UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress

In re	:	
	:	Docket No. 14-CRB-0001-WR
DETERMINATION OF ROYALTY RATES AND TERMS FOR EPHEMERAL RECORDING AND DIGITAL PERFORMANCE OF SOUND RECORDINGS (WEB IV)	:	(2016 – 2020)

TESTIMONY OF DANIEL R. FISCHEL AND DOUGLAS G. LICHTMAN

I. QUALIFICATIONS

A. Daniel R. Fischel

1. I am President of Compass Lexecon, a consulting firm that specializes in the application of economics to a variety of legal and regulatory issues. I am also the Lee and Brena Freeman Professor of Law and Business Emeritus at The University of Chicago Law School. I have served previously as Dean of The University of Chicago Law School, Director of the Law and Economics Program at The University of Chicago, and as Professor of Law and Business at The University of Chicago Graduate School of Business, the Kellogg School of Management at Northwestern University, and the Northwestern University Law School.

2. Both my research and my teaching have concerned the economics of corporate law and financial markets. I have published approximately fifty articles in leading legal and economics journals and am coauthor, with Judge Frank Easterbrook of the Seventh Circuit Court of Appeals, of the book *The Economic Structure of Corporate Law* (Harvard University Press, 1991). Courts of all levels, including the Supreme Court of the United States, have cited my

articles as authoritative. My curriculum vitae, which contains a list of my publications, is attached hereto as Appendix A.

3. I have served as a consultant or adviser on economic issues to, among others, the United States Department of Justice, the United States Securities and Exchange Commission, the National Association of Securities Dealers, the New York Stock Exchange, the Chicago Board of Trade, the Chicago Mercantile Exchange, the New York Mercantile Exchange, the United States Department of Labor, the Federal Deposit Insurance Corporation, the Resolution Trust Corporation, the Federal Housing Finance Agency, and the Federal Trade Commission.

4. I am a member of the American Economic Association and the American Finance Association. I am also a member of the Board of Governors of the Becker Friedman Institute at the University of Chicago and an Advisor to the Corporate Governance Project at Harvard University. I am also a former member of the Board of Directors of the Center for the Study of the Economy and the State at The University of Chicago, and former Chairman of the American Association of Law Schools' Section on Law and Economics. I have testified as an expert witness in multiple proceedings in federal and state courts across the country, as detailed in Appendix A, which includes my curriculum vitae and a list of my publications.

B. Douglas G. Lichtman

5. I am a tenured professor at the Law School at the University of California, Los Angeles, an appointment I have held since 2007. I am also a Senior Consultant at Compass Lexecon. Prior to my appointment at UCLA, I served for nine years on the faculty of the University of Chicago Law School. I also served for four years as editor of the *Journal of Law & Economics*, which is widely regarded as the top peer-reviewed law-and-economics journal in the United States.

6. My teaching and research focus on the legal, economic, and public policy underpinnings of intellectual property law, including copyright and patent law. At UCLA, I teach the full range of intellectual property courses, including a survey course, stand-alone patent and copyright courses, advanced copyright and patent courses, and a course in intellectual property strategy that is also offered to students at the UCLA Anderson School of Management. At the University of Chicago, I similarly taught the full range of intellectual property offerings.

7. I have published extensively on intellectual property topics, including scholarly articles in both peer-reviewed journals and law reviews. My articles have appeared in, among other publications, the *Journal of Law & Economics*, the *Journal of Legal Studies*, *Yale Law Journal*, *Stanford Law Journal*, the *University of Chicago Law Review*, the *Harvard Journal of Law & Technology*, the *Journal of Economic Perspectives*, *Georgetown Law Review* and the *Duke Law Journal*. Most of my articles have been republished internationally, including in legal periodicals in China and India.

8. In addition to my written work, I am regularly invited to speak on intellectual property topics. I have presented my scholarship in research seminars at nearly all of the major academic institutions, including, for example, Yale, Harvard, New York University, the University of Chicago, the University of California, Berkeley, the University of Pennsylvania, and China's Wuhan University. I also run an active independent consulting practice, advising technology firms including Microsoft and Oracle, and content companies including Paramount Pictures and the Associated Press. My curriculum vitae, which contains a list of my publications, is attached hereto as Appendix B.

II. BACKGROUND AND SUMMARY OF OPINIONS

9. The Digital Millennium Copyright Act of 1998 established a statutory license under which eligible webcasters are permitted to perform copyrighted sound recordings, and make specific ephemeral recordings of those same sound recordings, as long as they pay a specified royalty rate, often referred to as the "statutory rate."[1] Congress later authorized the Copyright Royalty Board ("CRB") to, among other things, set the size and terms of that statutory rate, and we understand that the current CRB proceeding is intended to do so for the period 2016 – 2020.[2]

10. We understand that Congress specified that the CRB should set the rates and terms for the statutory license based on those "that most clearly represent the rates and terms that would have been negotiated in the marketplace between a willing buyer and a willing seller."[3] Moreover, we understand that the CRB has determined that "[t]he terms 'willing buyer' and 'willing seller' in the statutory standard simply refer to buyers and sellers who are unconstrained in their marketplace dealings. In other words, the buyers and sellers operate in a free market unconstrained by government regulation or interference. Moreover, neither the buyers nor the sellers exercise such monopoly power as to establish them as price-makers and, thus, make negotiations between the parties superfluous."[4]

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1. United States Copyright Royalty Judges, *In re* Determination of Royalty Rates for Ephemeral Recordings and Digital Performance of Sound Recordings, Docket No. 2009-1 CRB (Webcasting III), "Determination After Remand of Rates and Terms for Royalty Years 2011 – 2015" ("Webcasting III Decision"), at 8. We understand that webcasters can also negotiate direct licenses with copyright holders in lieu of using the statutory license.
2. *Id*., at 9. Copyright Royalty Board, Docket No. 14-CRB-0001-WR (2016-2020), "Determination of Royalty Rates for Digital Performance Right in Sound Recordings and Ephemeral Recordings (Web IV)," ("Web IV Notice") at 1.
3. 17 U.S.C. § 114(f)(2)(B).
4. United States Copyright Royalty Judges, In the Matter of Digital Performance Right in Sound Recordings and Ephemeral Recordings, Docket No. 2009-1 CRB Webcasting III, "Final Determination of Rates and Terms," at 9-10 (citations omitted). *See* also United States Copyright Royalty Judges, *In re* Determination of Royalty Rates and Terms for Ephemeral Recording and Digital Performance of Sound Recordings (Web IV), Docket No. 14-CRB-0001-WR (2016-20), "Order Dismissing Petition to Participate (Triton Digital,

11. We have been asked by counsel for iHeartMedia, Inc. (formerly known as Clear Channel Communications, Inc.) ("iHeartMedia") to offer our opinion as to appropriate statutory sound recording royalty rates in light of the "willing buyer / willing seller" standard described above. Based on the available economic evidence and our expertise, our principal conclusion is that, if unconstrained by government regulation, economic evidence indicates that willing buyers and willing sellers in this market would negotiate royalty rates of approximately $0.0005 per performance.[5]

12. We recognize that our conclusion indicates a royalty rate that is substantially lower than the statutory rate adopted by the CRB in prior proceedings. And, although this conclusion is consistent with all of the economic evidence we summarize here, this disparity nevertheless initially gave us pause. We therefore believe a few comments about the disparity are appropriate here at the outset, before we return to a discussion of our work and the evidence on which we rely.

13. The 2015 statutory rate for commercial non-pureplay webcasters ranges between $0.0023 and $0.0025 per performance.[6] This rate is the culmination of an upward trend in the

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Inc.)," at 3 (stating, "[t]he statutory hypothetical market rates substitute for actual market rates for particular economic reasons: to overcome the intractable transaction costs that would lead to market failure if licensors and licensees were required to negotiate the royalty for each performance of a sound recording; and to ameliorate uncompetitive pricing that could arise if a private collective possessed the market power to establish royalty rates on behalf of all licensors.")

5. We report our conclusions and analyses as a per-performance royalty rate. We also considered the question recently raised by the Judges regarding the potential use of "a rate structure based on the number of subscribers or a percentage of webcaster revenue." Web IV Notice, at 3. From an economic perspective, both a per-performance royalty rate and other royalty structures, such as a percentage of revenue, have certain advantages. [redacted] Therefore, we do not view the evidence as strongly supporting one rate structure over another.

6. The 2015 statutory rate for commercial webcasters subject to the agreement between the National Association of Broadcasters and SoundExchange is $0.0025 per performance. The 2015 statutory rate for SiriusXM is $0.0024. The 2015 statutory rate for all other commercial webcasters is $0.0023. Webcasting III Decision, at 1 & 34.

statutory rate that began with the Webcaster II proceeding, and continued into the Webcaster Settlement Act and Webcasting III rates. That is, in Webcaster II, the CRB set rates for commercial webcasters that increased from $0.0008 in 2006 to $0.0019 in 2010.[7] Under the Webcaster Settlement Act, the National Association of Broadcasters and SoundExchange negotiated rates that increased from $0.0017 in 2011 to $0.0025 in 2015.[8] In Webcasting III, the CRB adopted those rates, and set rates for other commercial non-pureplay webcasters that will increase from $0.0019 in 2011 to $0.0023 in 2015.[9] As noted above, that trend led to rates that are substantially higher than the ones we conclude are appropriate for 2016 – 2020. We think that a key reason for the difference is that, in this proceeding, we (and also now the CRB) have access to much better evidence on which to base the relevant calculations.

