - F_B)$. Firm B’s payoff is the equivalent. The gains from trade equal the joint payoff when trade occurs, T , minus the sum of the firms’ fallback payoffs.

20. A simple numerical example illustrates the Nash bargaining solution. Assume that two parties, Firm A and Firm B, negotiate an agreement. Assume that, absent agreement, Firm A receives a payoff of 100 and Firm B receives a payoff of 200, but if they reach an agreement their joint payoff is 320. This means the gains from trade – or the joint benefit to reaching agreement – is 20 $(= 320 - (100 + 200))$. Nash bargaining implies that the parties will share equally in the gain of 20: the payoff to Firm A will be 110 $(= 100 + \frac{1}{2}(20))$ and the payoff to Firm B will be 210 $(= \frac{1}{2}(20) + 200)$. Both clearly are better off from reaching agreement.

21. It is useful to rewrite equations (1) and (2) as:

$$(3) \text{ Payoff}_A = \frac{1}{2}*(T + F_A - F_B)$$

$$(4) \text{ Payoff}_B = \frac{1}{2}*(T + F_B - F_A).$$

These equations illustrate an important implication of the Nash bargaining solution: that a firm’s payoff is greater the better its fallback payoff relative to its bargaining partner. Data on (1) the value of the joint gains from trade and (2) evidence of how those gains are split between the parties permit an inference about $F_A - F_B$ – the difference in the firms’ “fallback payoffs.” It also is possible to infer how a change in one firm’s “fallback payoff” caused by a change in its operations will affect how the parties split the gains from trade.

III. Application of Nash Bargaining to Negotiations over Retransmission Fees

A. Applying the Framework

22. The Nash bargaining framework described above can be applied to understand negotiations between NBC and an MVPD for retransmission rights, and to infer current departure rates from NBC's decision to elect retransmission consent (rather than "must carry" status) and observed levels of retransmission fees.¹³ Using the example above, the predicted distribution of the gains from trade from reaching agreement between NBC and an MVPD can be illustrated as follows. Assume, as above, that the gains from trade are 20. Assume the following:

NBC's profits if it does not reach a deal with the MVPD = 100

NBC's profits (exclusive of the retransmission fee received from the MVPD) if it reaches a deal with the MVPD = 105

MVPD's profits if it does not reach a deal with NBC = 200

MVPD's profits if it reaches a deal with NBC = 215

Gains from trade in this case are equal to the combined payoffs from agreement, $105 + 215$, minus total payoffs without agreement, $100 + 200$, so that the net gains from trade are $(105 + 215) - (100 + 200) = 20$. Nash bargaining results in each party receiving \$10 more than its fallback payoff. This implies a value of 110 ($= 100 + 10$) for NBC and 210 ($= 200 + 10$) for the MVPD. In equilibrium the MVPD will pay NBC 5 for the programming (in the form of a retransmission fee), because that provides NBC with the required payoff of 110 ($= 105 + 5$) and the MVPD with the required payoff of 210 ($= 215 - 5$). This also can be seen by noting that, absent a payment from the MVPD, NBC would gain 5 from the deal, while the MVPD would gain 15.

¹³ The framework is not specific to negotiations between NBC O&Os and MVPDs, but could apply generally in understanding licensing agreements between broadcast stations or cable networks and MVPDs, or indeed between any licensors of "content" and content distributors.

23. I now provide a more general model of the outcome of negotiations over a license to carry an NBC owned-and-operated station in a given local market. I assume there are three MVPDs – MVPD₁, MVPD₂, and Comcast, (which I designate with the subscripts “1,” “2,” and “c,” respectively). I represent the outcome where MVPD₁ carries the NBC station by “N=1” and where MVPD₁ does not carry the NBC station by “N=0.” I focus on the terms upon which MVPD₁ carries the NBC station, and assume that both Comcast and MVPD₂ have chosen to carry the NBC station.

24. Following the general framework above, I specify the relevant parameters for understanding negotiating outcomes: T , the total gains from trade (equal to the combined profits of NBC and MVPD₁ in the local market when NBC is carried by MVPD₁); F_A , NBC’s fallback payoff (NBC’s profits in the local market if MVPD₁ does not carry NBC); and F_B , MVPD₁’s fallback payoff (MVPD₁’s profits in the local market if it does not carry NBC):

$$(5) T = (b + r_c)Q_c(N = 1) + (b + r_2)Q_2(N = 1) + (b + P_1(N = 1))Q_1(N = 1)$$

$$(6) F_A = (b + r_c)Q_c(N = 0) + (b + r_2)Q_2(N = 0) + abQ_1(N = 0)$$

$$(7) F_B = P_1(N = 0)Q_1(N = 0)$$

Here,

b = broadcast ad revenues.

r_c = retransmission rate NBC receives from Comcast.

r_2 = retransmission rate NBC receives from MVPD₂.

a = share of MVPD₁’s “stayers” that watch NBC over the air or online if MVPD₁ does not carry NBC.

