RETRANSMISSION CONSENT AND ECONOMIC WELFARE: A REPLY TO COMPASS LEXECON

JEFFREY A. EISENACH, PH.D.[†]
KEVIN W. CAVES, PH.D.[††]

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[†] Managing Director, Navigant Economics, and Adjunct Professor, George Mason University Law School.
[††] Associate Director, Navigant Economics.

Congress created retransmission consent in 1992 to ensure that broadcasters would be able to negotiate in a free marketplace for fair compensation for pay television providers' use of their signals. Prior to 1992, pay TV providers could and did retransmit and resell broadcasters' signals without their permission, and without providing any compensation.

The evidence shows that retransmission consent is achieving Congress' intended purpose of allowing broadcasters to receive an economically efficient level of compensation for the value of their signals, and that this compensation ultimately benefits consumers by enriching the quantity, diversity, and quality of available programming, including local broadcast programming.

A November 2009 Report by Compass Lexecon tries but fails to rebut this evidence.

- Lexecon's "consumer welfare" analysis is simply wrong. Lexecon's one-sided analysis counts the purported costs to consumers of retransmission consent, but ignores the benefits of broadcasting to the consumers and the economy. Based on Lexecon's methodology, one could also show that consumer welfare is reduced because utilities charge the cable companies for electricity while truck manufacturers refuse to provide free bucket trucks!

- Lexecon's analysis of broadcasters' bargaining power in retransmission consent negotiations is both incomplete and irrelevant. Lexecon points to the entry of new multichannel video programming providers (MVPDs), such as direct broadcast satellite (DBS) providers and telephone companies, as evidence of a more competitive MVPD market, but it fails to take into account cable company clustering, consolidation among cable companies, or the falling market share of over-the-air broadcasters, all of which work in the opposite direction. Moreover, Lexecon never even alleges that broadcasters have "too much" bargaining power, or that retransmission consent fees are "too high" from the perspective of economic efficiency.

- Lexecon's "game theory" model of bargaining power explicitly contradicts its consumer welfare analysis. Remarkably, a central premise of Lexecon's bargaining power model is that the level of retransmission consent fees has no effect on consumer welfare.

- Lexecon dramatically overstates the costs of retransmission consent. Lexecon overstates the impact of retransmission consent on consumer prices by a factor of two-to-one, and overstates the effect on MVPD subscribership by a factor of more than five-to-one.

- Lexecon fails to contradict evidence that negotiating impasses are extremely rare. Lexecon presents no evidence whatsoever to suggest that negotiating impasses have any significant impact on economic welfare. An analysis of impasses through 2009 shows that consumers are more than 20 times more likely to be deprived of television viewing by an electricity outage than by a bargaining impasse between broadcasters and MVPDs. Aggregate service interruptions from retransmission consent negotiating impasses represent approximately one one-hundredth of one percent of annual U.S. television viewing hours.

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- <u>Finally, Lexecon provides no evidence that programming costs, in general, or retransmission consent fees, specifically, have any significant impact on prices paid by MVPD subscribers.</u> In fact, retransmission fees make up a small fraction of programming costs, and an even smaller percentage of MVPD revenues. Moreover, the evidence shows that programming costs are rising slower than MVPD revenues, slower than other components of MVPD costs, and slower than MVPD profits.

MVPDs have strong incentives to try to get policymakers to tilt market outcomes in their favor. Because most MVPDs have some downstream market power, they would retain as profit at least a portion of any reductions in retransmission consent fees. It is thus easy to understand why the National Cable & Telecommunications Association, DIRECTV and DISH Network commissioned the Lexecon report. Lexecon, however, cannot and does not demonstrate that, when it comes to retransmission consent, "what's good for pay television providers is good for consumers."

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I. INTRODUCTION

In March 2009, I authored a report on *The Economics of Retransmission Consent* ("March 2009 Report") which was subsequently filed with the Federal Communications Commission ("FCC" or "Commission").[1] The report found that retransmission consent is a market-based mechanism that results in economically efficient prices for broadcast signals, and ultimately benefits consumers by enriching the quantity, diversity, and quality of available programming. I have been asked by the National Association of Broadcasters to comment on a report by Michael Katz, Jonathan Orszag, and Theresa Sullivan of Compass Lexecon, which was commissioned by the National Cable & Telecommunications Association, DIRECTV, and DISH Network, and filed with the Commission (the "Lexecon Report" or "Lexecon").[2] The Lexecon Report finds that "the extant [retransmission consent] system significantly harms consumer welfare through higher subscription fees and the periodic (and to consumers, unpredictable) loss of access to retransmitted broadcast signals."[3]

Lexecon's analysis is profoundly flawed and fundamentally incorrect. At the most basic level, Lexecon's allegation of consumer harm amounts to nothing more or less than the assertion that pay television providers would charge consumers less for video service if they could get access to one of their key inputs (broadcast signals) for free, and that consumers would be better off as a result. Of course, precisely the same thing could be said about electricity and bucket trucks. The obvious fallacy is that forcing electricity producers and truck manufacturers to give

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[1] Jeffrey A. Eisenach, "The Economics of Retransmission Consent," Empiris, LLC (March 2009) (hereafter, *March 2009 Report*).

[2] Michael Katz, Jonathan Orszag and Theresa Sullivan, "An Economic Analysis of Consumer Harm from the Current Retransmission Consent Regime" (November 12, 2009) (hereafter, *Lexecon Report*). The *Lexecon Report* claims to rebut some of the findings of the *March 2009 Report*.

[3] See *Lexecon Report* at 1.

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pay television operators their products for free would reduce the quantity (and quality) of electricity and bucket trucks supplied, and both pay television operators and, ultimately, consumers would suffer as a result. The same is true for broadcasting.[4]

More broadly, while Lexecon's findings are clothed in seemingly sophisticated analyses of bargaining power and demand elasticities, and supported with a healthy dose of "factual" evidence, its analyses are flawed or inapposite, and its facts are often irrelevant or misleading. To summarize briefly, the Lexecon Report asserts that there is a trend in the marketplace away from in-kind (or zero) compensation by MVPDs for broadcast signals, to cash compensation. This is an uncontested fact. It also notes that there are more varieties of MVPDs than there were in 1992 – another uncontested fact.[5] Relying on a highly stylized model of bargaining power, it argues that the advent of cash compensation is explained by the increasing bargaining power of broadcasters relative to MVPDs, which in turn results from increasing competition among MVPDs for programming. Finally, it claims that cash compensation for retransmission consent is *per se* harmful to consumers.

There are several problems with this analysis. First, Lexecon ignores changes in the marketplace, such as the advent of cable system clustering, a reduction in the share of viewers watching television over the air, and the increase in the availability and audience shares of non-broadcast programming, all of which have *reduced* broadcasters' bargaining power relative to MVPDs. Thus, Lexecon provides no basis for concluding that broadcaster bargaining power has increased (relative to MVPD bargaining power), and therefore cannot credibly argue that the

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[4] Lexecon "admits" to limiting its analysis to the effects of retransmission consent on consumers, ignoring the impact on broadcasters and MVPDs. See *Lexecon Report* at 4 ("We do not consider the economic welfare of the parties directly involved in retransmission consent bargaining: broadcasters and MVPDs.") What it fails to mention is that its analysis also ignores the dynamic or "second order" effects of retransmission consent on consumers. That is, in the absence of retransmission consent, consumers would be harmed by the reduction in the quantity and quality of broadcast programming that would result.