14. In Webcaster II, the evidence available to the CRB was poor. We understand there existed at the time few or no direct license agreements involving non-interactive webcasters and sound recording copyright holders that could be used as benchmarks. The Webcaster II decision therefore appears to have relied substantially on a methodology proposed by SoundExchange's expert, Dr. Michael Pelcovits, who tried to draw an analogy between the rates charged in the market for interactive webcasting services and the rates to which willing buyers and willing sellers would agree in the market for non-interactive webcasting services.[10] However, more recently, the Judges have explicitly criticized Dr. Pelcovits' application of this

7. United States Copyright Royalty Judges, In the Matter of Digital Performance Right in Sound Recordings and Ephemeral Recordings, Docket No. 2005-1 CRB DTRA, "Final Determination of Rates and Terms," ("Webcaster II Decision"), at 47.
8. Webcasting III Decision, at 34. SiriusXM and SoundExchange negotiated rates that increased from $0.0018 in 2011 to $0.0024 in 2015. *Id.*
9. *Id.*, at 1.
10. Webcaster II Decision, at 46-47 ("Because we find that the interactive webcasting market is a benchmark with characteristics reasonably similar to non-interactive webcasting, particularly after Dr. Pelcovits' final adjustment for the difference in interactivity, the Copyright Royalty Judges find that this benchmark supports the explicit annual usage rates proposed by SoundExchange.")

approach and articulated a concern we share and explicate in more detail in Part V below, "that the interactive benchmark model as developed by Dr. Pelcovits is compromised, and its usefulness reduced" by the various assumptions and shortcuts employed.[11]

15. By the time of Webcasting III, there were also certain license agreements in place between copyright holders and webcasters under the Webcaster Settlement Act. However, to the extent that those deals were influenced by the Webcaster II rates, they would reflect the same compromised evidence reflected in the Webcaster II rates. Moreover, if the parties had failed to come to an agreement, we understand that the webcasters expected they would have operated under the statutory license, with terms set by the CRB in Webcasting III. Therefore, the rates in the Webcaster Settlement Act agreements are likely best understood as a reflection of the parties' expectations about Webcasting III, rather than a proxy for what a willing buyer and willing seller would have negotiated if unconstrained by government regulation.

16. None of this is meant to be a criticism of the prior proceedings. The CRB in those proceedings had no choice but to work with the evidence then available, imperfect as it might have been. Our point instead is that, in this proceeding, the Judges have available to them much better evidence: namely, a wide range of recent licensing agreements negotiated between important non-interactive webcasters and various copyright holders, large and small. Thus, there is no need in this proceeding to accept the limitations inherent in any analogy to other markets, or to continue royalty trends that were based on low-quality evidence. Rate-setting in this proceeding can be built on actual deals negotiated by actual buyers and actual sellers in this very industry.

11. Webcasting III Decision, at 60.

17. The remainder of our report is described briefly below.[12] Part III presents an analysis of 28 separate direct license agreements between iHeartMedia and various individual record labels. We first consider the license agreement that iHeartMedia signed with Warner Music Inc. ("Warner"), one of the three "major" record labels. We then consider the 27 agreements that iHeartMedia signed with various "independent" labels, including some prominent labels such as Big Machine Records, Glassnote Records, and Naxos. Together, Warner and these 27 other labels held the sound recording copyrights relevant to more than [redacted] percent of all performances on iHeartMedia's webcast stations as of July 2014.[13]

18. These direct deals are in our opinion the best currently available evidence on the rates and terms that a willing buyer and willing seller would negotiate. The reason is that these contracts document actual rates and terms that were in fact negotiated by buyers and sellers for rights we understand are very similar to those at issue in this proceeding. Moreover, because these agreements were negotiated by presumably self-interested buyers and sellers, they necessarily reflect the specific economic factors that we understand Congress and the Judges have stated should be accounted for in the statutory rate, including "whether the use at issue might substitute for, promote, or otherwise affect the copyright owners' stream of revenues," and "the relative contributions of the owners and licensees in making the licensed work available to the public."[14]

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12. While we share the same conclusions, Professor Fischel is primarily responsible for the material presented in Part III and Part IV.A, and Professor Lichtman is primarily responsible for the material presented in Part IV.B and Part V.

13. [redacted]

14. Web III Decision, at 9.

19. Compensation paid under these 28 license agreements was projected by iHeartMedia to generate an average royalty of between [redacted] and [redacted] per performance, *i.e.*, rates substantially lower than the 2015 statutory per-performance rate paid by iHeartMedia, which is $0.0025. Therefore, these agreements indicate that, at a minimum, willing buyers and willing sellers would agree to a substantial discount to the current statutory rate. However, these rates were set in a world where the statutory rate exists, and thus they may not reflect the rates that would have been set by a willing buyer and willing seller if unconstrained by the statutory rate. Therefore, to understand these contracts properly, we employed a two-step process. First, we looked for evidence as to the baseline level of how often iHeartMedia would have played a label's music in the absence of any direct deal. Without a deal, iHeartMedia would have continued to play that label's music at this baseline level and would have paid for those performances at the statutory rate. Thus, while the contracts provide iHeartMedia with a "blanket" license for all of the performances of each label and therefore on their face may appear to provide information about the royalty rate applicable to all of those performances, from an economic perspective, each negotiation between iHeartMedia and the associated label was really only a negotiation about the *additional* performances and *additional* royalty payments the parties expected, above the baseline level.

20. Given the baseline level of performances and royalty payments, then, our second step was to calculate the "incremental" rate implicit in these deals, factoring out the baseline. We thus estimated how much in additional royalty payments the labels were expected to receive under the license agreements, and we divided that amount by the number of additional performances the labels were expected to receive under these agreements. The resulting incremental rate is $0.0005 per performance for iHeartMedia's agreement with Warner, and

$0.0002 per performance for iHeartMedia's agreements with the 27 independent labels, taken as a group.

21. Part IV considers other available economic evidence as a check on our conclusions regarding these deals. First, we analyzed from a financial perspective the maximum amount that a typical simulcaster could pay in sound recording royalties while remaining economically viable. To do this, we looked at the financial performance of a large sample of terrestrial radio stations. Obviously, terrestrial radio stations are not required to pay sound recording royalties.[15] Nevertheless, we use data from a broad sample of firms in this mature, well-understood industry to calculate the maximum sound recording royalty that a simulcaster could feasibly pay, accounting for differences in the costs of providing terrestrial and webcasting service. This analysis indicates that, even if a simulcaster could generate revenue at the same rate earned by a typical terrestrial radio station, and even excluding some of the costs that a terrestrial station otherwise incurs, a simulcaster would still be able to pay sound recording royalties no greater than a level between $0.0003 and $0.0005 per performance.[16] This is an upper bound on what a willing buyer and willing seller would negotiate, because simulcasters would attempt to negotiate rates lower than the maximum amount they could pay.

22. Second, as another check on our conclusions regarding the license agreements between iHeartMedia and copyright holders, we analyzed royalty rates that have recently been established by the CRB for sound recordings performed on satellite radio. Obviously, the satellite statutory rate is set under a different regulatory standard. However, from an economic

15. Indeed, our evidence is consistent with a conclusion that terrestrial radio stations could not remain viable while paying substantial sound recording royalties because, when combined with the other costs of providing terrestrial radio, the cost of those royalties would drive the firms that own terrestrial radio stations out of the business.

16. The interquartile range (i.e., the 25th and 75th percentiles) of this analysis includes a range between a rate of $0 (or below) and $0.0008 per performance.

standpoint, it is hard to see why rates that satisfy the standard applicable to satellite radio would be meaningfully different from rates that satisfy the "willing buyer / willing seller" standard. Moreover, in the most recent satellite proceeding, evidence about the interaction between willing buyers and willing sellers was deemed relevant to the satellite standard. Specifically, experts for SoundExchange and SiriusXM put forward, and the Judges considered in their decision, evidence drawn from existing consensual licensing arrangements relevant to the markets for interactive webcasting and satellite broadcasting.[17] Regulatory issues aside, meanwhile, satellite radio also has important similarities to webcasting, among them (a) that the same copyrighted works are at issue, and (b) that, like webcasting, satellite radio is a non-interactive radio listening service. After accounting for potential differences in the music content of custom webcast stations, relative to satellite radio, this analysis indicates an appropriate per-performance royalty rate for custom webcasters of between $0.0005 and $0.0006.