$Q_c(N = 1)$: Comcast subscribers, if MVPD₁ carries NBC.

$Q_1(N = 1)$: MVPD₁ subscribers, if MVPD₁ carries NBC.

$Q_2(N = 1)$: MVPD₂ subscribers, if MVPD₁ carries NBC.

$Q_c(N = 0)$: Comcast subscribers, if MVPD₁ does not carry NBC.

$Q_1(N = 0)$: MVPD₁ subscribers, if MVPD₁ does not carry NBC.

$Q_2(N = 0)$: MVPD₂ subscribers, if MVPD₁ does not carry NBC.

$P_1(N = 1)$: MVPD₁ price (to subscribers), if MVPD₁ carries NBC.

$P_1(N = 0)$: MVPD₁ price (to subscribers), if MVPD₁ does not carry NBC.

25. Equation (5) states that the joint gains from trade equal NBC's advertising and retransmission profits from subscribers of Comcast and MVPD₂, plus NBC's and MVPD₁'s joint profits from MVPD₁ subscribers when MVPD₁ carries NBC. Equation (6) states that NBC's fallback payoff equals the amount it receives in advertising and retransmission profits from subscribers to Comcast and MVPD₂ when MVPD₁ does not carry NBC, plus its advertising revenues from MVPD₁ subscribers who obtain the NBC station over the air or on line. Equation (7) states that MVPD₁'s fallback payoff equals its profits when it does not carry NBC.¹⁴

26. I can solve for $Payoff_A$ by substituting equations (5)-(7) into equation (3) to obtain NBC's payoff – what it receives assuming that it negotiates retransmission consent with MVPD₁:

$$(8) \quad Payoff_A = \frac{1}{2}*(Eq(6)) + \frac{1}{2}*(Eq(5) - Eq(7)), \text{ or}$$

$$(9) \quad Payoff_A = \frac{1}{2}[(b + r_c)Q_c(N = 0) + (b + r_2)Q_2(N = 0) + abQ_1(N = 0)] + \frac{1}{2}[(b + r_c)Q_c(N = 1) + (b + r_2)Q_2(N = 1) + bQ_1(N = 1) + P_1(N = 1)Q_1(N = 1) - P_1(N = 0)Q_1(N = 0)]$$

I then use Equation (9) to obtain an expression for r^* , the retransmission rate per subscriber that NBC receives from MVPD₁, by subtracting from NBC's payoff the amount that NBC collects directly (broadcast advertising revenues from all MVPDs plus retransmission revenues from the other MVPDs) and dividing by $Q_1(N = 1)$, the number of MVPD₁ subscribers when MVPD₁ carries NBC. I find that r^* is:

¹⁴ For notational simplicity, I assume throughout that marginal costs equal zero for both parties, so MVPD₁'s price equals its margin. When applying the model below, I use evidence on MVPD margins in my calculations.

$$(10) \quad r^* = \frac{1}{2} [d(r_c \alpha + r_2(1 - \alpha)) - (1 - d)(1 - a)b] + \frac{1}{2} [P_1(N = 1)d + (P_1(N = 1) - P_1(N = 0))(1 - d)]$$

Here, d is the departure rate, α is the share of switchers that moves to Comcast (the “diversion rate”), and $(1 - \alpha)$ is the share of switchers that moves to MVPD₂. These, in turn, can be written as:

$$(11) \quad d = \frac{Q_1(N=1) - Q_1(N=0)}{Q_1(N=1)}, \alpha = \frac{Q_c(N=0) - Q_c(N=1)}{Q_1(N=1) - Q_1(N=0)}, 1 - \alpha = \frac{Q_2(N=0) - Q_2(N=1)}{Q_1(N=1) - Q_1(N=0)}$$