[5] *Lexecon Report* at 2.

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shift from in-kind to cash compensation is the result of a shift in bargaining power in the first instance.[6] Second, Lexecon fails to demonstrate that current (or anticipated future) levels of retransmission consent compensation are in any economically meaningful sense "too high" (any more than the price of bucket trucks is too high because it is greater than zero). When absent in such a finding, Lexecon's assertion of consumer harm is economically meaningless. Moreover, Lexecon ignores altogether the empirical evidence that (1) MVPDs' programming costs are rising less rapidly than their revenues, costs, and profits; and (2) retransmission fees make up only a tiny fraction of programming costs.

Beyond these fundamental flaws, Lexecon's analysis errs in other important respects. Lexecon's model of bargaining power is based on assumptions which explicitly contradict many of its other findings; the report makes a fundamental error in its choice of demand elasticities, which causes it to significantly overstate the relationship between MVPD prices and subscribership; it evidences confusion over the choice of relevant geographic markets; and, it incorrectly claims that negotiating impasses are more prevalent than prior research has shown.

In short, Lexecon fails to refute the conclusion of the March 2009 Report, that "[R]etransmission consent is achieving precisely what Congress intended it to achieve when it passed the 1992 Cable Act: Establishing a market based mechanism to ensure that broadcasters receive the economically efficient level of compensation for the value of their signals. Such compensation ultimately benefits consumers by enriching the quantity, diversity, and quality of available programming, including local programming."[7]

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[6] There are many alternative explanations. For example, it might be that the value of in-kind compensation, such as carriage of affiliated cable programming, has fallen, leading broadcasters to place a relatively higher value on cash.

[7] *March 2009 Report* at 41.

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The remainder of this paper is organized as follows. Section II explains why Lexecon's game-theoretic model of bargaining power is based on unrealistic factual assumptions about the market for broadcast signals, and also explains that the model is inconsistent with Lexecon's assertion of consumer harm. Section III explains the fallacies behind Lexecon's consumer welfare analysis, shows how the report errs in its estimation of price effects and the elasticity of demand, and demonstrates that the impact of retransmission consent compensation on MVPD subscribership is far less than Lexecon claims. Section IV updates the March 2009 Report's analysis of the frequency and impact of negotiating impasses, and finds that such impasses remain significantly less disruptive to consumer viewing than either electricity outages or cable system outages. Section V presents a brief conclusion.

II. LEXECON'S BARGAINING MODEL IGNORES KEY FACTS AND IS INCONSISTENT WITH ITS FINDING OF CONSUMER HARM

Lexecon proffers a game-theoretic model of bargaining power, the upshot of which is the obvious notion that the number of competitors on each side of a market affects the division of the "gains from trade" generated by transactions in that market. Specifically, the Lexecon model predicts that broadcasters' relative bargaining power is increased when multiple MVPDs compete to carry their signals, other things equal. Thus, it argues, entry by DBS providers and telephone companies since retransmission consent was enacted in 1992 has increased the amounts broadcasters can charge for retransmission consent.

As noted above, there are two fundamental problems with this analysis. First, the model looks only at one changed condition in the marketplace, but ignores others (such as cable system clustering and rising MVPD concentration). Second, the model is inconsistent with Lexecon's claim that increased retransmission consent fees reduce consumer welfare. Indeed, a central premise of Lexecon's bargaining model is that prices and output in the retail market, and hence consumer welfare, are completely unaffected by the size of retransmission fees.

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The first problem is an empirical one: Lexecon's analysis of relative bargaining power focuses on the increase in the types of MVPDs operating in most markets since 1992 as a result of DBS and telco entry. However, it ignores other factors – including cable system clustering, rising concentration in the national MVPD market, falling concentration in the video programming market, increasing competition between broadcasters and other content providers, and the declining audience share of over-the-air broadcasting – that *reduce* broadcasters' bargaining power.

As the March 2009 Report explained,[8] clustering reduces the number of cable systems in each local market, thereby increasing each remaining system's market share (and hence its bargaining power relative to a local broadcaster).[9] Thus, while there may be more *types* of MVPDs operating in each market (e.g., DBS, telco as well as cable), it is not at all clear that the actual *number* of MVPDs has increased, since, in 1992, there typically were *several* cable operators in each market (each serving a portion of the broadcaster's service area), whereas today (thanks to clustering) there are likely to be only one or two.[10]

The Lexecon Report also ignores the impact on bargaining power of the fact that concentration in the national market for distribution has increased over time, while concentration

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[8] See *March 2009 Report* at 20-21.

[9] Note that the size of the market is defined by the size of the broadcaster's service territory, a fact implicitly acknowledged by the *Lexecon Report* in its assumption that the surplus generated by reaching a retransmission consent agreement is the same in both the one-MVPD and two-MVPD scenarios. See *Lexecon Report* at 16 ("*As before*, suppose that carriage of the broadcaster's signal over all of the MVPDs in the market (now two instead of one) generates a total of \$6 million in incremental profits…." (*emphasis in original*)).

[10] The *Lexecon Report's* assertion (at 25. n. 48) that "the increase in clustering does not shift the balance of negotiating power; increased clustering just raises the stakes for *both* the broadcaster and the distributor," is simply wrong. If an impasse occurs, an MVPD loses the ability to distribute one of many channels to its customer base. This is true whether it serves 100 percent of the broadcaster's service area or 10 percent. On the other hand, a broadcaster risks losing distribution of its one and only signal to whatever portion of its service territory is served by the MVPD with which the impasse occurs. The proportion of a broadcaster's revenues at risk in a retransmission consent negotiation is thus a direct function of the market share of the MVPD with which it is negotiating. See also *March 2009 Report* at 21-23 (explaining why "when a local broadcast signal is pulled from a cable operator's channel lineup, the evidence suggests that broadcasters lose more"); see also Ken Binmore, Ariel Rubinstein, & Asher Wolinsky, "The Nash Bargaining Solution in Economic Modelling," *The RAND Journal of Economics* 17(2) (1986) 176-188 (explaining the role of variations in time and risk aversion among bargainers on bargaining outcomes).

in the market for programming has decreased.[11] Lexecon argues that national concentration is irrelevant, because "retransmission consent negotiations occur for local programming. Thus, local market shares are the most appropriate metrics to examine."[12] But this ignores the fact that that retransmission consent agreements are often negotiated between broadcasters and MVPDs that operate in multiple markets. As the March 2009 Report explains, "[w]hile broadcast programming is inherently local, retransmission negotiations often involve broadcasters who own stations in multiple markets (e.g., Fisher Communications) negotiating with MVPD operators who distribute programming in many of those same markets (e.g. Dish Network)."[13] National concentration ratios are one way of measuring the relative bargaining power of the parties in such regional or national negotiations.[14]

Lexecon also ignores the effect on bargaining power of the rise in MVPD subscribership since the passage of the 1992 Cable Act. As Figure One below illustrates, less than two-thirds of TV households subscribed to MVPD service in the early 1990s. By 2008, this figure had climbed to nearly 90 percent. As a result, the importance of multichannel distribution as a means of retransmitting broadcast signals to a broad audience is substantially greater than it was when Congress enacted retransmission consent.