23. Part V discusses two reasons why it is reasonable to re-evaluate the statutory rate in the light of the better, newly-available evidence of the recent license agreements. First, we discuss the interactive benchmark that Sound Exchange's expert, Dr. Pelcovits, presented in prior webcasting proceedings, and we explain why Dr. Pelcovits' application of that benchmark likely overstates the royalty that a willing buyer and seller would negotiate. Second, we present details of a thought experiment which puts the current statutory rates in the context of actual record industry outcomes. Specifically, we demonstrate that, even under the extreme assumption that consumers who migrate from terrestrial radio to webcasting entirely cease all purchases of

17. United States Copyright Royalty Judges, In the Matter of Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services, Docket No. 2011-1 CRB, PSS/Satellite II, "Final Determination" ("Satellite II Decision"), at 32 & 35.

music, a per-performance royalty much less than the current statutory rate would be sufficient to maintain copyright holder revenue at its current level.

24. We have been assisted in preparing this report by members of Compass Lexecon's professional staff. Compass Lexecon is being compensated for Professor Fischel's time at an hourly rate of $1,250, for Professor Lichtman's time at an hourly rate of $850, and for the time of others assisting us at their normal hourly rates. Appendix C provides a list of materials relied upon in the preparation of this report.

III. RECENT LICENSE AGREEMENTS INDICATE THAT, IF UNCONSTRAINED BY GOVERNMENT REGULATION, WILLING BUYERS AND WILLING SELLERS IN THIS MARKET WOULD NEGOTIATE ROYALTY RATES OF APPROXIMATELY $0.0005 PER PERFORMANCE.

A. The best available economic evidence regarding what willing buyers and willing sellers would negotiate is actual recent agreements between webcasters and copyright holders.

25. In recent years, iHeartMedia has signed license agreements with 28 different record labels that hold sound recording copyrights. These agreements reflect actual negotiations between buyers and sellers over rights we understand are similar to those at issue in this proceeding. These agreements therefore provide the most direct economic evidence regarding the willing buyer / willing seller standard we understand is at issue in this proceeding.

26. Moreover, these agreements also reflect considerations that we understand Congress and the Judges have deemed relevant in establishing the statutory rate: "whether the use at issue might substitute for, promote, or otherwise affect the copyright owners' stream of revenues," and "the relative contributions of the owners and licensees in making the licensed

work available to the public."[18] Parties to an agreement are usually assumed to negotiate from the standpoint of their own self-interest; therefore, in the negotiations between iHeartMedia and the record labels, the parties would have considered these factors, because they are relevant to their own self-interest. With respect to the first consideration, if the parties believed that webcasting substituted for and reduced copyright owners' other sources of revenue, such as sales of physical music or digital downloads, a record label would demand a correspondingly higher royalty rate as compensation for this loss. Conversely, if the parties believed that webcasting promoted and increased copyright holders' other sources of revenue, a record label (in competition with other labels) would be willing to offer a correspondingly lower rate to obtain this promotional gain.

27. iHeartMedia's agreements with the 28 record labels also reflect the relative economic contributions made by webcasters and copyright holders. The contribution of copyright holders is fairly straightforward: they identify, develop, and market music to appeal to consumer tastes. Webcasters like iHeartMedia also provide important contributions recognized in economic literature. Webcasters operate in what economists call a "multi-sided" market. A "multi-sided" market is one in which firms act as "platforms" that "enable interactions between end-users, and try to get the two (or multiple) sides 'on board' by appropriately charging each side."[19] In the case of webcasting, the webcasters are platforms bringing together music consumers, music copyright holders, and advertisers to generate value for all sides.

18. Web III Decision, at 9.
19. Jean-Charles Rochet and Jean Tirole (2006) "Two-sided markets: A progress report," *RAND Journal of Economics* 37(3):645-67, at 645. Examples of other platforms in two-sided or multi-sided markets include: payment cards like Visa and MasterCard, which reduce transactions costs between consumers and merchants, and computer operating systems like Windows, which reduce transactions costs between developers of software applications and computer users. *Id*., at 646-7.

28. In principle, an advertiser could directly transact with each individual record label and, simultaneously, with individual consumers, paying the record labels to provide a stream of music to the consumer and providing the stream to the consumer in return for listening to or viewing advertisements. The set of different negotiations and payments that would be necessary to operationalize this arrangement would be large and probably infeasible. A webcaster is a platform that brings all of the parties together in a way that minimizes the transactions costs that otherwise would likely doom such efforts. As two prominent competition economists put it, "[g]enerally, one can think of two-sided platforms as arising in situations in which there are externalities and in which transactions costs, broadly considered, prevent the two sides from solving this externality directly. The platform can be thought of as providing a technology for solving the externality in a way that minimizes transactions costs."[20]

29. Specific webcasters succeed by both minimizing transactions costs and making additional contributions which attract various parties. For instance, webcasters compete with each other to provide additional value to listeners through song selection expertise and technology. Webcasters also work with advertisers to market their products to listeners. Additionally, some webcasters, such as iHeartMedia and other simulcasters, provide further value by providing complementary content including DJ commentary, interviews with musicians, information on local events, and news, weather and traffic reports.[21]

30. Without direct evidence from recent agreements between webcasters and copyright holders, it would be difficult to reliably quantify the value of these contributions.

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20. David S. Evans and Richard Schmalensee (2007) "The industrial organization of markets with two-sided platforms," *Competition Policy International*, 3(1):151-79, at 154.

21. Simulcast consumers presumably receive substantial value from this complementary content, because otherwise they could instead just listen to custom webcasts, which in essence replace this content with additional music.

However, from an economic perspective, the royalty rates negotiated by webcasters and copyright holders already incorporate all of these contributions because it is in the self-interest of the parties to be compensated appropriately for their contributions. Because the terms of actual agreements incorporate these and other effects relevant to determining what a willing buyer and willing seller would negotiate, the actual agreements are the most important evidence we relied upon in forming our conclusions.

B. iHeartMedia's agreement with Warner demonstrates that willing buyers and willing sellers would negotiate royalty rates of approximately $0.0005 per performance.

31. On October 1, 2013, iHeartMedia and Warner executed an agreement with a three-year term under which iHeartMedia received a license to perform Warner-owned sound recordings on its webcast stations.[22] The iHeartMedia-Warner agreement is of particular significance because of the standing of both parties. We are not aware of any other public agreements since the last webcasting proceeding between a non-interactive webcaster of similar prominence as iHeartMedia and a record label of similar prominence as Warner.[23]

32. In exchange for a license to perform Warner's sound recordings (as well as several other valuable rights discussed below), iHeartMedia agreed to pay Warner cash compensation over the three-year term of the agreement as follows:[24]

- [redacted]

22. [redacted]

23. If information about important non-public agreements made by webcasters other than iHeartMedia becomes available to us through discovery in this proceeding, we can supplement our report to incorporate analyses of those agreements.

24. [redacted]

- [redacted]

33. At the time it signed the contract, iHeartMedia made projections about its expected payments under the contract, which are described in more detail below. [redacted]

34. [redacted]

25. [redacted]

26. [redacted]

27. [redacted]

28. [redacted]

35. Two other provisions are also important in evaluating compensation under the agreement. [redacted]

36. [redacted]

29. [redacted]
30. [redacted]
31. [redacted]

[redacted]

37. The Warner agreement also contains a number of non-pecuniary terms, including the following:

- [redacted]
- [redacted]

32. [redacted]
33. [redacted]
34. [redacted]
35. [redacted]
36. [redacted]
37. [redacted]

- [redacted]
- [redacted]

38. It is difficult to precisely quantify the value of these various non-pecuniary terms in isolation. Some benefit iHeartMedia, while others benefit Warner, and it is the net value of all of these provisions taken together that is relevant from an economic perspective. [redacted]

39. [redacted]

38. [redacted]
39. [redacted]
40. [redacted]

[redacted]

40. Exhibit A reports iHeartMedia's contemporaneous projections regarding the total number of performances (including Warner performances) it expected to play over the term of the agreement.[42] There are two steps involved in the calculations presented in Exhibit A. First, we report iHeartMedia's contemporaneous projections regarding total listening hours ("TLH") on music-formatted webcast stations. Second, we convert TLH into total performances based on iHeartMedia's projections from the same document regarding the average number of performances (including partial performances) per listener-hour. In total, Exhibit A shows that iHeartMedia expected to play [redacted] performances over the three-year term of the agreement.[43]

41. [redacted]

41. [redacted]

42. [redacted]

43. [redacted]

[redacted]

42. [redacted] Therefore, the agreement reflects a substantial discount on iHeartMedia's statutory royalty rate, and provides market evidence that

44. [redacted]

45. [redacted]

willing buyers and willing sellers have negotiated rates substantially below the existing statutory rate.

43. Because iHeartMedia and Warner negotiated the agreement in a world where the statutory rate exists, however, this [redacted] rate does not necessarily reflect the rate that would have been reached under what we understand is the relevant statutory standard – that is, the rate that a willing buyer and willing seller would have reached in a marketplace "unconstrained by government regulation or interference."[46]

44. Nonetheless, the agreement does provide a basis by which an estimate of this rate may be determined. As an economic matter, the Warner agreement reflects a bundle of two distinct sets of rights. The first set of rights provides a license for iHeartMedia to play the same number of Warner performances as it would have played absent the agreement. The second set of rights provides a license for iHeartMedia to play additional Warner performances, above and beyond those it would have played absent the agreement.