27. The economic intuition behind Equation (10) is as follows. The first square bracketed term is what NBC’s retransmission rate would be if NBC received only its fallback payoff. The first part of this term is the share of NBC’s retransmission revenues from current MVPD₁ subscribers that is *not* dependent on coming to terms with MVPD₁, this is what NBC would continue to receive from subscribers that switch from MVPD₁ to Comcast or to MVPD₂ when NBC no longer is available on MVPD₁ (“switchers”). The second part of this bracketed term is the share of NBC’s broadcast advertising revenues (again, from current MVPD₁ subscribers) that *is* dependent on coming to terms with MVPD₁; this is what NBC loses from households that do not switch MVPDs and do not obtain the signal otherwise.¹⁵

28. The magnitude and sign of the first square bracketed term depends on NBC’s “fallback payoff.” That payoff is high when the departure rate is close to one, because then NBC continues to receive broadcast ad revenues and retransmission revenues from MVPD₁’s current subscribers, even if MVPD₁ does not carry NBC. In contrast, NBC’s “fallback payoff” is low when the departure rate is close to zero. Importantly, if the departure rate were zero or very low, then the bracketed term could be negative: NBC’s “fallback payoff” would involve NBC’s paying MVPD₁ some part of the advertising revenues associated with MVPD₁’s carriage of NBC.

¹⁵ This also could capture possible lower advertising price per viewer from reducing the total viewership of NBC programming (which Israel-Katz claim is meaningful). See, Israel-Katz Report ¶ 68.

29. The second square bracketed term in Equation (10) is what NBC would receive per current MVPD₁ subscriber if MVPD₁ only received its fallback payoff (i.e., all of the gains from trade accrued to NBC). It is equal to how much MVPD₁'s profits per current customer would fall if it did not carry NBC. The loss of profits to MVPD₁ come in two forms: a reduction in subscribers (the first term) and price concessions made to retain subscribers (the second term).

30. I can rewrite equation (10) as:

$$(12) \quad r^* = \frac{1}{2} [d(r_c \alpha + r_2(1 - \alpha)) - (1 - d)(1 - a)b] + \frac{1}{2} P_1(N = 1)dk$$

where

$$(13) \quad k = \frac{P_1(N=1)Q_1(N=1) - P_1(N=0)Q_1(N=0)}{P_1(N=1)(Q_1(N=1) - Q_1(N=0))}$$

In words, k equals one over the share of MVPD₁'s decrease in profits that is attributable to the reduction in MVPD₁'s quantity, holding constant its price.

31. This analysis provides two important results. First, *r^* is increasing in d , the departure rate*. A higher departure rate implies both that NBC's "fallback payoff" is better and that MVPD₁'s profits are more dependent on carrying NBC. Both of these effects would increase NBC's payoff when negotiating with an MVPD.

32. *Second, if the departure rate is zero when MVPD₁ loses the NBC station but keeps the subscription price constant, then a negotiated retransmission rate necessarily will be negative.* The economics behind this are simple: if $d=0$ when MVPD₁ keeps price constant, then MVPD₁'s demand is not dependent on carrying the NBC station and therefore MVPD₁ would not be willing to pay anything for the right to carry NBC programming. In that case, MVPD₁'s profits do not change when it does not carry NBC, and NBC's fallback payoff is poor. NBC has no leverage with which to induce MVPD₁ to pay a fee for content that does not increase MVPD₁'s profits. Instead, absent "must carry" provisions, NBC would have to pay MVPD₁ for access to viewers; MVPD₁ effectively would be able to extract from NBC some of the revenues that NBC collects from advertisers as a result of carriage on MVPD₁.

33. Thus, observations of retransmission fees that have been negotiated in the past provide evidence about the degree to which an MVPD's demand from subscribers is adversely affected by the absence of NBC from the MVPD's lineup and thus whether the departure rate holding the MVPD's price constant exceeds zero. Because NBC receives positive retransmission fees – or, more generally, NBC chooses not to invoke the “must carry” provision that would force MVPDs to carry its O&Os at a zero fee – I know that MVPDs' demand is dependent on carrying NBC stations. Indeed, as I show below, the “constant price” departure rate must exceed a minimum threshold. This is economic evidence that carriage of NBC stations provides additional revenue to MVPDs and that NBC's fallback payoff is not extremely poor.