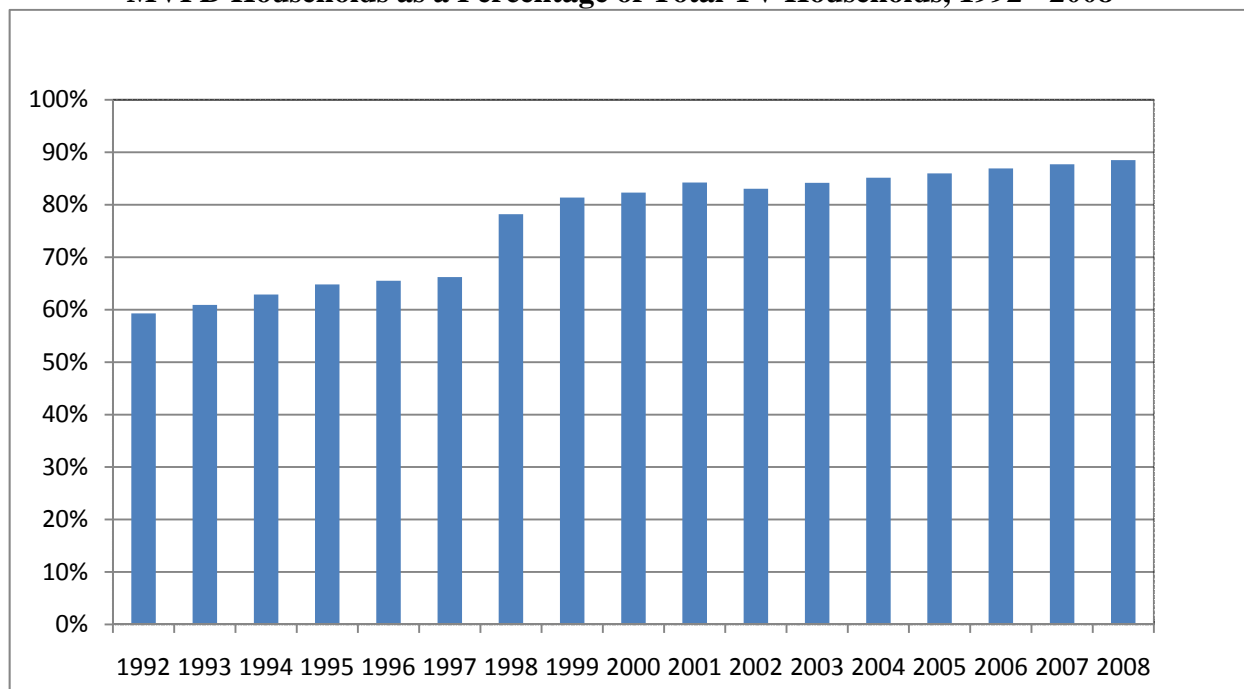---

[11] *March 2009 Report*, Section III.
[12] *Lexecon Report* at 25, n. 48
[13] March 2009 Report at n. 30.
[14] See *March 2009 Report* at 19-20 (demonstrating this increased concentration in the national MVPD marketplace).

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Figure One:
MVPD Households as a Percentage of Total TV Households, 1992 - 2008[15]

In sum, there is no empirical basis for the central assumption behind Lexecon's bargaining model, i.e., for the proposition that broadcasters' relative bargaining power has increased since retransmission consent was authorized by Congress in 1992.

Moreover, even if Lexecon had demonstrated a *shift* in bargaining power, the larger question is whether broadcasters have sufficient power to impose uneconomic terms on MVPDs. The March 2009 Report addresses this question directly, presenting empirical evidence that "broadcasters have, if anything, less bargaining power in retransmission consent negotiations than do cable operators."[16] The Lexecon Report does not refute, or even attempt to refute, this

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[15] *See* Federal Communications Commission, *Annual Report on Competition in Video Markets* (various years), available at: http://www.fcc.gov/mb/csrptpg.html. FCC figures span the years 1992 – 2006. Figure for 2008 is Nielsen's "Broadcast Only" percentage. Figure for 2007 is calculated as the average of 2006 and 2008 statistics. Note that the jump downward from 1997 - 1998 reflects the fact that, prior to 1998, the FCC data reflect only cable subscribers. From 1998 forward, all MVPD services are taken into account. Compare, e.g., Table B-1 in the FCC's 8th *Annual Report* with Appendix Table B-1 in the FCC's 9th *Annual Report*.

[16] *March 2009 Report* at 12.

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finding: Quite simply, *Lexecon never even argues that broadcasters have, in any meaningful economic sense, "too much" bargaining power.*

A second fundamental problem with the Lexecon bargaining model is its inconsistency with Lexecon's contention that retransmission fees reduce consumer welfare.

The Lexecon model posits a highly simplified view of retransmission consent negotiations. Retransmission is negotiated for a single signal. In Lexecon's first example, only two parties are involved in the negotiation: One MVPD and one broadcast station owner. In the second example, there are three parties: Two MVPDs (labeled MVPD *A* and MVPD *B*), and one broadcast station owner. The retransmission of the broadcaster's signal via one or more MVPDs generates economic value. Part of the value is derived from increased advertising revenues, and part is derived from increased subscription fees. The sum of these two components comprises the incremental profits associated with retransmission.

The purpose of the model is simply to predict how this fixed "pie" of incremental profits is divided. As the Lexecon Report emphasizes, "[a] negotiation over retransmission rights can thus be thought of as a negotiation over *how to divide the pool of incremental profits created by the retransmission of the broadcaster's signal to the MVPD's subscribers*."[17] It bears emphasis that the incremental profits are assumed to be fixed, and do not vary with retransmission fees. As the Lexecon Report observes, "[b]argaining situations are commonly described as negotiations to divide some *fixed amount of surplus*."[18]

The model yields a simple, intuitive prediction: retransmission fees earned by the broadcaster will be higher when there are two MVPDs than when there is only one MVPD. Specifically, in the first model, there is $6 million in fixed surplus to be gained from

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[17] *Lexecon Report* at 12 (emphasis in original).
[18] *Lexecon Report* at 12 (n. 27, emphasis added).

retransmission. In equilibrium, this surplus is divided evenly between the broadcaster and the MVPD, with each gaining $3 million as a result of retransmission.[19] In the second model, the total surplus from retransmission on both of the two MVPDs is also fixed at $6 million. In equilibrium, the broadcaster earns $4 million as a result of retransmission, while each of the two MVPDs earns $1 million.[20] Thus, when the broadcaster is negotiating with only one MVPD, the broadcaster is able to obtain only half of the fixed surplus. But when the broadcaster is negotiating with two MVPDs, the broadcaster is able to keep two-thirds of the fixed surplus.[21]

Thus, the Lexecon game-theoretic model yields the unsurprising prediction that broadcasters earn higher retransmission fees, and a higher share of the fixed surplus, when there are multiple MVPDs competing for the right to transmit their signals, other things equal. The important point, however, is that regardless of whether there is one MVPD or two MVPDs, and regardless of whether the broadcaster keeps half of the fixed surplus or two-thirds of the surplus, the surplus itself is *fixed*.

As an inevitable consequence of Lexecon's assumption about the fixed nature of the surplus, the prices paid by consumers, and the amounts of MVPD services consumers purchase, are also fixed – that is, they are unaffected by retransmission consent fees.[22] Put differently, a central premise of the Lexecon model is that if MVPDs did not pay retransmission consent fees,

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[19] *Lexecon Report* at 16.

[20] *Lexecon Report* at 18.