45. Together, these two parts of the bundle constitute the full license iHeartMedia received under the agreement, and the compensation paid under the agreement encompasses both parts of the bundle. However, the two parts are conceptually distinct and it is useful to consider them separately. The following hypothetical illustrates this. Suppose that iHeartMedia and Warner had negotiated a license for only the first part of the bundle – that is, for the Warner performances that iHeartMedia would have played even absent the agreement. Because the number of Warner performances is unchanged, Warner would have an economic incentive to reject any agreement for such a license in which it received less in compensation than it would

46. United States Copyright Royalty Judges, In the Matter of Digital Performance Right in Sound Recordings and Ephemeral Recordings, Docket No. 2009-1 CRB Webcasting III, "Final Determination of Rates and Terms," at 9.

have received absent the agreement. In other words, Warner would have rejected any rate lower than the statutory rate.[47] If Warner accepted a lower per-performance fee in this case, it would receive less revenue for the same number of performances (and thus, the same costs), thereby lowering its profit. [redacted]

46. Likewise, iHeartMedia would have no incentive to pay Warner more than the existing statutory rate in this hypothetical. If, in private negotiations, Warner demanded a rate higher than the statutory rate, iHeartMedia would be better off declining the offer and simply paying the statutory rate.

47. Compensation paid for this first part of the "bundle," therefore, is directly affected by the existing statutory rate. As a result, this part of the bundle provides essentially no information about what willing buyers and willing sellers would negotiate in the absence of government regulation.

48. By contrast, the second part of the bundle is highly relevant to what willing buyers and willing sellers would negotiate if unconstrained by government regulation. This part of the bundle involves a license for iHeartMedia to play additional Warner performances, above and beyond those it would have played absent the agreement. Those additional performances are not directly influenced by the existing statutory rate, because absent the agreement, iHeartMedia

47. It is possible that a deal could be negotiated that was structured differently than the existing statutory rate, such as with a fixed payment, but however the compensation was structured, the parties would be unlikely to agree upon any deal that provided, on average, a different amount of value in total for performances that would have been played even absent the deal (including the value of any risk-sharing that a differently-structured contract might provide).

wouldn't play them and Warner wouldn't receive any compensation for them. The royalty rate negotiated for this second part of the bundle, therefore, is a more appropriate measure of what a willing buyer and a willing seller would negotiate if unconstrained by government regulation. Warner licensed the rights to those performances to iHeartMedia, and iHeartMedia compensated Warner for that license, at rates that were acceptably profitable for both parties. The rate here was not determined by regulation; it was determined by the give-and-take of a true negotiation.

49. Exhibit B reports our calculations of the average per-performance royalty paid under the Warner agreement for these additional performances based on the contemporaneous iHeartMedia projections described above. [redacted] Therefore, the agreement involved a license under which iHeartMedia expected to play [redacted] additional Warner performances [redacted].

50. [redacted] Therefore, the agreement involved additional projected compensation of [redacted] to Warner for [redacted] additional performances, which reflects an average payment of $0.0005 per performance. This is the average rate iHeartMedia expected to pay Warner for the second part of the "bundle," *i.e.*, the rights to play additional performances that

48. [redacted]

iHeartMedia obtained under the agreement. Unlike the average [redacted] per performance rate described above, this rate is not directly influenced by the statutory rate, and therefore is a more appropriate reflection of what a willing buyer and willing seller would agree upon if unconstrained by government regulation.

51. Although our opinion is that this $0.0005 per performance rate is the best available evidence on the question at issue in this proceeding, it is also important to recognize certain limitations. We have already mentioned the various non-pecuniary aspects of the Warner agreement which are not incorporated into this calculation. [redacted] However, to the extent their net value is negative (*i.e.*, on net, they provide additional value to iHeartMedia), then the $0.0005 calculation could overstate the appropriate royalty rate; similarly, to the extent their net value is positive (*i.e.*, on net, they provide additional value to Warner), then the $0.0005 calculation could understate the appropriate royalty rate.

52. The $0.0005 per-performance rate reflects an average payment for the incremental performances under the Warner agreement, which constitute approximately [redacted] percent of all the projected Warner performances on iHeartMedia's webcast stations.[49] However, for the reasons described above, the Warner agreement does not directly indicate what rate iHeartMedia and Warner would have negotiated, if unconstrained by government regulation, for the remaining [redacted] percent of projected performances (the "first part of the bundle"). For

49. [redacted]

instance, it may be the case that the initial webcast performances of Warner songs generate more promotional value for Warner in music sales than do later performances as listeners become more familiar with Warner music. If so, then in the absence of the statutory rate, Warner might have agreed to a lower rate on non-incremental performances than on incremental performances, and therefore $0.0005 might be an overstatement of the appropriate average per-performance rate for all Warner performances. If the opposite is true, then $0.0005 might be an understatement of the appropriate rate. In any case, because the royalty rate paid for the non-incremental performances is essentially set by the contemporaneous statutory rate, the Warner agreement only provides direct evidence regarding the incremental performances. However, we are aware of no evidence demonstrating that the royalty rate for non-incremental performances (if unconstrained by government regulation) would be substantially different from that of the incremental performances. Moreover, we describe in the following sections additional corroborating evidence consistent with a conclusion that $0.0005 is likely to be within a reasonable range for all performances.

53. As we have described above, the $0.0005 calculation is not directly affected by the existing statutory rate; however, there may be other more subtle or indirect effects of the regulatory structure that do impact even this rate. For instance, in a marketplace unencumbered by regulation, a record label negotiating with a webcaster might accept a lower per-performance royalty because, by offering a lower royalty rate than others, the record label can incentivize the webcaster to direct to it a larger share of listener performances. The idea here would be for the relevant label to gain in volume more than what it loses in the lower per-performance royalty. However, the regulatory structure inadvertently discourages this rate-lowering strategy. The reason: a record label has less incentive to attempt this strategy if it believes that the CRB will

see its lower rate, use that rate as a benchmark for the statutory rate, and thereby impose the lower rate on all record labels. If that happens, after all, the original record label will no longer enjoy the benefits of being the low-priced seller, and thus the strategy will end up reducing that label's revenue but without increasing that label's share of performances.[50] These and other subtle implications of the regulatory regime might well affect the $0.0005 royalty rate calculation in ways that could warrant further adjustments.

54. In addition, the exercise of seller market power may affect the royalties paid under the agreement. For example, to the extent that Warner was able to exert market power in negotiating its agreement with iHeartMedia, the amount of compensation it demanded from iHeartMedia may be higher than it would have been able to demand in a transaction without market power. If so, then the effect of that market power would be to increase the royalty rate on additional performances under the agreement, as we have calculated it, above what that rate would otherwise be. If so, then a rate lower than $0.0005 may be appropriate for the statutory rate.

55. [redacted]

50. This is a straightforward application of the well-known economic theory regarding "price match guarantees," in which firms in an industry guarantee they will "meet or beat any competitor's price," and in so doing, weaken the incentive of any individual firm to cut prices, since when a price cut is automatically matched by all competitors, no firm can increase its sales by cutting prices. *See*: Steven C. Salop (1986) "Practices that (Credibly) Facilitate Oligopoly Co-ordination," in Joseph E. Stiglitz & G. Frank Mathewson, eds., *New Developments in the Analysis of Market Structure*, Cambridge, MA: MIT Press *See also*: Jonathan B. Baker (1996) "Vertical Restraints with Horizontal Consequences: Competitive Effects of 'Most-Favored-Customer' Clauses," 64 *Antitrust Law Journal* 517-34. In this case, the statutory rate serves as a price match guarantee, since it forces all sellers to offer the rates set in the agreements that form the benchmark for the statutory rate.

[redacted]

C. iHeartMedia's agreements with 27 other copyright holders demonstrate that many willing buyers and willing sellers would negotiate a royalty rate of $0.0002 per performance.

56. In addition to its agreement with Warner, iHeartMedia also signed direct license deals with 27 "independent" record labels. Exhibit C provides a list of these deals, including the effective date for each agreement. As of July 2014, these 27 labels accounted for approximately [redacted] percent of webcast performances on iHeartMedia.[51] Although Warner is substantially larger than any of these other labels, these 27 deals provide important additional evidence as to the rates negotiated by willing buyers and willing sellers.

57. These 27 agreements contain many similar provisions. Each has a five-year term and provides the label with the following cash compensation:[52]

- [redacted]
- [redacted]

51. [redacted]

52. [redacted]

- [redacted]

58. [redacted]

59. [redacted]

60. [redacted]

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53. [redacted]
54. [redacted]
55. [redacted]
56. [redacted]
57. [redacted]

[redacted]

61. As in the Warner agreement, there are a variety of non-pecuniary terms in each of these contracts, some of which benefit iHeartMedia and some of which benefit the labels. [redacted]

[redacted]

58. [redacted]
59. [redacted]
60. [redacted]
61. [redacted]

62.

Because these calculations require us to make certain assumptions regarding what iHeartMedia projected at the time of these agreements, and the degree to which they met those projections, we are not able to calculate the appropriate royalty rate based on these agreements with as much precision as we can using the Warner agreement. Nevertheless, this analysis provides an independent look at the same question regarding what a willing buyer and willing seller would negotiate, and the results indicate a royalty rate of a similar (and in fact slightly lower) magnitude. Exhibit D summarizes the calculations, which are described in detail below.