B. Applying the Bargaining Model To Estimate Departure Rates

34. The prevalence of positive retransmission rates for NBC stations is evidence that MVPDs' demand from subscribers is sensitive to whether NBC stations are part of their lineup. As I now explain, given information about retransmission rates, broadcast advertising revenue, and MVPD margin, I can estimate the departure rate by solving for d in Equation (12):

$$(14) \quad d = \frac{2r^* + (1-a)b}{(r_c\alpha + r_2(1-\alpha)) + (1-a)b + P_1(N=1)k}$$

Equation (14) shows how the departure rate, d , depends on the (realized) retransmission fees, broadcast ad revenues, the MVPD's margin, and the portion of the profit reduction that the MVPD would incur if it did not carry NBC that is accounted for by reduced quantity.¹⁶

35. NBC always can guarantee an outcome no worse than $r^*=0$ by invoking “must carry,” rather than retransmission consent, so assuming $r^*=0$ in Equation (14) provides a lower bound for the departure rate:

$$(15) \quad d > \frac{(1-a)b}{(r_c\alpha + r_2(1-\alpha)) + (1-a)b + P_1(N=1)k}$$

¹⁶ Since the terms in equation (12) are measurable empirically, I can estimate the departure rate that is reflected today in MVPDs' payments for retransmission rights to NBC stations (which I do later in my report).

This lower bound is useful because historical retransmission negotiations have produced agreements where broadcast stations are paid through compensation that is not measured only in dollars, but instead involves required carriage of other new or less desirable networks or positioning on particular subscription tiers. In such cases, the retransmission fee r^* is implicit, but not directly observed, but a lower bound for the departure rate can be determined using equation (15).

36. I also can use these equations to infer “constant price” departure rates that would obtain if MVPD₁ did not change its price to subscribers in response to losing an NBC station. The “constant price” departure rate is informative, because it better measures how much MVPD₁’s demand decreases if it loses an NBC station. I obtain an analogous equation and bound for the “constant price” departure rate by simply multiplying both sides of equations (14) and (15) by k . If the share of the profit decrease from the elimination of an NBC channel from an MVPD’s lineup that is accounted for by the decrease in subscribers is X percent, then $k = 1/(.01 * X)$ and I can obtain the “constant price” departure rate by dividing d by $(.01 * X)$.

C. Estimating the Effect of the NBC-Comcast Merger on Retransmission Fees from the Bargaining Model

37. I now extend the analysis to examine how the proposed transaction will affect the departure rate and thus the likely retransmission fees paid by MVPDs for NBC programming. If NBC and Comcast are jointly operated, it could affect F_A (NBC’s fallback payoff) during negotiations over retransmission consent. As owner of NBC stations, Comcast could have a better fallback payoff because subscribers who switched from an MVPD to Comcast would give Comcast an incremental margin (from Comcast’s cable operations) to offset the loss of retransmission fees and broadcast advertising revenues. This is shown in Equation (16):

$$(16) \quad F_{1,I} = (b + P_c(N = 0))Q_c(N = 0) + (b + r_2)Q_2(N = 0) + abQ_1(N = 0)$$

38. The determination of the retransmission fee follows the same logic as above, with $P_c(N = 0)$ replacing r_c in Equation (12):

]].¹⁹

- $k = \{\{ \quad \}\}$. As I discuss below, the evidence from Klein et al.'s and Kunz's studies of the effects of local channels on DIRECTV's and DISH's subscriber levels, respectively, $\{\{$

$\}\}$. (See Appendix A for details of this

calculation.)

Using these assumptions yields an estimate of the departure rate associated with the loss of a single NBC station of $\{\{ \quad \}\}$ percent.

40. I obtain an estimate of the "constant price" departure rate by multiplying this value by k . My estimate of the constant price departure rate is therefore $\{\{ \quad \}\}$ percent. This means that approximately this percentage of the competing MVPD's subscribers would switch MVPDs if the MVPD did not offer NBC stations and the MVPD did not compensate for the loss of the NBC stations by a change in its pricing to subscribers. Current retransmission rates, given the values of the other parameters in the model above, imply that an MVPD's demand would decrease considerably (by roughly $\{\{ \quad \}\}$ percent) if it did not offer NBC stations.

¹⁹ For the fourth quarter 2009, SNL Kagan reported Comcast programming costs for a basic subscriber at $[[\quad]]$ and its video revenues as $[[\quad]]$. The difference between these is $[[\quad]]$. See, Ow, Michelle. "Bundling gains drive cable ARPU amid stagnant segment growth." March 30, 2010. SNL Kagan.; Ow, Michelle. "Programming costs expected to continue to rise in '10," June 2, 2010. SNL Kagan.