[21] The Lexecon model also contemplates a scenario in which the broadcaster is permitted to sign an exclusive contract with one of the MVPDs. Not surprisingly, the authors find that retransmission fees are even larger when exclusive contracts are permitted. However, this analysis is wholly irrelevant as a practical matter, because broadcasters are prohibited by law from entering into exclusive retransmission agreements with MVPDs. *See* 47 C.F.R. § 76.64(l) ("exclusive retransmission consent agreements are prohibited"); 47 U.S.C. § 325(b)(3)(C)(ii).

[22] The assumption that the surplus is not affected by retransmission consent fees necessarily implies that broadcasters' and MVPDs' combined revenues and costs do not change, which in turn implies that both the quantity sold to consumers and the prices they pay do not change.

they would simply keep the savings entirely to themselves, and pass none of them on to consumers in the form of lower prices.[23]

Moreover, according to the Lexecon model, consumers suffer harm only out of equilibrium – that is, in scenarios wherein the broadcaster and MVPD(s) fail to reach an agreement. Specifically, in the first model, involving one broadcaster and one MVPD, there are only two possible outcomes: A retransmission agreement is either reached or not reached. If it is not reached, retransmission fees are zero, and consumers subscribing to the MVPD are harmed, because they are unable to view the broadcaster's signal on that system.[24] In equilibrium, an agreement involving positive retransmission fees is reached, because it is in the interest of both parties to do so. This is also the outcome that maximizes consumer welfare.

In Lexecon's second model, involving one broadcaster and two MVPDs, there are four possible outcomes. In the first outcome, no retransmission agreement is reached, and the subscribers to both MVPDs are harmed. In the second outcome, a retransmission agreement is reached between the broadcaster and MVPD *A*, but not MVPD *B*. In order to gain access to the broadcaster's signal, some consumers switch from MVPD *B* to MVPD *A*, but some do not (or cannot). The third outcome is the mirror image of the second: A retransmission agreement is reached between the broadcaster and MVPD *B*, but not MVPD *A*, and some (but not all) subscribers switch from MVPD *A* to MVPD *B*. Thus, some consumers are harmed in the second and third scenarios. In the fourth and final outcome, the broadcaster reaches retransmission agreements with both MVPDs (and both pay positive retransmission fees to the broadcaster). Again, this is the outcome that occurs in equilibrium, because it is in the interest of all parties

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[23] Hence, Lexecon's statement (see n. 4 *infra*) that it ignores the effect of retransmission consent on MVPDs and broadcasters, and focuses only on the effect on consumers, is precisely backwards: To the contrary, its game-theoretic model is, by design, *incapable* of assessing the impact on consumers, and focused *solely* on the division of profits between broadcasters and MVPDs.

[24] It bears emphasis that the broadcast signal is always available, albeit by antenna rather than via MVPD service.

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involved in the negotiations; and, it is also the outcome that maximizes consumer welfare, because it ensures that all consumers gain access to the broadcaster's signal via their respective MVPDs. As explained in the March 2009 Report and reiterated below, it is also the outcome which regularly occurs, with only the rarest exceptions, in today's marketplace.[25]

To reiterate, the Lexecon game-theoretic model analyzes the bargaining that takes place between a broadcaster and one (or two) MVPD(s), as the two sides determine how a fixed pie of surplus will be divided. Remarkably, Lexecon's model is predicated on the assumption that retransmission fees *do not harm consumers*. To the contrary, the only way consumers in the model can be harmed is when there are no retransmission fees because broadcasters and MVPDs fail to reach mutually beneficial agreements to retransmit the broadcaster's signal.

III. THE LEXECON CONSUMER WELFARE ANALYSIS IS WRONG BOTH CONCEPTUALLY AND TECHNICALLY

After presenting a game-theoretic model in which consumer welfare is unaffected by retransmission consent fees, Lexecon proceeds to reverse course and present a contradictory analysis of the alleged "consumer harm from the current retransmission consent regime."[26] Specifically, according to Lexecon, retransmission consent harms consumers through higher prices and reduced output.

At the outset, Lexecon's analysis is conceptually incorrect at the most fundamental level. As explained above, Lexecon makes the rudimentary error of failing to account for the impact of retransmission consent on the supply of broadcasting: That is, if broadcasters could not be compensated for their signals through retransmission consent, they would produce less (and

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[25] Of course, in reality, broadcasters frequently agree to have their signals retransmitted without cash compensation. Nevertheless, regardless of whether or not compensation comes in the form of cash, in-kind arrangements, or simply the benefits of a larger broadcast audience, the important point is that broadcasters and MVPDs virtually always reach mutually beneficial agreements.

[26] *Lexecon Report* at 29.

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possibly lower quality) broadcasting, and consumers (and MVPDs) would suffer harm as a result.[27] From an economic perspective, retransmission fees are "too high" only if they are the result of monopolistic price-setting, in which supply is restricted artificially, resulting in higher prices. Yet Lexecon provides no argument or analysis *of any kind* to suggest that retransmission consent agreements – which are voluntary transactions between economic agents acting in their own best interests, and hence are presumptively economically efficient – result in monopolistic prices, or the underproduction of broadcasting, or monopoly profits for broadcasters.[28] Indeed, the very fact that MVPDs choose to pay retransmission consent fees proves that *MVPDs* believe the value consumers place on broadcast signals exceeds their price (in the form of whatever portion of retransmission consent fees MVPDs pass through).

With these caveats in mind, there is nothing inherently wrong with attempting to estimate the amount of retransmission consent fees passed on to consumers, or the impact of retransmission consent fees on MVPD. Lexecon does so, and finds both effects to be quite small. Even the modest effects estimated by Lexecon, however, turn out to be significantly inflated as a result of Lexecon's methodological errors.

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[27] Lexecon's understanding of such effects improves somewhat when it is faced with the notion of "regulat[ing] MVPD rates so that increases in retransmission consent costs are not passed through to MVPD subscribers." (See n. 70.) Such a policy, Lexecon avers (without explanation), would "cause far more significant harms to consumer welfare than the harms associated with increased retransmission costs." So, according to Lexecon, lower prices are good when they result from imposing *de facto* price controls on retransmission fees, but not when they result from retail price controls on MVPDs. In fact, price controls would harm consumer welfare, for essentially the same reasons, in both cases.

[28] Nor could such a showing be made. To the contrary, there is a widespread recognition that broadcasters are facing financial difficulties. See, e.g., Federal Communications Commission, *Connecting America: The National Broadband Plan* (March 2010) at 91 ("Since 2005, broadcast TV station revenues have declined 26%, and overall industry employment has declined as well.") (footnotes omitted). Cable companies, on the other hand, are prospering. As Comcast CEO Brian Roberts said following the release of Comcast's first quarter 2010 earnings, "For many, many years, cable had to invest, and now we're starting to see returns on some of that investment…. We've been on a trend for, gosh, six, eight straight quarters where free cash flow has been increasing to record levels, and so this was the highest we've had in a first quarter." (See CNBC, "Comcast CEO on Earnings, Outlook" (April 28, 2010) (available at http://www.cnbc.com/id/15840232?video=1479708426&play=1, last viewed April 28, 2010)).

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A.   Even Lexecon's Flawed Analysis Shows Little Effect of Retransmission Consent Fees on Consumers

Lexecon presents an analysis purporting to show that MVPDs raise prices to consumers by as much as $0.74 per month due to retransmission consent, and that, as a result, as many as 2.26 million people choose not to subscribe to MVPD services. As explained below, both estimates are dramatically inflated. However, even if Lexecon's estimates were accurate, they are quite modest when compared to the overall price of cable or the overall number of MVPD subscribers.