63.

62.

63.

[redacted]

64. [redacted]

[redacted]

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64. [redacted]

65. [redacted]

[redacted] Multiplying the number of performances by the applicable statutory royalty rates in each month, we estimate that iHeartMedia would have paid, in total, [redacted] million in royalties for these labels' music, absent the agreements.

65. Next, we estimated the number of performances and the amount of royalties the parties projected at the time the agreements were signed. [redacted]

66. Next, we calculated the royalty rates that iHeartMedia would have paid under the agreements for these projected numbers of performances. [redacted]

[redacted]

Dividing this amount by the total projected [redacted] performances yields an average royalty payment of [redacted] per performance. [redacted]

67. As with the Warner agreement, however, this royalty rate reflects the average rate across two distinct sets of performances: those that iHeartMedia would have made absent the deal, and the additional performances above and beyond this level. The rate for the latter category of performances, those that iHeartMedia would not have played absent the agreements, more appropriately indicates what a willing buyer and willing seller would negotiate if unconstrained by government regulation. Focusing on the latter category, Exhibit D shows that the parties would have projected [redacted] additional performances from these 27 labels as a result of the direct licenses, and payment of approximately [redacted] more in royalties. This yields a per-performance royalty of $0.0002.

68. This estimated royalty rate for incremental performances of the 27 independent labels is lower than the $0.0005 per-performance rate that iHeartMedia projected for incremental performances with Warner. There are several economic considerations that may explain why the independent labels would have agreed to lower royalty rates on incremental performances. First, these labels may have placed a higher value on increasing public exposure for their artists, who

are likely to be less well-known, on average, than those associated with a major record label. Second, relative to major labels, independent labels may have a smaller "back catalog" of music that is already familiar to listeners, relative to a major label. Despite these potential differences, these agreements with independent labels still provide an important benchmark, because they indicate what a substantial number of willing sellers in the industry would negotiate. This analysis also demonstrates that our main conclusion, regarding the $0.0005 per performance rate, is not the result of some unusual or unique feature of the Warner agreement; as we show here, a broad range of other agreements also indicate a royalty rate of similar magnitude.

IV. OTHER AVAILABLE ECONOMIC EVIDENCE IS CONSISTENT WITH OUR CONCLUSIONS REGARDING THE RECENT LICENSE AGREEMENTS.

A. A model of simulcaster financial performance based on terrestrial radio indicates that the maximum royalty rate simulcasters would likely be able to pay is, on average, between $0.0003 and $0.0005 per performance, and the 25th and 75th percentiles of the analysis reflect a range between $0 (or below) and $0.0008 per performance.

69. As a test of the reasonableness of our conclusions regarding the royalty rates paid under iHeartMedia's agreements with Warner and the 27 independent labels, we performed an analysis designed to determine the maximum amount a simulcaster would be able to pay for sound recording performance rights while remaining viable as a going concern.

70. It is a basic tenet of financial economics that companies need to cover all expenditures to continue to conduct their business operations over the long term. Companies' expenditures fall into two broad categories:

- Expenditures related to running the company, including operating expenditures (those related to day-to-day operations) and capital expenditures (*i.e.*, expenditures necessary to maintain the productive capacity of its assets and/or grow); and

- Expenditures related to financing the company, providing a return to investors (*i.e.*, debt and equity holders) to compensate them for bearing the risk of investing in the company.

If a company cannot cover its operating and capital expenditures, it will not be able to continue in business over the long term. Even if the company covers its operating and capital expenditures but fails to provide a reasonable rate of return to investors, it will not be able to stay in business over the long term because investors will not be willing to provide the capital necessary to do so. However, to the extent a company generates positive "economic value added" ("EVA"), *i.e.*, revenues in excess of its operating expenditures, capital expenditures, and return to investors, the company could theoretically remain in business with reduced revenues or higher expenditures up to the point where EVA is reduced to zero, or in other words, until the company breaks even.[66]

71. Applying these economic principles, we prepared a financial model of a hypothetical representative internet-only webcaster that provides the same types of broadcasts as terrestrial radio stations do now, which we refer to as a "hypothetical simulcaster." This model estimates the EVA that a hypothetical simulcaster could earn, which in turn determines the maximum royalty that could be paid to sound recording copyright owners. While the model indicates the maximum amount that a hypothetical simulcaster could pay, actual firms would presumably negotiate lower rates than the maximum amount they could pay. Moreover, to the

66. The economic rationale for the use of economic value added, or EVA, as a measure of value creation is discussed extensively in the academic literature and used widely in practice under approaches also sometimes known as "Residual Income" or "Economic Profit." *See, e.g.,* Zvi Bodie, Alex Kane, and Alan Marcus (2013) *Essentials of Investments,* Tenth Edition, McGraw-Hill, at 454; Bennett Stewart (2013) *Best-Practice EVA*, Wiley; and Tim Koller, Marc Goedhart, and David Wessels (2010) *Valuation*, Fifth Edition, Wiley, at 115-119. The notion of EVA derives from another basic tenet of financial economics – that the value of the firm equals the present value of profits or cash flows available to investors in the firm, where the profits or cash flows are discounted at the applicable discount rate (*i.e.*, a discounted cash flow, or "DCF" methodology). *See, e.g.*, Aswath Damodaran (2012) *Investment Valuation,* Third Edition, Wiley, at 871-874. Consistent with the DCF methodology, it follows that a firm with zero EVA (*i.e.*, one that is just breaking even) is one wherein net present value equals zero (*i.e.*, the present value of investments equals exactly the present value of cash flows).

extent copyright holders would compete with each other to have their music played on the hypothetical simulcaster's stations, the royalty would be driven downward from the maximum amount we calculate. For these reasons, the model estimates an upper bound on what a willing buyer and a willing seller would actually negotiate.

72. To build our model, we used data from a reasonable proxy for a hypothetical simulcaster, namely, publicly-traded companies that own and/or operate terrestrial radio stations. Besides being obviously related to webcasting in terms of the content and format, terrestrial radio has the advantage of being a mature industry in which there are many firms with publicly-available financial information. Terrestrial radio therefore provides a reasonable and well-documented basis for modeling a hypothetical simulcaster.[67]

73. A major source of costs for terrestrial radio stations are impairments recorded on FCC licenses, and expenses related to radio towers and other specialized capital equipment used for broadcasting. Because webcasters do not need to pay these costs, we adjusted our model to reduce the hypothetical webcaster's expenses, relative to those of terrestrial radio. This adjustment has the effect of increasing the estimated EVA and, thus, the royalty rate that can be paid.[68] We did not, however, add in additional webcaster-specific costs such as those related to computer servers and internet bandwidth. Had we added those costs into the model, the maximum feasible royalty would have ended up correspondingly lower. We simply lacked sufficiently precise evidence to make this adjustment.

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67. Although this evidence also might be relevant for custom webcasting stations, such a conclusion is less certain since custom stations typically do not provide the same complementary content, such as DJ commentary and weather and news updates, that terrestrial and simulcast stations do.

68. The EVA calculations we provide in this section are therefore higher than actual EVA for these terrestrial radio firms. Absent the assumed reductions in costs, average EVA for these firms would be much lower. Therefore, these calculations do not imply that actual terrestrial radio firms could pay substantially higher costs and remain in business.

74. The financial model is based on public financial reporting on the operations of 12 companies with terrestrial radio operations for a 10-year time period between 2004 and 2013. In 2004, the radio companies in our sample together accounted for approximately 45 percent of the $21.4 billion of total radio station revenues in that year, as estimated by the Radio Advertising Bureau.[69] We conduct our analysis in six steps, which are explained in greater detail in Appendix D:

1. Identify a set of radio companies with terrestrial operations for which publicly-available data are available and sufficient for our analysis over the ten-year period, 2004 to 2013;

2. Estimate a standard measure of accounting profits after covering operating expenditures, known as Net Operating Profit After Taxes ("NOPAT"), including an adjustment for the reduction in costs for a hypothetical simulcaster, which would not need to pay expenses related to FCC licenses and radio towers, relative to a terrestrial radio firm;

3. Estimate the amount of invested capital that would be necessary for a hypothetical simulcaster;

4. Estimate a weighted average cost of capital ("WACC") for a hypothetical simulcaster to account for a reasonable return to investors to compensate them for bearing the risk of investing in the company and ensure that an efficient amount of capital is drawn into the industry;

5. Estimate a hypothetical simulcaster's potential EVA as NOPAT minus the cost of invested capital based on the WACC; and

6. Translate EVA into a maximum per-performance royalty rate by extrapolating EVA for these firms to the entire industry, and then dividing by an estimate of the total number of terrestrial radio performances (*i.e.*, radio "spins" multiplied by listeners) in 2013.

75. Our model assumes that the ability of terrestrial radio firms to generate revenue is a reasonable benchmark for the revenue a hypothetical simulcaster could generate. Although it

69. The total 2004 revenues of all firms equal $9,578.8 million, as demonstrated in Appendix D. (*See* Appendix D – Exhibit 4D-1.)

is impossible to predict with precision what revenues for a hypothetical simulcaster would be on an industry-wide basis, simulcasters are similar to terrestrial radio broadcasters in the sense that they offer similar content to listeners, and the bulk of their revenue is generated by selling advertisements to the same type of buyers. We understand that currently, iHeartMedia's simulcast stations generate substantially lower revenue per listener-hour than do its terrestrial stations, on average. Arguably, simulcasters could one day have an advantage over terrestrial radio if their advertisements could be targeted more precisely to specific listeners than are terrestrial radio advertisements. Even so, it is unclear that this advantage would translate into substantially higher prices for advertising, since webcasters do not face the same type of barriers to entry (in the form of scarce FCC licenses, major capital expenditures, and limitations on any station's geographic reach) that terrestrial radio broadcasters face. Therefore, competition among simulcasters may be fiercer than it is among terrestrial broadcasters, limiting their ability to raise advertising prices.

76. The details of the first five steps of our analysis, which lead to our calculation of EVA, are presented in Appendix D. Exhibit E-1 reports bottom-line calculated EVA for a hypothetical simulcaster, and demonstrates the implication of those calculations for the maximum royalty rate such a firm would be able to pay while remaining in business over the long term. To do so, we first calculate the average pre-tax EVA for all firms in our sample as a share of their average revenues for all years from 2004 to 2013. Over this 10-year period, the EVA represents 7.2 percent of revenues. We then apply this 7.2 percent rate to total terrestrial radio industry revenues for 2013, which are $17.6 billion, as reported by Radio Advertising

Bureau.[70] This calculation indicates that a hypothetical simulcasting industry that was as large as the terrestrial radio industry in 2013 (but which had substantially lower costs than the actual terrestrial radio industry) could pay sound recording royalties in total of $1.269 billion (= $17.6 billion x 7.2 percent).

77. We then estimated the total number of "performance" equivalents (*i.e.*, terrestrial radio spins multiplied by listeners) for the terrestrial radio industry in 2013. Nielsen reports that terrestrial radio in 2013 had approximately 242 million (age 12+) listeners, who listened on average for 2.7 hours per day.[71] Music-formatted stations constitute approximately 84 percent of all terrestrial stations, so we estimated that approximately 2.3 hours per day on average was associated with music listening (2.3 = 2.7 x 84 percent).[72] We understand that iHeartMedia's music-format terrestrial stations typically play approximately 12 songs per hour. If that is similar to the number of songs on average for all music-formatted terrestrial stations, then total 2013 terrestrial radio "performance"-equivalents would be approximately 2.4 trillion.[73]

78. To translate the estimate of total EVA into a per-performance royalty, we divide the estimated $1.269 billion in maximum royalty payments by 2.4 trillion performances. This indicates that a hypothetical simulcaster could pay a maximum per-performance royalty rate of $0.0005. This calculation is for the entire sample of companies we considered. A similar analysis conducted using firms that have no other material business segment other than radio

70. Radio Advertising Bureau, "Network, Digital, Off-Air Shine as Radio Ends 2013 in the Black / Insurance, Healthcare, Professional Services Spending Surges in Q4," Press Release, March 14, 2014.
71. "State of the Media: Audio Today 2014," Nielsen, February 2014.
72. *Id.*, at 12 (indicating shares of total stations with non-music formats, including News/Talk (11.3 percent), Sports (3.1 percent), and All News (1.5 percent). The sum of these is 15.9 percent, leaving 84.1 percent of stations as music format).
73. 2.4 trillion = 242 million x 2.3 hours x 365 days x 12 songs per hour.

("Pure Radio" firms), yields equivalent figures of 5.6 percent of revenue and $0.0004 per performance.

79. Alternatively, we also performed the same analysis, but restricted our sample to the firms for which data were available for all 10 years from 2004 – 2013. In other words, we tested the sensitivity of our results to any errors that may be introduced by mergers and bankruptcies of the firms in our sample. For this restricted sample, EVA is 5.6 percent of revenues over 2004 – 2013. Applying the estimate of total industry revenue and performances to this figure, the maximum per-performance royalty rate a hypothetical simulcaster could pay would be $0.0004. If one further restricts the sample to just the Pure Radio firms in this group, the equivalent figures are 4.5 percent of revenue and $0.0003 per performance. All of these calculations are summarized in Exhibit E-1.[74]

80. Therefore, we find that a hypothetical simulcaster would be able to pay no more than an average of between $0.0003 and $0.0005 per performance in order to remain in business over the long term. As noted above, these calculations reflect the maximum amount that a hypothetical simulcaster could pay; firms would presumably negotiate lower rates than this maximum, and to the extent there was substantial competition between copyright holders for airplay on simulcast stations, royalty rates would be driven below the maximum amount.

74. Our sample includes 12 firms (reduced to eight firms by 2013 because of mergers and bankruptcies). The interquartile range of annual ratio of Pre-tax EVA to Revenue (that is the 25th to 75th percentile) is reported in Exhibit E-2. Based on this sample of firms, the interquartile range is between $0.0000 and $0.0008 per performance. Focusing exclusively on the Pure Radio firms, the interquartile range is between -$0.0002 and $0.0008 per performance. If we restrict the sample to the firms for which data are available in all years, then the interquartile range is -$0.0001 to $0.0007 per performance, and if we further restrict to the Pure Radio firms, then the interquartile range is -$0.0002 to $0.0007 per performance.

B. Royalty rates for satellite radio demonstrate that willing buyers and willing sellers would likely negotiate a royalty rate of between $0.0005 and $0.0006 for custom webcasts.

81. As another check on our conclusions regarding the appropriate statutory royalty rate, we also considered the current statutory rate for satellite digital audio radio services ("SDARS"). Obviously, the satellite statutory rate is set under a different regulatory standard. However, from an economic standpoint, it is hard to see why rates that satisfy the standard applicable to satellite radio would be meaningfully different from rates that satisfy the "willing buyer / willing seller" standard. Moreover, in the most recent satellite proceeding, evidence about the interaction between willing buyers and willing sellers was deemed relevant to the *satellite* standard. Specifically, experts for SoundExchange and SiriusXM put forward, and the Judges considered in their decision, evidence drawn from existing consensual licensing arrangements relevant to the markets for interactive webcasting and satellite broadcasting.[75] Regulatory issues aside, meanwhile, satellite radio also has important similarities to webcasting, among them (a) that the same copyrighted works are at issue, and (b) that, like webcasting, satellite radio is a non-interactive radio listening service.

82. In the most recent SDARS proceeding, the CRB set a statutory rate for the period 2013 – 2017. The Judges concluded that "the most appropriate rate for SDARS for the 2013 to 2017 period is 11% of Gross Revenues."[76] We understand that "Gross Revenues" includes

75. Satellite II Decision, at 32 & 35.

76. *Id*., at 68. We understand that in the most recent proceeding, the Judges stated that "the rates that the Judges announce in this determination for the SDARS reflect a downward adjustment from the 12% - 13% rate range based upon the third § 801(b) factor." *Id*., at 61. We understand that the third § 801(b) factor deals with the relative roles of the copyright owner and copyright user in making contributions and investments. *Id*., at 6. Clearly, webcasters make important contributions and investments. Nevertheless, if the Judges believe that a rate between 12 and 13 percent is the more appropriate SDARS-related benchmark for a statutory webcasting royalty rate, then, based on the analysis above, a maximum royalty rate for custom webcasting would be between 24 and 26 percent (*i.e.*, double 12 or 13 percent), and applying this rate to Pandora's estimated $0.0026 in revenue per performance, as calculated below, indicates a per-performance royalty rate of between $0.0006 and $0.0007.

revenue generated by the SDARS from non-music content, so in order to use the SDARS statutory rates to calculate an appropriate rate for webcasting services, it is necessary to adjust for any differences in the relative importance of non-music content to webcasting and satellite radio, respectively.[77]

83. One of SoundExchange's experts argued in that proceeding that, according to market evidence, approximately 50 percent of the revenue of SDARS was attributable to music, with the other 50 percent attributable to non-music content (such as talk and news).[78] Although we take no position on whether that estimate is correct, if it is approximately correct, then the equivalent royalty rate for a music-only SDARS service would be twice as high as the statutory rate, or 22 percent of gross revenues.

84. Custom webcast services are essentially music-only, and therefore can be compared on this basis to a music-only SDARS service.[79] Thus, it is possible to apply the SDARS music-only rate (22 percent of gross revenue) to a webcaster's custom revenues and corresponding performances in order to calculate a reasonable per-performance benchmark rate for custom webcasting. By contrast, simulcast webcasts include a great deal of talk, news, traffic reports and other non-music inputs, such that a 22 percent rate would likely be too high. We are

77. For the purpose of the satellite statutory rate, "Gross Revenue" is defined to exclude revenue not directly earned from broadcasting content, such as from sales of equipment or licensing of intellectual property. Satellite services are allowed exclusions from gross revenue for (among other things) "[c]urrent and future data services offered for a separate charge," and "[c]hannels, programming, products and/or other services offered for a separate charge where such channels use only incidental performances of sound recordings" (37 C.F.R. 382.11).