Lexecon relies on data from SNL Kagan showing that the average monthly retransmission fee paid by MVPDs that paid retransmission fees in 2009 was $0.74 per subscriber.[29] Next, Lexecon assumes MVPDs pass through between 50 and 100 percent of retransmission fees to consumers. Thus, Lexecon alleges that consumers pay between $0.37 and $0.74 per month to be able to watch broadcast programming on their MVPD services, or between about 0.75 percent and 1.5 percent of the average monthly price for expanded basic cable.[30] Even if this proportion were accurate, it hardly seems excessive, especially when one considers that broadcast programming accounts for about 38 percent of television viewing.[31]

Next, based on these estimates of the price effects of retransmission consent, Lexecon seeks to estimate the impact on the number of MVPD subscribers, using estimates of demand elasticity ranging from -1.0 to -1.75 (indicating that a one percentage point increase in the price of MVPD services results in a reduction in the number of subscribers of between 1.0% and

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[29] *Lexecon Report* at 35. Lexecon's estimate is based on spreading the total amount of retransmission fees SNL Kagan estimates were paid in 2009 ($739 million) across the subscribers to MVPDs which pay retransmission fees, However, as Lexecon notes, about 17 percent of MVPD subscribers subscribe to MVPDs that do not pay cash retransmission fees. Thus, a more appropriate estimate of average cash retransmission fees would be approximately $0.61 per subscriber per month ($0.74*83%).

[30] *See* Federal Communications Commission, *Report on Cable Industry Prices* (January 16, 2009) at 2.

[31] See *March 2009 Report* at 18 (citing data from SNL Kagan).

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1.75%).[32] Based on these parameters, Lexecon estimates that retransmission consent fees cause as many as 2.26 million households not to subscribe. As demonstrated below, this figure is overstated by a factor of about 5-to-1 – but again, even if it were accurate, it would represent less than two percent of all MVPD subscribers, or less than the annual rate of subscriber growth.

B.   Lexecon's Impact Estimates are Dramatically Inflated

Lexecon's estimates of consumer impact are based on three key parameters: The magnitude of transmission fees; the rate at which MVPDs pass transmission fees through to consumers; and, the elasticity of demand. Lexecon's assumptions regarding both the pass-through rate and the elasticity of demand are unrealistic (or simply incorrect). As a result, the Lexecon Report substantially inflates the impact of retransmission consent.

First, Lexecon assumes, for some of its estimates, an unrealistic pass through rate of 75 or even 100 percent. Yet, the empirical evidence cited by Lexecon shows a pass-through rate of 50 percent; and, as Lexecon points out, only firms in perfectly competitive industries pass through 100 percent of cost increases to consumers.[33] Thus, there is no basis for assuming a pass-through rate of more than 50 percent – implying that the impact of retransmission consent on consumer prices, rather than $0.74 per month, is $0.37 per month, or less than one percent of the average monthly subscription fee for expanded basic and less than three tenths of one percent of cable operators' average revenue per customer.

Lexecon's next, and more egregious, error is in its assumptions regarding the price elasticity of demand for MVPD service, which form the basis for its estimate of the reduction in MVPD subscribership associated with retransmission consent. The only recent elasticity estimate that Lexecon relies on is an estimate of the elasticity of demand of approximately -1.5,

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[32] See *Lexecon Report* at 36, n. 68.
[33] *Lexecon Report* at 37, n. 71.

which it takes from Goolsbee and Petrin (2004).[34] Lexecon uses this elasticity as the basis for its calculations of the number of households that forgo MVPD service as a result of the effect of retransmission consent fees on MVPD prices. In other words, Lexecon treats the elasticity of -1.5 as a measure of consumers' tendencies to substitute away from *all MVPD services* in the face of an across-the-board increase in the price of *all MVPD services*.

A careful reading of Goolsbee and Petrin, however, makes clear that their -1.5 estimate for the elasticity of demand measures the tendency of *basic* cable customers to substitute away from *basic* cable service in the face of an increase in the price of *basic* cable, holding other MVPD prices constant.[35] As common sense would suggest, however, the demand for basic cable service (holding other MVPD prices constant) is more elastic than the demand for all MVPD services: Consumers faced with an increase in the price of basic cable service have close substitutes (e.g., they can switch to a DBS provider), while consumers faced with an increase in the price of all MVPD services do not.[36] Simply put, Lexecon uses the wrong elasticity estimate, and the effect is to significantly inflate the effect of retransmission consent on MVPD subscribership.

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[34] Austan Goolsbee and Amil Petrin, "The Consumer Gains From Direct Broadcast Satellite and the Competition With Cable TV," *Econometrica* 72(2), 351 – 381 (March 2004), (hereafter, *Goolsbee & Petrin*). Lexecon also cites a dated elasticity estimate of -1.5 for cable services, from a study published in the early 1990s, when cable faced virtually no competition from alternate MVPDs. *See Lexecon Report* at 38 (n. 72). It is unsurprising that this older study indicates that demand is *elastic*, while Goolsbee & Petrin's more recent estimates (as explained below) imply *inelastic* demand. This is due to the fact that a profit-maximizing monopolist will always operate on the elastic portion of the demand curve. Thus, the apparent shift in price elasticities over time – from elastic to inelastic – is perfectly consistent with the evolution of the MVPD industry from a monopolistic setting to one with multiple MVPD competitors.

[35] *Goolsbee & Petrin* at 369, Table VIII. Goolsbee and Petrin use three price variables: The price of basic enhanced service ("monthly cable price"); the price of basic enhanced service plus premium service ("premium cable price"); and the price of DBS service. They also consider over-the-air viewers. Thus, the effect of an increase in the price of basic cable could be to cause subscribers to (a) switch to premium service (which is now *relatively* less expensive), (b) switch to DBS, or (c) switch to over-the-air only. See Goolsbee & Petrin at 357-8.

[36] Similarly, for example, if the price of Ford mid-sized sedans rose by 10 percent, many consumers would choose a different model, or switch to Chevrolets and Hondas. If the price of *all* cars went up by 10 percent, consumers would still have alternatives – some would buy motorcycles, and some would forego purchases altogether – but most would still buy a car. Thus, a 10 percent increase in the price of Ford mid-sized sedans, holding all other car prices constant, would have a larger impact on the demand for Ford mid-sized sedans than a 10 percent increase in the price of all cars.

To obtain an estimate of the elasticity that Lexecon should have used, I used data from Goolsbee and Petrin to estimate the elasticity of demand for all MVPD services with respect to the price of all MVPD services. As explained in the Appendix, Goolsbee and Petrin's elasticity matrix implies an MVPD elasticity estimate of approximately -0.66, meaning that a one percent across-the-board increase in the price of MVPD services causes demand for MVPD services to decline by only 0.66 percent. Thus, Lexecon's estimate of the responsiveness of subscribers to price changes, at -1.5, is more than double the correct figure, of -0.66. As seen in Table One below, Lexecon's estimates of the number of households that forgo MVPD service are substantially diminished once the elasticity has been corrected. Based on the incorrect market elasticity of demand of -1.5, Lexecon claims that retransmission fees cause MVPD subscribership to fall by between 948,000 and 1.93 million households, depending on the pass-through rate. When the corrected elasticity of -0.66 is used instead, estimates drop by more than half, to between 410,000 and 827,000, or far less than one percent of U.S. MVPD subscribers. Based on its most aggressive overestimates of the pass-through rate (100 percent) and elasticity of demand (-1.75) (not shown in the table), Lexecon claims that retransmission consent reduces MVPD subscribership by up to 2.26 million. The correct figure, based on an appropriate elasticity estimate and a realistic 50 percent pass through rate, is about 410,000. Thus, Lexecon inflates its estimate by a factor of slightly more than five to one.