78. Satellite II Decision, at 36 ("[Dr. Ordover] chose this reduction percentage [50 percent] principally based upon his observation of the identical $9.99 retail prices offered by SiriusXM for non-music and mostly music stand-alone subscriber packages.") We are not aware of similar market evidence for webcasters, *i.e.*, separate non-music and music services on which subscriber prices could be compared.

79. Many custom webcasters simultaneously provide visual text and image information about the music being played, and that information presumably provides value to consumers as well. Nevertheless, for custom webcasts, we can conservatively assume that visual information is not valued, and therefore, all revenue is attributable to music, as opposed to non-music content.

not aware of any reliable data on how much value consumers place on these other inputs, however, and thus we are not able to apply the SDARS benchmark to simulcasting.

85. We performed such a calculation using publicly-available data for Pandora, which exclusively provides custom webcasting and is the largest custom webcaster in the U.S. In 2013, Pandora reported $647.5 million in revenue, including both subscription and advertising revenue, and 16.7 billion listener-hours.[80] This indicates average revenue of $0.0388 per listener-hour. Assuming that Pandora listeners receive approximately 15 performances per hour (including partial performances), this translates into $0.0026 in revenue per performance. Application of the 22 percent royalty rate described above would therefore correspond to a per-performance royalty rate between $0.0005 and $0.0006.[81] This rate (which assumes that Pandora generates no custom webcasting revenue from non-music content) is approximately consistent with the range indicated by the other evidence described in this report.

V. IN ANALYZING THE APPROPRIATE STATUTORY RATE, IT IS REASONABLE TO FOCUS PRIMARILY ON NEWLY AVAILABLE EVIDENCE AND NOT SIMPLY EXTEND RATES SET IN PRIOR PROCEEDINGS.

86. As noted previously, the evidence available to the CRB in prior proceedings was relatively poor. The CRB had little choice but to rely on Dr. Pelcovits' imperfect "interactive benchmark" methodology and also to defer to the agreements struck in 2009 under the Webcaster Settlement Act. In this proceeding, however, the Judges have available to them much better evidence in the form of the recent licensing agreements between actual willing buyers and

80. Pandora Historical Financial Results, Three Months Ended June 30, 2014, at 8 & 9 (showing Non-GAAP total revenue for year ended 12/31/2013 of $647,518,000, and showing listener hours of 4.26 billion, 3.91 billion, 3.99 billion, and 4.54 billion in the four quarters of 2013).

81. This rate reflects Pandora's total revenue. [redacted]

actual willing sellers, which we have analyzed in prior sections. It is therefore reasonable to focus analysis primarily on this newly available evidence.

87. To amplify that point, in this section we discuss the flaws in Dr. Pelcovits' interactive benchmark, and we also present the results of a thought experiment which puts the current statutory rates in the context of actual record industry outcomes. The thought experiment is helpful because it shows that, even under the extreme assumption that consumers who migrate from terrestrial radio to webcasting entirely eliminate all their purchases of music, a per-performance royalty much less than the current statutory rate would be sufficient to maintain copyright holder revenue.

A. Dr. Pelcovits' application of the interactive benchmark is highly flawed.

88. Interactive services provide listeners with the ability to select precisely the music they wish to listen to, at the time they wish to listen to it. The use of royalty rates paid by interactive services as a benchmark to set rates for non-interactive services was proposed in the Webcaster II and Webcasting III proceedings by SoundExchange's expert, Dr. Michael Pelcovits.[82] He relied upon "the contracts entered into between the four major recording companies (EMI, Warner Music Group, Universal Music Group, and Sony BMG) and the Internet music companies offering interactive music services."[83] He then attempted to adjust the rates in these contracts for certain differences between interactive services and non-interactive services. One adjustment attempted to estimate the value consumers place on interactive services, relative to non-interactive services, based on the prices charged for subscriptions to

82. Webcasting III Decision, at 48-60; Webcaster II Decision, at 33-34.
83. United States Copyright Royalty Judges, In the Matter of Digital Performance Right in Sound Recordings and Ephemeral Recordings, Docket No. 2005-1 CRB DTRA, "Testimony of Michael Pelcovits," dated October 31 2005, at 21.

each type of service.[84] Another adjustment attempted to account for differing intensity of usage for typical listeners to each type of service.[85]

89. Although it may be possible as a theoretical matter to make adjustments to the rates paid by interactive services to determine what willing buyers and willing sellers would negotiate for non-interactive services, Dr. Pelcovits' attempt to make such adjustments is flawed for multiple reasons. First, Dr. Pelcovits failed to account for important differences in the way that interactive and non-interactive services are typically sold to consumers. Non-interactive services are usually provided to consumers with no subscription fee, but with display and audio advertisements bundled together with the music. For instance, Pandora, which is by far the largest non-interactive webcasting service, has reported that less than five percent of its active users, and less than two percent of its registered users, subscribe.[86] Interactive services, by contrast, are more commonly sold by subscription.[87] Google Play All Access, Xbox Music Pass, and Rhapsody, for instance, appear to fully or nearly fully rely on subscription revenue.[88] Those interactive services with both subscription and non-subscription options typically count subscribers as a far more substantial portion of their active users than does Pandora. For

84. *Id*., at 26 & 37.
85. *Id*., at 26 & 44-45.
86. "Pandora One Subscription Changes," March 18, 2014, http://blog.pandora.com/2014/03/18/6128/, last accessed October 4, 2014 (showing 3.3 million subscribers); Pandora Media Form 10-Q for period ending June 30, 2014, at 21 (showing 76.4 million active users and "more than 250 million registered users").
87. *See*, *e.g.*, Matthew Moskovciak (2014) "Spotify, Rdio, Beats Music, and more: How to get started with subscription music services," CNET.com, January 27 (describing interactive services as "subscription services," comparing them with radio-like non-interactive services, and stating "Subscription music services typically have music libraries of 15 to 20 million tracks and you can stream as much as you want for about $10 per month. […] In addition to subscription music services, there's a whole host of streaming-radio services available, such as Pandora, iTunes Radio, Songza, 8tracks, Aupeo, and Last.FM […]. These services are more like traditional radio, where you don't get to pick what they play, but they're based around what artists you like. They're typically free with advertising, with the option to pay a monthly fee to make the ads go away.")
88. *See*: https://play.google.com/about/music/allaccess/#/, http://www.xbox.com/en-US/music/music-pass, and http://www rhapsody.com/pricing, last accessed October 4, 2014.

instance, Spotify, a leading interactive service, indicates that approximately 25 percent of its reported active users are subscribers, as compared with the aforementioned five percent of Pandora's active users.[89] We understand that, at the time of the Webcaster II proceeding, there were even fewer (or no) non-subscription interactive services.

90. As noted above, one of Dr. Pelcovits' main adjustments relies on subscription prices for interactive and non-interactive services. Because subscribers typically generate more revenue per listener than non-subscribers, this approach likely overstates the revenue-generating ability of non-interactive webcasters, and hence, the royalty rates they would pay. The CRB recognized at the time of Webcaster II that a focus on subscription revenue was potentially problematic, but noted that SoundExchange's proposal could still be reasonable "to the extent that ad-supported revenues may not yet have equalized subscription revenues on a per-listener hour basis but are expected to grow over the term of this applicable license."[90] However, even today, subscribers to non-interactive services appear to generate far more revenue, on a per-listener-hour basis, than ad-supported listeners. For instance, as noted above, in 2013, Pandora reported total revenue of $647.5 million (including both subscription and advertising revenue) and 16.7 billion listener-hours, or $0.0388 in revenue per listener-hour.[91] To calculate a comparable figure for subscription revenues, note first that a monthly subscription to Pandora costs $3.99 per month.[92] Even assuming that actual revenues are only 50 percent of the posted

89. *See*: https://press.spotify.com/us/information/ (indicating over 10 million paid subscribers and over 40 million active users), last accessed October 4, 2014.
90. Webcaster II Decision, at 40.
91. "Pandora Historical Financial Results, Three Months Ended June 30, 2014," at (pdf pages) 8 & 9. Retrieved at http://investor.pandora.com/phoenix.zhtml?c=227956&p=HistoricalFinancials, last accessed on October 6, 2014. The document shows non-GAAP total revenue for year ended 12/31/2013 of $647,518,000, and listener hours of 4.26 billion, 3.91 billion, 3.99 billion, and 4.54 billion in the four quarters of 2013.
92. "Pandora One Subscription Changes," March 18, 2014, http://blog.pandora.com/2014/03/18/6128/ ,last accessed October 4, 2014. This price is for existing subscribers before a recent price change.

price, due to discounts or non-payment, the calculations presented by Dr. Pelcovits in Webcasting III indicate that Pandora would earn approximately $0.0531 per listener-hour for existing subscribers.[93] In any case, these calculations show that any claim made at the time of Webcaster II projecting that advertising revenue would catch up to subscription revenue was incorrect.

91. Consistent with this conclusion, we agree with the Judges' recent statement that "the interactive benchmark model as developed by Dr. Pelcovits is compromised, and its usefulness reduced, by its failure to take into account the advertising revenue received in both the interactive benchmark market and the statutory noninteractive market."[94] There is also market evidence consistent with the conclusion that different rates for advertising-based and subscription-based services are appropriate. [redacted]

92. Second, Dr. Pelcovits' methodology relies exclusively on the royalty rates paid by interactive services to the major record labels, while ignoring the rates paid by independent labels. As we discussed previously in this report, for its non-interactive webcasting service, iHeartMedia agreed to pay lower sound recording royalty rates to independent record labels than

93. Dr. Pelcovits claimed that the average subscriber to a non-interactive webcasting service listens to approximately 563 performances per month. Webcasting III Decision, at 55. With 15 performances per hour, 563 performances would be heard in 37.6 hours. Then $0.0531 = ($3.99 x 50 percent) / 37.6.

94. Webcasting III Decision, at 60.

95. [redacted]

to Warner, one of the major record labels. If interactive services also pay lower royalty rates to independent record labels than to major record labels, then Dr. Pelcovits' methodology would overstate the royalty rate interactive services pay, and thus, the appropriate royalty rate for non-interactive services. Consistent with this conclusion, the Judges recently stated that "the absence of any evidence as to the impact of the rates charged by the independent labels, either within the model itself or as an adjustment, diminishes the value of that interactive benchmark analysis."[96]

93. Third, Dr. Pelcovits did not attempt to account for a wide range of other differences between interactive and non-interactive services. For instance, it may be that record labels have more economic leverage over interactive webcasters because an interactive service needs to play the precise songs its listeners select, but less economic leverage over non-interactive webcasters who can (and, as we discuss above, actually do) steer listeners toward or away from particular music, in part based on the royalties that would be incurred.

94. In light of these and other flaws, Dr. Pelcovits' application of the interactive benchmark in prior CRB proceedings was likely unreliable and, indeed, likely led him to inflated conclusions as to the appropriate non-interactive webcasting royalty rate.

B. Current statutory rates appear very high in the context of actual record industry outcomes.

95. One way to evaluate the current statutory rate is to consider whether this rate is sufficient to maintain copyright holder revenue at current levels if it turns out that webcasting has a very large net substitutional effect on music sales and other forms of revenue generation, compared to current forms of radio listening. We are not aware of any evidence indicating that such an outcome is likely, but such an assumption provides a helpful framework from which to

96. Webcasting III Decision, at 61.

consider whether the old rates might have inadvertently ended up higher than was intended, relative to actual record industry revenues.

96. We operationalized the thought experiment as follows. We started by considering what happens to an individual's purchases of music and other activities that generate revenues for copyright holders when that individual migrates from terrestrial radio to non-interactive webcasting. The simplest and most obvious assumption would be that nothing material happens to these purchases, because webcasting is similar in its promotional and/or substitutional effects to terrestrial radio. If so, then any royalty payment for webcasting will serve to increase copyright holder revenues because copyright holders currently receive no royalty on terrestrial radio airplay.

97. We next considered an assumption that seems, on the face of it, highly unrealistic: namely, that when an individual migrates from terrestrial radio to webcasting, he stops listening to purchased music, stops purchasing CDs, stops purchasing subscriptions to interactive webcasting services, and stops otherwise generating any revenue for the relevant copyright holders (except whatever revenue is generated through SoundExchange). This is an intentionally extreme assumption. While we understand there may be debate about whether webcasting has a larger or smaller promotional and/or substitutional effect on music purchasing than does terrestrial radio, we are not aware of any evidence demonstrating that radio-like, non-interactive webcasting will completely eliminate every other source of copyright holder revenue. Indeed, the most relevant evidence seems to point the opposite way: terrestrial radio is (obviously) a radio-like, non-interactive music service that has been enormously popular, and yet listeners over the last several decades have continued to purchase music and otherwise generate revenue for the relevant copyright holders. Nonetheless, as we explain here, even under this

extreme assumption that non-interactive webcasting will fully displace all other sources of music revenue, we estimate that copyright holders would experience no loss in revenue at a per-performance rate of approximately $0.0014, well below the current statutory rates.

98. Our basic calculations for this thought experiment are summarized in Exhibit F. The first step is to determine the revenue sound recording copyright holders earn today. Total 2013 revenues in the recorded music industry from all sources (other than SoundExchange distributions) were $6.4 billion, which equates to $25.12 per person age 15+ in the United States.[97] This figure overstates the relevant copyright holder profits, as this value is based on the "total dollar amount of the products shipped at estimated retail price," and thus would include distribution costs, final retailer mark-up, and musical works royalties, in addition to profits to sound recording copyright holders.[98]

99. The second step is converting this $25.12 figure into a per-performance royalty by estimating how many musical performances a webcast listener will hear. To do this, we used the fact that, as noted above, the average American currently spends 2.3 hours per day on music-formatted radio listening.[99] An additional 1.0 hours per day is spent listening to music through owned music and TV music.[100] Therefore, total music listening time for the typical listener is roughly 3.3 hours per day, or 1,204.5 hours annually.

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97. Record industry revenues obtained from RIAA Shipment Database. $25.12 = $6.4 billion / 255 million population. U.S. Census Bureau, Population Estimates, "Annual Estimates of the Resident Population for Selected Age Groups by Sex: April 1, 2010 to July 1, 2013," Accessed at http://www.census.gov/popest/data/national/asrh/2013/index html, retrieved on October 6, 2013. Excel file, "US Census 2013 by Demographics.xls."

98. Per https://www.riaa.com/keystatistics.php?content_selector=research-shipment-database-faq, last accessed on October 6, 2014.

99. State of the Media: Audio Today 2014. Nielsen, February 2014, at 3 & 12 (indicating 2.7 total hours of radio listening and indicating shares of total stations with non-music formats, including News/Talk (11.3 percent), Sports (3.1 percent), and All News (1.5 percent). The sum of these is 15.9 percent, leaving 84.1 percent of stations as music format. 84.1 percent of 2.7 hours is 2.3 hours.)

100. Edison Research "Share of Ear" Study Release Announcement dated June 18, 2014 (noting 4.1 total hours of music listening per person per day, with 20.3 percent for owned music and 5.2 percent for TV music.

100. Now, as discussed above, suppose that consumers who migrate from terrestrial radio to webcasting fully eliminate all other music listening (and hence, all other copyright holder revenues) by replacing those 3.3 hours each day with webcasting. Again, this is an intentionally extreme, unrealistic assumption, meant to obviate the debate over whether non-interactive webcasting promotes or substitutes for music sales more or less than terrestrial radio. In this scenario, then, the webcast listener will listen online for roughly 1,204.5 hours per year. Therefore, to keep copyright holders' revenue from declining in this scenario, the webcasting royalty rate would need to cover the lost $25.12 per person, per year, but spread over these 1,204.5 hours. The rate that does so is $0.0209 per listener-hour.

101. Assuming, as above, that webcast listening involves approximately 15 songs per hour, this royalty rate translates to $0.0014 per performance.[101] This result is reported in the second column of Exhibit F. (The first column reports the simple case considered at the start of this discussion, in which webcasting has similar promotional and/or substitutional effects as terrestrial radio.) In other words, even under the extreme assumption that the migration of listening from terrestrial radio to webcasting leads to the elimination of all other major sources of copyright holder revenue, a royalty rate of $0.0014 per performance is sufficient to maintain copyright holder revenue at its current level. Obviously, this is far below the current statutory rates for non-pureplay commercial webcasters. The essential reason for this outcome is that, before the migration from terrestrial radio, copyright holders received no compensation for radio

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Absent other information, we assume that no listening time in the categories of podcasts and "other" is music).

101. We understand that simulcast stations typically play fewer than 15 songs per hour. However, simulcast listenership appears to be a relatively small share of total webcast listenership, and therefore, the adjustment would be proportionately small. *See* Pandora Media, Inc. Q2 2014 earnings call dated 24 July 2014 (stating that Pandora, a custom webcast service, claims 77.6 percent of active sessions among top 20 internet radio channels).

airplay, but after the migration to webcasting, copyright holders will receive a royalty. Therefore, even if webcasting decimates music sales and other revenue-generating activity, the per-performance royalty necessary to keep copyright holders "whole" is not high.

102. The last column of Exhibit F reports a similar calculation in which we assume that the migration from terrestrial radio to webcasting eliminates "only" 25 percent of the typical listener's revenue-generating activity. We are aware of no evidence that even this outcome is at all likely, but the result of this calculation, which indicates a per-performance rate of $0.0004, demonstrate that, even at much lower rates, copyright holder revenue is unlikely to decline as a consequence of the migration to webcasting.

103. What is most informative about this experiment is that even under the extreme assumption where the migration to webcasting causes a cessation in all other revenue-generating activity, a royalty of $0.0014 per performance or less would *still* maintain copyright holders at their current level of revenue. The existing statutory rate under the NAB / SoundExchange settlement is $0.0025 for 2015.[102] Therefore, the existing statutory rate is more than 75 percent higher than the rate that would be sufficient to maintain copyright holders' revenue even under this extreme assumption. While this calculation does not, by itself, indicate the rate a willing buyer and willing seller would agree upon, it does demonstrate that, in the context of actual record industry revenues, the current statutory rates appear high.

102. Webcasting III Decision, at 34.

I declare under penalty of perjury that the foregoing is true and correct.

Daniel R. Fischel

Douglas G. Lichtman

Oct 6, 2014
Date

October 6, 2014
Date