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Table One:
Revised Version of Lexecon Table 5, With Corrected Elasticities
(Based on Retransmission Fees of $0.74 per Subscriber per Month)

Pass-through Rate	Incorrect Elasticity	Corrected Elasticity	Change In Subscribers (Incorrect Elasticity)	Change In Subscribers (Corrected Elasticity)
100%	-1.5	-0.66	-1,932,050	-826,944
75%	-1.5	-0.66	-1,435,152	-617,871
50%	-1.5	-0.66	-947,686	-410,368

IV. LEXECON PROVIDES NO EVIDENCE THAT SERVICE INTERRUPTIONS REPRESENT MORE THAN AN INFINITESIMALLY SMALL PORTION OF TELEVISION VIEWING

Lexecon provides a brief list of retransmission disputes and programming interruptions, which it claims (without explanation or support) demonstrates that the March 2009 Report's analysis of negotiating impasses was "incomplete."[37] However, Lexecon fails to identify a single programming interruption not identified in the sample period spanned by the prior analysis. Moreover, an update of the March 2009 analysis shows that the basic results have not changed: retransmission consent impasses are extraordinarily rare and typically short lived, and do not substantially impact consumer welfare.

A. Lexecon Fails to Identify Any Instance of Service Interruption Not Accounted for in the Prior Analysis

In an attempt to demonstrate that the list of service interruptions found in the March 2009 Report was incomplete, Lexecon provides a table containing a list of "Selected Instances of Service Interruptions" spanning the years 2000 through 2009.[38] For purposes of comparing the Lexecon list of service interruptions to the list of service interruptions found in the March 2009 Report, the relevant years are 2006 – 2008, since these are the years summarized in Tables 2 and

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[37] *Lexecon Report* at 40 (n. 75).
[38] *Lexecon Report* at Table 6.

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3 of the March 2009 Report.[39] The Lexecon list contains a total of six disputes from 2006 – 2008. Five of these six disputes are listed in the prior report. The remaining dispute does not appear in the prior report, for the simple reason that it did not result in any service interruption.[40]

B.   The Impact of Retransmission Consent Related Carriage Interruptions on Television Viewing in the U.S. is Infinitesimally Small

Because Lexecon fails to identify a single instance of service interruption not accounted for in the prior analysis, while simultaneously neglecting to identify several programming interruptions that *were* identified in the prior analysis, the conclusions from the March 2009 Report remain unaltered. Specifically, the report concluded that aggregate service interruptions from 2006 – 2008 represented a grand total of approximately one one-hundredth of one percent of annual television viewing hours in the United States,[41] meaning that the average household is roughly 24 times more likely to be without electricity than it is to be deprived of its first-choice television channel.

Of course, it is possible to extend this prior sample period for an additional year, to take subsequent service interruptions into account for the year 2009. As demonstrated in Table Two below, doing so does not change the conclusions of the March 2009 Report.

Lexecon identifies two service interruptions that occurred in 2009.[42] In addition, Table Two reflects a dispute between Fisher Communications and Dish Network, already documented

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[39] *March 2009 Report* at Tables 2 and 3.

[40] This is a dispute that occurred between Sinclair Broadcast Group and Suddenlink Communications in 2006. According to press reports, Sinclair indicated it was contemplating withholding its signal from Suddenlink, but ultimately did not follow through, when the parties reached a deal including "mutually agreeable economic considerations." See Mike Farrel, "Suddenlink, Sinclair Settle Retrans Flap," *Multichannel News* (August 10, 2006).

[41] *March 2009 Report* at Table 3.

[42] The first, a dispute involving Hearst-Argyle Television and Sunflower Broadband, caused approximately 31,000 viewers in Kansas City, MO to lose access to two channels. See Linda Moss, "Sunflower Retrans Dispute Keeps K.C. Viewers In The Dark," *Multichannel News* (January 6, 2009). The second, a dispute involving Free State Communications and Dish Network, caused approximately 13 percent of viewers in the Topeka, KS area to lose access to the signal of the local ABC affiliate for one week. See Michael Hooper, "KTKA, DISH continue talks," *Topeka Capital-Journal* (January 3, 2009).

in the prior report, which spilled into 2009,[43] as well as an additional service interruption in February of 2009, arising from a retransmission dispute between Cable One and Newport Television, which caused several local channels in Mobile, AL, Memphis, TN, and Tulsa, OK to be unavailable for approximately five days.[44] Finally, Table Two contains one 2010 dispute between ABC and Cablevision, which caused Cablevision viewers in the New York City metropolitan area to lose access via cable to WABC's broadcast of the Academy Awards for approximately 14 minutes.[45]

When these subsequent outages are accounted for, the conclusions of the March 2009 Report are unaltered: Aggregate service interruptions continue to represent approximately one one-hundredth of one percent of annual U.S. viewing hours, as shown in the bottom right cell of Table Two. To put this figure in perspective, U.S. households experienced an average annual service interruption – that is, the inability to tune in to their first-choice television channel via an MVPD – of about 19 minutes during this period. As noted in the prior report, the average North American household experiences annual electricity outages of about 381 minutes – during which time, they are, of course, unable to watch any TV channels. In addition, the *aspirational* standard for cable system reliability is 99.97%, implying average annual system outages of *at least* 158 minutes per year. Thus, the average household is far more likely to be without electricity, or to experience a cable system outage, than it is to be unable to watch its favorite broadcast channel via an MVPD as a result of a retransmission dispute.[46]

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[43] *March 2009 Report* at Table 2.

[44] Michael Malone, "Stations go dark in Mobile, Memphis and Tulsa," *Broadcasting & Cable* (February 6, 2009).

[45] John Eggerton, "WABC Back on Cablevision," *Broadcasting & Cable* (March 8, 2010). Note that the analysis in Table 2 takes into account the high ratings associated with the Academy Awards.

[46] As noted above, broadcast channels would still remain available to viewers over-the-air, even during these extremely rare outages arising from retransmission disputes.

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Table Two:
Estimated Effect of Service Interruptions on Viewing Hours, Updated To Reflect Disputes in 2006 – 2009, and 2010 ABC/Cablevision Dispute

Parties	Affected Markets	Total TV HHs in Affected Markets	% of TV HHs Subscribing to Affected MVPD	Daily Affected Viewing Hours (Affected HHs)	% Daily Viewing Hours Affected (Affected HHs)	% Annual Viewing Hours Affected (Affected HHs)	% Annual Viewing Hours Affected (All TV HHs)
Fisher Communications/Dish Network	7	4,061,880	13%	0.39	4.7%	3.49%	0.44%
Young Broadcasting/Dish Network	10	6,650,980	13%	0.80	9.7%	0.10%	0.01%
Lin TV/Time Warner Cable	11	5,914,950	38%	0.55	6.7%	0.67%	0.25%
Citadel/Dish Network	4	1,178,200	15%	0.40	4.8%	0.46%	0.07%
Barrington Broadcasting/Dish Network	1	179,010	20%	0.88	10.7%	2.12%	0.43%
Lin TV/Suddenlink	2	1,356,790	22%	0.40	4.8%	0.92%	0.20%
KAYU/Time Warner Cable	1	416,630	10%	0.28	3.4%	3.83%	0.38%
Sinclair/Mediacom	16	10,726,520	7%	0.32	3.9%	0.95%	0.07%
Sunflower/Hearst-Argyle	1	937,970	3%	0.59	7.2%	1.30%	0.04%
Free State/DISH network	1	175,940	13%	0.29	3.5%	0.07%	0.01%
Newport/Cable One	3	1,741,120	53%	0.48	5.8%	0.13%	0.07%
National Averages/Totals (2006 - 2009)	51[*]	33,339,990	18%[**]	0.47	5.7%	0.21%	0.01%[***]
ABC/Cablevision (3/2010)	1	7,433,820	42%	1.19	14.4%	0.04%	0.02%
National Averages/Totals (2006 - 3/2010)	52[*]	40,773,810	22%[**]	0.48	5.8%	0.13%	0.01%[***]

* Rows to not add to total since some markets were affected by more than one dispute. ** Average across affected markets.
*** Based on 100% of U.S. TV HHs.

It remains true that, as in any market involving negotiations between free economic actors, there will sometimes be unresolved disagreements that result in potentially beneficial transactions not taking place. The relevant question is whether government can, through regulation, achieve a better outcome. The answer ultimately depends on whether government can (a) reliably distinguish efficiency-enhancing trades from economically harmful ones (and mandate only the former) and (b) accurately discern and mandate an efficient price. There is substantial evidence that markets are far more effective at accomplishing both tasks, and that government efforts to mandate exchanges at regulated prices have resulted in large reductions in

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economic welfare.[47] And, there is every reason to believe the same would be true in the market for broadcast signals.[48]

V. LEXECON PROVIDES NO EVIDENCE THAT PROGRAMMING COSTS IN GENERAL, OR RETRANSMISSION FEES IN PARTICULAR, HAVE A SIGNIFICANT IMPACT ON MVPD PRICES

Lexecon expresses concern over the impact of rising MVPD prices on consumers;[49] and, it is indeed true that monthly subscription prices for certain types of MVPD service, such as cable television prices, have increased more rapidly than inflation in recent years.[50] However, as noted in the March 2009 Report,[51] and reiterated here, the data simply do not support the claim that increases in MVPD rates are caused by rising programming costs in general, or rising retransmission fees in particular. To the contrary, programming costs are rising slower than MVPD revenues, slower than other components of MVPD costs, and slower than MVPD profits, while retransmission fees make up a small fraction of programming costs, and an even smaller percentage of MVPD revenues. Lexecon provides no evidence to contradict this.

Specifically, for the six publicly traded MVPDs for which up-to-date programming cost data are consistently available,[52] the share of cost of revenue accounted for by programming

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[47] See, e.g., Jerry A. Hausman and Gregory J. Sidak, "A Consumer-Welfare Approach to the Mandatory Unbundling of Telecommunications Networks," *Yale Law Journal* 109; 3 (December 1999) 417-505 (Available at SSRN: http://ssrn.com/abstract=205670).

[48] See also Jeffrey A. Eisenach, *Why the FCC Should Not Increase Regulation of Wholesale TV Programming: Reply to Comments in MB Docket No. 07-198* (February 12, 2008) (available at http://fjallfoss.fcc.gov/ecfs/document/view?id=6519840921).

[49] *Lexecon Report* at 3.

[50] *See* Federal Communications Commission, *Thirteenth Annual Report on Competition in Video Markets* at ¶4 ("While competition in the delivery of video programming services has provided consumers with increased choice, better picture quality, and greater technological innovation, prices continue to outpace the general level of inflation.")

[51] *March 2009 Report*, Section IV.

[52] The six MVPDs are Adelphia, Charter, Comcast, DirecTV, Knology, and Time Warner Cable. The data presented here were compiled from Forms 10-K for the years 2003 through 2008. In some isolated cases, data from earlier years not available in Forms 10-K were supplemented with data derived from analyst reports by SNL Kagan and Morgan Stanley. *See* SNL Kagan, "Benchmarking Cable MSO Financial Statistics," 2007 Edition; SNL Kagan, "Media Trends," 2008 Edition; Morgan Stanley, "Cable Satellite Industry Overview: What Does the Market Expect?" (April 2004); Morgan Stanley, "Cable Satellite Industry Overview: Bundling and the Battle for Basic," (October 2004). Data for Adelphia are available for the years leading up to the acquisition of its systems by Comcast and Time Warner (from 2003-2005). Therefore, the industry statistics include Adelphia for these years. For further

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costs declined from 67 percent to 59 percent between 2003 and 2008; during the same period, the share of cost of revenue plus selling, general, and administrative costs ("SG&A") accounted for by programming costs shrank from 44 percent in 2003 to 41 percent in 2008. In addition, monthly revenues per subscriber rose by $35.13 between 2003 and 2008, while programming expenses rose by only $8.84. Put differently, for every dollar increase in programming expenses, MVPDs raised total monthly charges to consumers by $3.97. As a result, although programming expenses per subscriber for these MVPDs increased by approximately 51 percent from 2003 - 2008, MVPD gross profits per subscriber increased by approximately 57 percent over the same interval; operating profits per subscriber for the MVPDs increased by approximately 78 percent over this time period.

Finally, to repeat a point made above, retransmission fees account for only a small component of programming expenses, and an even smaller fraction of MVPD revenues. For instance, in 2008, the average MVPD programming expense per subscriber per month was approximately $26, while average MVPD revenue was over $99 per subscriber per month. In contrast, as noted above, the average per-subscriber, per-month retransmission fee was about $0.74 in 2009 (and even this estimate is inflated, as it does not account for the fact that millions of households subscribe to MVPDs that pay no retransmission fees whatsoever).

Thus, while rates for certain types of MVPD services – such as cable television prices – are undeniably on the rise, it makes little sense to blame this trend on programming costs, and even less to single out retransmission fees.

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explanation, see Jeffrey A. Eisenach, "Video Programming Costs and Cable TV Prices," Navigant Economics LLC (April 2010).

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VI. CONCLUSION

The Lexecon Report tries but fails to demonstrate that retransmission consent harms consumers.

Lexecon begins by proffering a game-theoretic model which is both empirically unsupported and conceptually antithetical to its underlying argument, and which does not even attempt to demonstrate that broadcasters have *greater* bargaining power than MVPDs, or that the retransmission consent agreements broadcasters and MVPDs negotiate are in any way inefficient or uneconomic. Indeed, the way the model is constructed, retransmission consent agreements are presumptively consumer welfare-enhancing.

Lexecon's "consumer welfare" analysis is nothing of the sort. At best, Lexecon attempts to calculate the costs to consumers of receiving broadcast content through MVPD systems, while ignoring the benefits of broadcasting to consumers and in general. Even so, Lexecon errs in its calculations, resulting in substantial inflation of its estimates.

Finally, nothing in the Lexecon Report refutes the undeniable evidence that while MVPDs sometimes choose to draw the attention of an interested public to their contentious negotiations with broadcasters, the incidence of actual negotiating impasses is almost infinitesimally low.

In short, nothing in the Lexecon Report challenges the conclusion that the current retransmission consent regime represents an effective, market-based mechanism for ensuring broadcasters receive an economically efficient level of compensation for the value of their signals, and as such benefits both consumers and the economy overall.

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In its calculations of MVPD subscriber loss due to retransmission fees, Lexecon improperly makes use of an elasticity estimate from Goolsbee and Petrin (2004) ("G&P")[1] that measures the responsiveness of basic cable customers to the price of basic cable. To obtain an estimate of the elasticity that Lexecon should have used, I used data presented in G&P to estimate the elasticity of demand for all MVPD services with respect to the price of all MVPD services. The elasticity matrix that G&P estimate contains own-price and cross-price elasticities for each type of MVPD service in their model, and is reproduced below in Figure A-1:

Figure A-1:
Table VIII from Goolsbee & Petrin (2004)

TABLE VIII

ESTIMATED DEMAND ELASTICITIES
(MARSHALLIAN AND HICKSIAN)

Method	SUR	3SLS Marshallian	3SLS Hicksian
Price of expanded basic			
Antenna only share	.020	1.301	1.323
Expanded basic share	.014	−1.538	−1.516
Premium share	−.040	1.263	1.284
Satellite share	−.014	.929	.951
Price of premium			
Antenna only share	−.000	.917	.932
Expanded basic share	−.030	.924	.938
Premium share	.074	−3.175	−3.161
Satellite share	−.035	1.173	1.187
Price of satellite			
Antenna only share	.001	.123	.129
Expanded basic share	−.005	.286	.292
Premium share	−.015	.492	.498
Satellite share	.050	−2.448	−2.442

Note: Specification is estimated using the 254 markets for which the tax on franchise revenues is reported in Warren Publishing. SUR is seemingly unrelated regressions (not instrumented). 3SLS is three stage least squares using the tax to instrument price.

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[1] Austan Goolsbee & Amil Petrin, "The Consumer Gains From Direct Broadcast Satellites and the Competition With Cable TV," *Econometrica* 72(2) , 351 – 381 (March 2004), (hereafter, *Goolsbee & Petrin*).

As seen above, G&P present a full matrix of own and cross-price elasticities for four categories of television viewers, consisting of (1) "Antenna only" customers who lack MVPD service, and thus rely solely on over-the-air broadcasts; (2) "Expanded basic" cable customers, with access to an assortment of channels beyond the local broadcast stations; (3) "Premium" cable customers, who (in addition to the "expanded basic" package also receive channels such as HBO; and, (4) "Satellite" customers, or DBS subscribers. The relevant elasticities are those in the final two columns, produced by three-stage-least squares ("3SLS") estimation. The entries from these two columns are nearly identical, because Hicksian and Marshallian elasticities converge when income effects are small.[2]

The only entry from the table that Lexecon relies on is the elasticity of the market share[3] of expanded basic cable with respect to the price of expanded basic cable, which appears in the second row of the second column, and is equal to approximately -1.5. Lexecon naively interprets this estimate to mean that a one percent increase in the price of *all* MVPD services leads to a 1.5 percent decrease in the quantity of MVPD services demanded. In other words, Lexecon interprets the elasticity to mean that, in the face of the price increase, one hundred percent of the resulting substitution is away from MVPD services and towards over-the-air television. This interpretation is flatly incorrect, for two reasons. First, it treats the elasticity as if it were capturing substitution patterns in the wake of a price increase for all MVPD services, when in fact it only captures substitution associated with an increase in the price of basic cable. Second,

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[2] The Marshallian demand function is sometimes referred to as the "uncompensated demand function," because it measures consumers' demand responsiveness when they are not compensated for the decrease in utility that occurs in the face of a price change. In contrast, the Hicksian demand function, sometimes referred to as the "compensated demand function," holds the consumer at a fixed level of utility by compensating the consumer through adjustments in income. *See, e.g.,* Carl Simon & Lawrence Blume, *Mathematics for Economists* (Norton: 1994), at 547-557. For products such as MVPD services, which comprise a relatively small share of total consumer income, the Marshallian and Hicksian demand elasticities are typically quite similar.

[3] The price elasticity of a product's market share is equivalent to the price elasticity of a product's quantity.

and more importantly, it treats the elasticity as if it measured substitution towards over-the-air television (and away from all MVPD services), when in fact it measures substitution towards *both* over-the-air television *and* alternate MVPD services (and away from basic cable).

To understand precisely why the elasticity that Lexecon employs is incorrect, it is useful to note that the cross-price elasticity matrix allows us to decompose the Lexecon elasticity. As noted above, the matrix indicates that, given a one percent increase in the price of basic cable, the demand for basic cable declines by approximately 1.5 percent. But the matrix gives us more information, by indicating how this decline in the demand for basic cable is spread across three mutually exclusive alternatives (premium cable, satellite, and over-the air television).

Specifically, according to the entry in the third row of the second column, the cross-price elasticity of premium cable with respect to the price of expanded basic cable is equal to 1.26, which means that a one percent increase in the price of basic cable causes the demand for premium cable to increase by approximately 1.26 percent. According to the entry in the fourth row (second column), the cross-price elasticity of satellite with respect to the price of expanded basic cable is equal to 0.929, which means that a one percent increase in the price of basic cable causes the demand for DBS to increase by approximately 0.929 percent. Finally, the first row (second column) indicates that a one percent increase in the price of basic cable causes the antenna-only share to increase by 1.301 percent. Thus, of the three sub-components of the Lexecon elasticity, *only one* involves substitution away from MVPD services entirely (and towards over-the-air television). The rest involve substitution *between* different MVPD services.

Retransmission fees are paid by all types of MVPD providers. Therefore, to obtain the correct elasticity, it is necessary to estimate the responsiveness of the demand for all MVPD services to an across-the-board increase in the price of all MVPD services. Fortunately, the G&P

elasticity matrix contains sufficient information to produce such an estimate. The most straightforward way to do so is simply to recognize that the mutually exclusive market shares for over-the-air, basic cable, premium cable, and satellite will always sum to one.[4] Therefore, a decrease in the market share of all MVPD services translates directly into increase in the share of over-the-air households.

Consider the experiment of raising all MVPD prices by one percent. According to the elasticity matrix, this would cause the demand for over-the-air television to increase by 1.301 percent (due to the basic cable price increase) plus 0.917 percent (due to the premium price increase) plus 0.123 percent (due to the satellite price increase), which comes to a total of approximately 2.34 percent. According to G&P, approximately 22.1 percent of households in their 2001 sample were "Antenna Only"; the remaining 77.9 percent subscribed to some form of MVPD service. Therefore, according to the elasticity matrix, a one percent, across-the-board increase in MVPD prices would cause the demand for over-the-air television to expand by $(0.0234) \times (0.221) \approx 0.00517$, or approximately 0.517 percentage points. In other words, about one half of one percent of U.S. households would drop all MVPD service in response to an across-the-board, one percent increase in MVPD prices. This corresponds to a decline in MVPD subscribership of $(0.00517)/(0.779) \approx 0.0066$, or approximately 0.66 percent. To summarize: a one percent, across-the-board increase in MVPD prices is estimated to reduce MVPD subscribership by roughly 0.66 percent.[5]

Thus, in contrast to the elasticity that Lexecon selects, which, at -1.5, implies an elastic demand curve (elasticity greater than one in absolute value), the corrected estimate of -0.66

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[4] Goolsbee and Petrin rely on the fact that these market shares sum to one as a part of their estimation algorithm. *See Goolsbee & Petrin* at 352.

[5] If the market share data were updated to reflect the decline in the "Antenna-Only" share since 2001, the implied elasticity would be even smaller.

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actually implies inelastic demand: That is, the percentage decline in the demand for MVPD services is less than the percentage increase in MVPD prices. Thus, according to G&P, consumers of MVPD services are substantially less price-sensitive than Lexecon assumes.